

was 2 cwt. On our return home, about four miles from the shipping-place of the iron, one of the small bolts that fastened the axle to the boiler broke, and all the water ran out of the boiler, which prevented the return of the engine until this evening.

The gentleman that bet 500 guineas against it rode the whole of the journey with us, and is satisfied that he has lost the bet. We shall continue to work on the road, and shall take 40 tons the next journey".

His optimism was perhaps premature, for nothing further is recorded of steam locomotives in use at Penydarren; with Trevithick deeply involved in engineering projects elsewhere it seems unlikely that he could devote his full attention to consolidating this success and ironing out the technical problems.

The cost of the proposed memorial is estimated at £1,000 and contributions are invited from individuals and organisations who would like to be associated with the Trevithick Memorial. Please address any donations to Compton Davies JP, Treasurer Abercynon Trevithick Memorial Committee, 25 Glancynon Terrace, Abercynon, Mid-Glamorgan.

Penydarren Remembers Trevithick February 1979 will mark the 175th anniversary of what is generally regarded as the first successful use of a steam locomotive on a railway, when Richard Trevithick's single-cylinder high-pressure locomotive successfully pulled ten loaded wagons from Penydarren to Abercynon Basin on the Glamorganshire Canal. To commemorate the event the Abercynon Trevithick Memorial Committee has been formed with the intention of erecting a memorial at Abercynon on a plinth of blue pennant stone blocks, which will themselves be relics of the early industrial history of this part of South Wales. The Mid Glamorgan County Planning Authority has approved the proposal to site the memorial in the forecourt of the new fire station which adjoins the spot where the historic journey terminated.

Trevithick's experiment is believed to have been prompted by a 500 guinea wager made by the Merthyr industrialist Samuel Homfray who was confident that a steam engine could haul a load of ten tons of iron over nine miles of the Penydarren tramroad, a horse-worked route linking Merthyr with the canal basin at Abercynon. The engine he built had no foot plate, but was controlled and fired from the tender. There were difficulties when the cast-iron fishbelly rails failed under the locomotive's weight, but the journey was successfully completed, and Homfray won his bet with his fellow-industrialist Anthony Hill. Trevithick's own account of the event, written the following day in a letter to his friend Davies Gilbert, is often quoted:—

