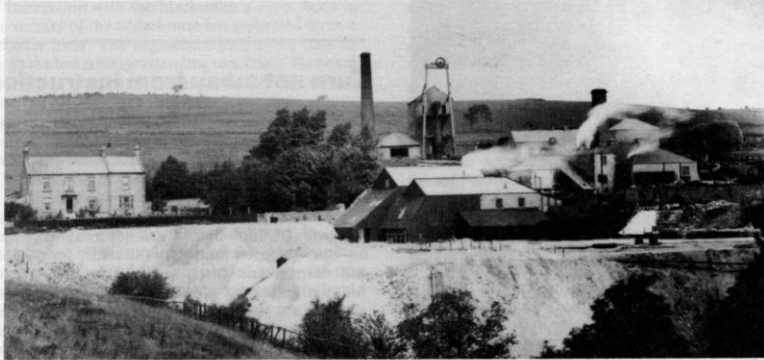


THE TREVITHICK SOCIETY

NEWSLETTER No. 37

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MAY 1982



CORNISH ENGINE AT STONECROFT MINE

This photograph reproduced by courtesy of the Northumberland Record Office (NRO.1876/F.4469) shows Stonecroft lead mines before the turn of the century. Some of the buildings still exist. They include the mine manager's house and office (left), the Cornish enginehouse, and the furthestmost row of buildings on the right which included the capstan house, smithy and stores. The building emitting steam is believed to have contained a small overcrank winding engine.

By measurement, it has been established that the Cornish pumping engine was a 70-inch with strokes of 10ft and 9ft, almost certainly of Cornish build. See article on page 5.

Museum of Cornish Pottery

A Museum of Cornish Pottery is being developed on the site of the old Lakes Pottery in Truro, with the old Bottle Kiln as its centrepiece. With the co-operation of the Royal Institution of Cornwall, it intends to show the history of Cornish Potters from the Bronze Age to the present day, and create an educational unit for the use of students and local schools.

The museum researcher, S. J. Howe, is anxious to trace any old photographs either of the Pottery, or which show examples of its pots in them. The Cornish Pitcher is quite distinctive, and often features in old domestic photographs. He would also like to show a feature on the Calenick Crucible Works and would be pleased to hear from anyone who has any old photos of the smelter. The address is Truro Pottery, Chapel Hill, Truro, Cornwall TR1 3BN.

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Did these buildings at East Cornwall Silver Mines once contain the smelter built for the 1835 working? See below.

Editorial

It is a pleasure to pen these few words with warm Cornish sunshine outside and every scrap of film brought down from London already used up! I have been involved of late with aiding research on three "upcountry" Cornish engine sites. An article in this issue on a visit to a lead mine in Northumberland and the discovery of a 70-inch Cornish engine house there is related elsewhere in this issue. I have also been consulted concerning a smaller engine, probably not Cornish built, that was put up on a pumping shaft of the Lonsdale iron mine in North Yorkshire. The masonry-lined shaft, part of the bob-wall and a few traces of other buildings are about all that remain here.

It is worth remarking that both these sites have attracted considerable interest on the part of local groups of industrial archaeologists; the remains are safeguarded by a protection order and in the case of Lonsdale, systematic excavation is taking place. In Cornwall, the care of ruined mine buildings still seems to be very much up to the individual landowners and authorities, some of whom are sympathetic to the idea of preservation but many of whom are not.

Following the report on repairs to the Medlyn Moor enginehouse in the last newsletter, I am happy to say that the owner of some buildings on East Cornwall Silver Mine near Callington dating from around 1835 is also taking some steps towards preserving them. Mr. Richard Ahern is living in the old count house, adjoining which is a complex of buildings thought to be the silver smelting works mentioned by Dr. Hamilton Jenkin as having been built in 1835-7. Also on his property is the ivy-covered enginehouse built in 1835 to receive the Harvey-built 80-inch engine designed by William West as a sister to the famous high-duty 80 on Fowey Consols. This engine became famous when it was moved to the Old Ford station of the East London Waterworks Company in 1838, the first Cornish pumping engine set to work in London and which led to eventually 70 per cent of London's water being supplied by Cornish engines. Ultimately there were four Cornish engines at Old Ford: all were scrapped in 1892.

Mr. Ahern has started shifting ivy from the 80's house and has cleared bramble thickets from the boilerhouse, all four walls of which are visible together with the base of the stack. According to Dr. Hamilton Jenkin, the mine enjoyed two subsequent reworkings. In 1848-56 as Wheal Langford the mine appears to have been drained by a 64-inch engine whose house also still stands, about 300 yds to the west; and in 1884-6 as New Langford a larger engine may have been put in the same house. The older 80-inch enginehouse probably saw use during one of these reworkings because the shaft and condenser pit have a stone-built arched roof over them and the driver's doorway to the boilerhouse has been bricked up. Mr. Ahern would welcome any further information on the buildings in his care, in particular the smelter complex. Any member who can help is asked to write to me.

I understand from Mr. Justin Brooke that the recording subcommittee is readying itself for action. In the meantime, members are invited to send to the Secretary, copies of any

notes or sketches they may make following a visit to a Cornish industrial site for Mr. Brooke to place on file. Even having names and addresses of individuals who have been to sites can be of great value. I cannot overstate the importance this type of work assumes when every year more evidence is lost.

To save postage, it is planned to send this year's Journal (No 9) and the August newsletter out together. May I conclude with an appeal to members to send me contributions for the newsletter so that a wide range of topics may be covered. Anything between 20 and 1500 words is welcome.