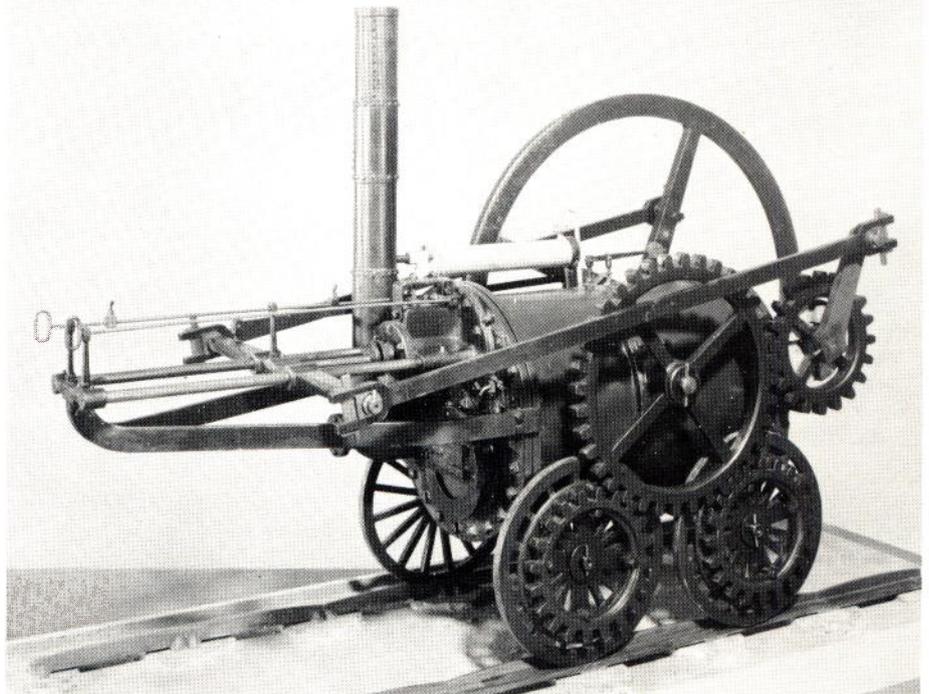
Penydarren, 22nd February 1804

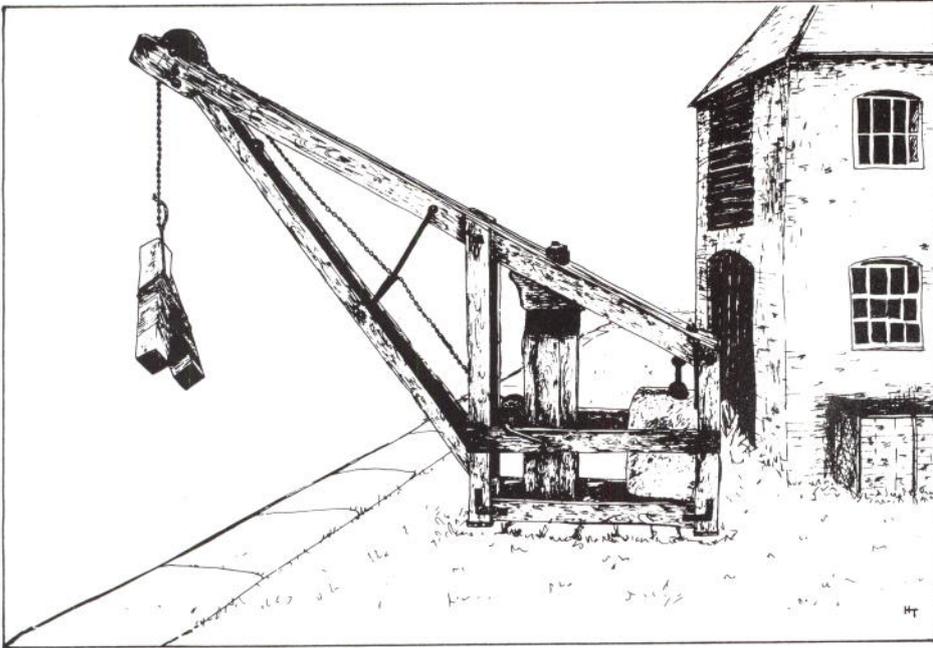
"Mr Giddy

"Sir — Yesterday, we proceeded on our journey with the engine; we carried 10 tons of iron, five waggons, and seventy men riding on them the whole of the journey. It is above nine miles, which we performed in four hours and five minutes. We had to cut down some trees and remove some large rocks out of the road. The engine while working, went nearly five miles per hour; no water was put into the boiler from the time we started until we arrived at our journey's end. The coal consumed

Burbage Wharf Crane In the year 1810 the Rivers Thames and Bristol Avon were linked by a new canal running from Bath to Reading. Twenty-one years later the then Earl of Ailesbury, owner of the great Forest of Savernake near Marlborough in Wiltshire, decided to have a wharf built as near to his estates as possible, at Burbage on the Kennet and Avon Canal. The wharf and its buildings were built of Bath stone brought up the canal and of local bricks inscribed with an 'A' in his Lordship's honour. To handle the new trade in timber, stone, coal and farm products a huge wooden crane was built on the Wharf, carefully carved, turned and erected by expert craftsmen with a Savernake tree trunk two feet in diameter and sixteen feet high as the centre post on which rotated a jib over twenty feet long and fifteen feet high, balanced by two tons of stone blocks.

In 1972 a small team of local industrial archaeologists, led by Don Cross of Shrewton, carried out a recording survey on the old crane on Burbage Wharf, the only survivor on our canals. It was found to be in a dangerous state and the owners of the Wharf, Her Majesty's Crown Estates Commissioners, agreed to its





demolition. After careful measurements were completed a huge Army mobile crane helped to dismantle the rotten 142-year old veteran.

Then a project began probably unique in constructional engineering. All the ironwork left on the old crane was saved — and the Crown Estates offered Mr Cross all the new timber needed to build a replica.

A small team of local folk with varied occupations, have been working since 1973 shaping the new timbers, using drawings prepared by a young Oxford engineer, David Pearce. Very few pictures and no constructional details of the old crane exist so the project still lacks information on how and why some of the parts of the crane were built. The Army has provided practical help, young local Sub-aqua club members have looked in the canal for lost parts, and several local firms have given help and advice.

Cutting mortices and tenons a foot long and six inches deep with hand tools, sawing timbers fifteen feet long and weighing a ton have been difficult and digging out the masonry hole where the new post now stands was a major problem. However, a new wooden Burbage crane is arising on the canal side — a working reminder of the busy commercial activities which once took place there and a unique effort in restoration.

Volunteers have assisted in assembling the heavy timber components and lifting the crane into position. Thanks to Stothert and Pitt, appropriate lifting tackle is being provided and the Autumn of 1978 will see some of the last stages in the restoration of this remarkable machine. A brass plaque is being fitted to commemorate the efforts of the working party, and the official unveiling of their efforts is scheduled for November 1978, when it is hoped, one of Her Majesty's Crown Estates Commissioners will come to Burbage to re-commission the crane.

Camden Works Museum, Bath At Christmas 1872 J B Bowler set up on his own, in Corn Street, Bath, as a 'plumber's and general brass founder, gas fitter, locksmith and bell hanger' and maker of soda water machinery. Six years later he acquired an aerated water manufactory. From then on until 1969 when the firm closed and the buildings were demolished, hardly a

piece of machinery, label, bill or letter was ever thrown away. The entire stock-in-trade, fixtures and fittings were saved from the scrap-heap, and it has now been possible to re-create many of the interiors of the Corn Street premises as they would have looked in the 1890s.

The Bowler Collection's new home was built in 1779 as a Real Tennis Court, it soon became a malthouse, pin-factory, charity school, light engineering works (during the First World War), soap-factory and suitcase-makers' until closure in 1960. Two floors inserted in the 19th century and supported by cast iron columns give great character to the new exhibition area, while the upper mezzanine provides space for temporary exhibitions, lectures, filmshows and a study area for school parties. It will be used this winter by the University of Bristol's extramural department who are holding a lecture series on the Industrial Archaeology of the Bath area.



The museum is due to be opened by **HRH the Duke of Gloucester on 26 September**. Initially it will be open to the public afternoons except Mondays, with school parties by arrangement. As well as walking through Bowler's shop, office, brass foundry and brass finishing room, visitors can see the heavy machine tools, now restored to working order, and walk around the aerated water factory with its gas generating plant, carbonating pump, bottle filling machines, and large collection of old bottles of many types.

An association of the Friends of Camden Works Museum has been formed; this has already helped with purchasing equipment,

fostering public relations, and cleaning bottles and jars in the collection. Help has also come from the **Science Museum**, the **Area Museums Council for the South West** and the **Manpower Services Commission**: the Job Creation Team has been responsible for restoring all the smaller machines to working order, and sorting through the documents in the collection.

GSTMC An organisation was set up in April this year to bring together those concerned with collections of historic scientific and medical material, and with industrial archaeological sites. Known as the Group for Scientific Technological and Medical Collections, the new group will seek to coordinate collecting policies by museums and related organisations and to exchange information.

The annual subscription is £1, and a meeting has been arranged for 27 October in Manchester at which a number of aspects of technological preservation will be discussed. Further details from Miss Jane Smith, Secretary, GSTMC, The Science Museum, South Kensington, London SW7 2DD.

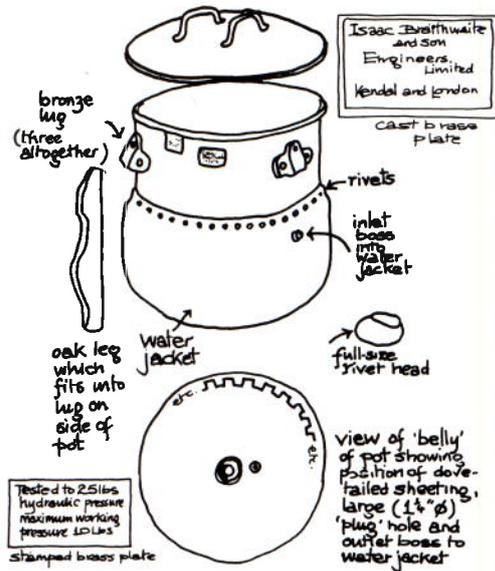
Lime Kiln Census Miss Barbara Lees is compiling a national register of limekilns and would welcome the co-operation of readers of the Bulletin in listing details of locations, dimensions etc. Please write to her at 27 Newton Lodge, Oakwood Grange Road, Leeds 8 if you can help with details of sites known to you.

Welsh Mining Sites The Welsh Development Agency has commissioned the University of Liverpool to carry out a survey of abandoned metal mining sites in Wales in order to identify high priority sites for land reclamation work. The survey team are keen to avoid threatening those sites of high archaeological and historical significance, but are finding that information on Welsh metal mining sites is scarce.

Readers may know of sites with features of historical interest which should be taken into account when planning land reclamation schemes. Please let the University know as soon as possible; the address to write to is: — Dr M S Johnson, Environmental Advisory Officer, Department of Botany, The University of Liverpool, PO Box 147, Liverpool L69 3BX. Telephone 051 709 6022, extension 2085.

The subject of Welsh metal mines was discussed at a recent well-attended meeting at Dylife and David Bick author of *The Old Metal Mines of Wales* agreed to compile a list of all those individuals and organisations with an interest in the subject, to facilitate the exchange of information and to enable support to be mobilised for the protection of individual sites should the need arise. The list will be circulated in due course. If you wish to be included please write now giving details of 'Interest' eg History, Underground Exploration, Minerals, Industrial Archaeology, Machinery, Restoration etc and specify any mines or areas particularly known, with the names of any societies or clubs with allied interests to which you belong. The address to write to is: David Bick, The Pound House, Newent, Glos. Please enclose sae with your reply.

Mystery Pot Can anyone suggest what this double-bottomed copper pot may have been used for? The wooden legs and the fact that the outlet for the water jacket is placed externally in the middle of the bottom suggest that it was



Sketch of beaten copper pot with lid and legs
width and height about 30 inches

Mines and Canals
29 September – 1 October

Weekend residential course including canal trip and underground visit to a lead mine. Details (sae) from Peter Townsend, Principal, Peak National Park Study Centre, Losehill Road, Castleton, Derbyshire. S30 2WB. Telephone Hope Valley 20373/20693.

Roads and Bridges
6–8 October

Weekend course at Horncastle Residential College, Mareham Road, Horncastle, Lincs. Tutors Neville Birch and Dr Michael Lewis. Fee £17.45 (£15.95 without Friday dinner) residential, £15.65 non-residential. Applications before 27 September to the Warden at Horncastle College.

Watermills and Windmills
28 October

17th East Midlands Industrial Archaeology Conference organised by Society for Lincolnshire History and Archaeology. At Queen Elizabeth Grammar School, Alford, Lincs, with visits to Alford Windmill and Thompson's Millwrights. Conference fee £1. Details from: Conference Secretary, EMIAC 17, 55 Rookery Lane, Lincoln. Bookings by 30 September.

7–8 October

Association of British Transport Museums autumn conference. Talk on history and preservation of fire appliances, visit to Nene Valley Railway, live display of historic cycles. Bookings by 21 September. Details from: Association of British Transport Museums, 76 Stewarts Road, London SW8 4DE. Telephone 01 720 6849.

Technology Education and Museums
19–20 October

Seminar at Ironbridge Gorge Museum (previously announced in Bulletin 5:4). Details from Tony Herbert, Special Projects Officer, Ironbridge Gorge Museum Trust.

Regional IA Conference
21 October

Second North West Regional IA Conference at City of Liverpool College of Higher Education, Prescott. Details from Paul Rees, Secretary, North Western Society for Industrial Archaeology and History, Merseyside County Museums, William Brown Street, Liverpool L3 8EN. Telephone 051 207 0001.

27 October

Conference Group for Scientific, Technological and Medical Collections at Manchester (see separate announcement).

Re-Furbishment of Period Property 1500-1912
2 November

One-day Seminar at Knebworth House, chaired by J F S Pryke. Subjects of papers will include conversion of St Katherine's Dock, centennial restoration of Royal Albert Hall, resins in the repair of buildings, budget control and contractual arrangements for refurbishment. Fee £45 plus £3.60 VAT which includes lunch and full documentation. Details from Procord Development Ltd, 51 Harpesford Avenue, Virginia Water, Weybridge, Surrey GU25 4RA telephone 09904 4908.

Underwater Archaeology
3–5 November

Residential weekend conference with talks on 19th century ship construction etc, at Dartington Hall. Details from Tom Griffiths, Warden, Devon Centre for Further Education, Dartington Hall, Totnes, Devon.

Oral History Seminar
11 November

Jointly organised by AIA and Oral History Society, as previously announced in Bulletin 5:3. To be held at Birmingham Public Library. Applications to Peter White, Ancient Monuments Inspectorate, Department of the Environment, Room 224, Fortress House, 23 Savile Row, London W1X 2AA.

not heated over an open flame. A possibility is that it was plugged into a steam supply in a laboratory, hospital sterilising room or even a ship's engine room, where advantage could be taken of steam on tap to heat the contents of the inner pot. The makers, Isaac Braithwaite and Son were in business at Ibis Works, Kendal early in the present century and local trade directories suggest that they were still there late in the 1930's. Suggestions as to this gadget's original use would be welcome; please write to John Robinson at the Science Museum, London SW7 or to the enquirer, Heywood Hill at Harpton Granary, New Radnor, Presteigne, Powys,

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The Dutch Connection The Sheffield Trades Historical Society plans a visit to the Netherlands in the Spring of 1979, the main purpose of which is a visit to the Cruquius pumping engine near Haarlem. Installed to drain the Haarlem lake and commissioned in 1849, this annular compound engine was conceived by Harveys of Hayle, who also built the pumps and the steam cylinders, the beams and boilers being made in Holland. The eight radial beams were counterbalanced with a total of 86 tons of balance weights, and the low-pressure cylinder has an internal diameter of 144", the largest of any pumping engine. The steam pistons have a stroke of 120" and the pumps of 118" with a lift of 16 ft. The engine was last used in 1933.

The trip will take place between Friday, May 25 and Monday May 28, with a likely inclusive cost of £65. Visits are also planned to the Netherlands Railway Museum at Utrecht and to a windmill museum. Final booking date is 30 September, 1978; please write immediately to M J Tilley, Secretary of the STHS if you would like to join the pilgrimage. His address is: 2 Page Hall Flats, Bolsover Road, Sheffield

Railway Preservation Symposium

28 November

First National railway preservation symposium, sponsored by Friends of the National Railway Museum. At Institution of Civil Engineers, Westminster, London, SW1 0930-1800. Speakers include Dr Margaret Weston, Richard Hardy, Michael Satow, Allan Garroway. Followed by evening reception at Science Museum. Fee £10.80 including preprints of main papers, lunch and tea. Details (sae) from Secretary, Railway Preservation Advisory Group, 2 Cleaver Square, London SE11 4DW. Telephone 01 735 5012

Machines and Men

9 September - 7 October 1978

Oldham Art Gallery

Exhibition of more than 50 paintings by the Leeds-born artist Edna Lumb, featuring Lancashire cotton mills. Includes unique series of 25 pictures of Ellen Road Ring Mill and the last days of mule spinning. Open every day except Sunday 1000-1900 (Tuesday and Saturday 1000-1300). For details contact Mrs J Taylor, Oldham Art Gallery, Union Street Oldham. Telephone 061-624-0505 ext 4653.

Shuttleworth Golden Jubilee Pageant

24 September

Flying display should include 1912 Blackburn monoplane and Supermarine Spitfire, historic cars will include 1898 Panhard 1903 de Dietrich racer and steam road locomotives. To celebrate 50th anniversary of foundation of Shuttleworth Collection. At Old Warden Aerodrome, Biggleswade, Beds. For details write or telephone Northill (076 727) 288.

Exchange and Mart

Mr Hill of 13 View Drive, Oakby, Dudley has a quarry in Somerset which contains three oil engines; the makers being Petter, Robey, and Fielding. Anyone interested in acquiring this equipment should contact Mr Hill at Dudley. It is understood that the site must be cleared during September.

A home is sought for an early wire-recording machine dating from about 1946 and manufactured by the Wire Recorder Corporation of America, Brooklyn. It was used by a blind student for recording lectures, and packs into a suitcase. Enquiries to Miss Patricia Saunders, Secretary's Office, St Dunstan's, 191 Old Marylebone Road, London NW1 5QN Telephone 01-723-5021.

The Fund for the Preservation of Technological and Scientific Material is assisting the National Trust in its efforts to re-equip the **woodworking shop** on the **Erddig estate near Wrexham**; (Erddig represents a novel approach to country house presentation, concentrating on the **working** aspects of the estate rather than the aesthetic features of the house, and is joint winner of the 1978 Museum of the Year Award). A late 19th century atmosphere is aimed at in the woodworking shop, and the following items are particularly sought: Morticer, Overhand planer planer, Sander, Circular saw with 12-16" blade. Any offers to John Robinson, Science Museum, South Kensington, London SW7 2DD, Telephone 01 589 3456 ext 614 or to Mr Powell-Jones at Erddig.

Dorothea Restoration Engineers Ltd, specialists in the restoration of steam and water powered machinery, Victorian ironwork etc are looking for employees with a broad engineering experience and who should preferably be familiar with the problems of dealing with heavy machinery. The job offers considerable variety and successful applicants may soon be responsible for projects of great interest. The nature of the work is such that it is almost invariably necessary to live away from home Monday-Friday on a regular basis. For further details contact David Hodgson, DRE Ltd, South Street, Buxton, Derbyshire. Telephone Buxton (0298) 3438.

AIA Bookshelf

The Evolution of a Family Firm: Stothert and Pitt of Bath *Hugh Torrens S & P Ltd* £1.50

1978. An excellent example of what a sympathetic approach to research can achieve. In 1975 Hugh Torrens, a geologist from Keele University began delving into the history of this well-known heavy-engineering firm of Bath. Then not even the Directors were sure when Stotherts had actually started. Now the first period of the firm's growth, 1785 to 1902 has been written and its 86 pages contains 30 illustrations including S and P products varying from breadovens to Titan cranes.

A History of Grosvenor Chater 1690-1977

Michael Chater, Grosvenor Chater & Co Limited.

A short and well-produced business history concerning a wholesale stationers. Of particular interest is the fact that the Temple of Mithras was discovered under their new headquarters in 1955.

The Peak Forest Canal and Tramway *The Inland Waterways Protection Society*, 1976, obtainable from Ian Edgar, 35 Linkstore Road, Woolton, Liverpool, L25 6DH. This article, with maps of the Bugsworth Basin and the Peak Forest Tramway was written by Brian Lamb. The publication can be obtained at 50p which goes towards the work of the Inland Waterways Protection Society.

The work of the Society is carried out on a national basis but the Society is pledged to the restoration of the Bugsworth Basin complex using voluntary labour and funds raised by their own resources. Membership of the Society costs £1.50 for an individual or £5.00 corporate. Please contact the Honorary Treasurer Ian Edgar, for further details.

The Scarborough and Whitby Railway *J R Lidster, Hendon Publishing Co Ltd*, £1.60, 1977.

A photographic and historical survey of this coastal railway, with evocative photographs of general interest. It was particularly nice to see the illustrations of handbills, tickets and railway personalities, together with the more usual illustrations of track and trains.

The handbook also has measured drawings of Scalby Station and fascinating illustrations of the construction of the Esk Viaduct in 1882.

Craftsmen at Work. John Norwood, A & C Black Limited, £6.25, 1977. A refreshing look at the typical rural crafts but including some new ones which have not been covered well in previous publications, such as brick-making, furniture making and hand block printing. Well illustrated, text clear and concise.



Claverton Pumphouse re-opens to the public.

Following nine years work by volunteers John Rennie's historic pumping engine built in 1813 and raising water from the River Avon, near Bath, to the Kennet and Avon Canal, has been commissioned.

It was shown to the Press and TV on Monday 26 June (which resulted in several very valuable publicity 'puffs') and the general public saw the 24 feet wide waterwheel in action for the first time on Saturday 1 July. A comprehensive series of publications is planned commencing with a simple give-away leaflet and culminating in a booklet giving full historical and technical details.

The Pumphouse is open (with the machinery quiescent) every Sunday until October 29 and on 16/17 September and 7/8 October the massive undershot waterwheel and the two beam-engine-type pumps will be operating. Party visits can be arranged and for details of these and any other aspects contact John Powell at 22 Penrose, Whitchurch, Bristol BS14 0AQ telephone Bristol (0272) 836031.



Railways in the Peak District. Two volumes by Christopher B Nicholson entitled 'Main Lines' and 'Branch Lines' *Dalesman Publishing Co.* Ltd £1.50 each. Railway books of considerable interest to the Industrial Archaeologist as their routes cover a heavy industrialised, though neglected, part of Britain. The illustrations contain much on the construction and maintenance of the railways.

AIA Bulletin is published by the Association for Industrial Archaeology. The Association was established in September 1973 to promote the study of Industrial Archaeology and encourage improved standards of recording, research, publication and conservation. It aims to assist and support regional and specialist survey and research groups and bodies involved in the preservation of industrial monuments, to represent the interest of Industrial Archaeology at a national level, to hold conferences and seminars and to publish the results of research. Further details of the Association and its activities may be obtained from the Membership Secretary Association for Industrial Archaeology, The Wharfage, Ironbridge, Telford, Salop TF8 7AW England (095-245 3522).