The Editor

Turn not away from instruction

On Friday 22 January the Society held a joint meeting with the Carn Brea Mining Society at the Camborne School of Mines when Justin Brooke gave a well-presented and informative talk on the subject of Historical Research, Sources and Methods.

In communicating some of his own enthusiasm for research Mr Brooke began with a quotation from the First Book of Artemas (Ch 16, v 28), "Turn not away from instruction, O my son, but open thine eyes full wide, for wisdom maketh a fair mistress and she is youthful for all time. And he that followeth after, his life shall be well ordered, and his affairs shall fall out just so." And, like the late Rev John Wesley, he divided his talk into three parts. The first part, on societies and sources, is reported in detail as this should prove a valuable source of information for any member embarking on research.

Societies

Carn Brea Mining Society. Minerology to exploration of old mines. Publishes a newsletter. Presently engaged in an appeal for the restoration of the two Crowns engine houses at Botallack.

Cornwall Association of Local Historians. Founded by Mrs Veronica Chesher, University of Exeter Extra-Mural Department (Truro). A co-ordinating body for those engaged in specific studies.

Federation of Old Cornwall Societies. The senior organisation with branches in most towns.

Historical Association (Cornwall Branch). An organisation mainly for teachers and professional historians.

Plymouth Mining and Mineral Club. Based in Plymouth but has members in Cornwall. Publishes a newsletter.

Trevithick Society. Members' interests and study projects listed in the newsletter. Many members willing to advise. Currently engaged in co-ordinating the recording of industrial remains.

Sources

County Record Office, Truro. Open 9.30-1, 2-5 Tues-Fri, also Sat mornings. Appointment necessary. Largest collection in the County. Publishes a useful "Brief Guide to Sources". Particularly strong on mining and associated industries and on genealogical research sources.

Institute of Cornish Studies, Trevenson House, Pool. Open 9-1 and 2-5 weekdays. Associate membership available. Appointment necessary. Particularly helpful in matters dealing with Cornish language, dialect and archaeology.

Penzance Library, Morrab Gardens. Open 10-4.30. Private library with subscription membership. (Not to be confused with the Public Library in Morrab Road.) Local newspapers from early 1800's. Photo collections.

Redruth Public Library, Clinton Road. Open 9.30-12.30, 1.30-5 Mon-Thurs and to 7 pm Fri, also Saturday mornings. A.K. Hamilton Jenkin collections including annotated 6 inch O.S. maps 1907/8 25 inch O.S circa 1880 on microfilm with print-out facilities. Photo collection. Incomplete collection of Mining Journal, Mining World, Mining Magazine.

Royal Geological Society of Cornwall, Public Buildings, Penzance. Mineral Gallery open summer afternoons. Library for members

Royal Institution of Cornwall, River Street, Truro. Open 9-1, 2-5, closed Mondays in winter. Local newspaper collection. Fine collection of works dealing with Cornwall.

In the second part of his talk Mr Brooke again quoted

Artimas (1 xvi 20) in advising, "Make thou thy task according to thy strength ..." In presenting guidelines for researchers he suggested a careful choice of subject, a review of previous work, a systematic method of study and the need to keep indexes. The final results should, ideally, be put into print, or lodged with a Society or Record Office.

Finally, Mr Brooke offered to help members with their investigations. His private collection has indices and notes on over 11,000 companies and ventures dating from the Middle Ages. He closed with what should be a maxim for all researchers, taken from Dickens' Dombey and Son, "When found, make a note of."

WN

First Hamilton Jenkin memorial lecture

Halcyon days when Bideford was an international seaport and the centre of a thriving shipbuilding industry were vividly portrayed at the Royal Institution of Cornwall in Truro on 16 April. In the first biennial A. K. Hamilton Jenkin memorial lecture entitled 'The Maritime Industrial History of the Port of Bideford' Dr. Basil Greenhill CB, CMG, director of the National Maritime Museum, showed how the town's history as a seaport can be traced as far back as the 16th century.

Bideford was the setting off point for the Grenville expedition of Devon and Cornish men to North America in 1586, and the speaker showed slides of the site of the first colony established over there which he had recently visited. Overseas trade went into a temporary eclipse around the year 1800 but was compensated by a growth in local coastal trade. Many slides were shown of the small sailing vessels which plied the Bristol Channel and further afield, in some places using beaches to load and discharge cargo, particularly along the North Devon and Cornish coasts. Sturdily constructed, some of these vessels lasted for 100 years.

A boom in transatlantic traffic which brought large schooners into Bideford, and prompted many to be built there, was brought about by the North American timber trade. Slides were shown showing this activity on both sides of the Atlantic. The vessels usually carried emigrants on the outward journey and timber on the return. The importance of Bideford and Appledore in shipbuilding terms also peaked during the 19th century during which some 814 vessels are known to have been built. One enterprising local shipbuilder called Retalack emigrated to Prince Edward Island and started building ships there: a museum is now established on the site.

Throughout his lecture, the speaker stressed the potential areas of further research, in particular into the sea trading and shipbuilding activities of the many small seaports in the Westcountry. In proposing a vote of thanks to Dr. Greenhill, the Society's President, Mr. Jack Trounson, compared the hardness of the men who set out to sea in sailing vessels with that of Cornish miners of whose activities he was more intimately acquainted. These men accepted everyday conditions which would not be tolerated today, and he suggested that present day prosperity may have made us soft as a nation. Mr. Trounson and the chairman, Mr. Rodney Law, paid tribute to the late Dr. Hamilton Jenkin in whose memory the lecture was held, for the tremendous depth of his research into his subject of mining, which is of inestimable value to present and future generations.

A final reminder . . .

The Membership Secretary had several letters stolen from his letter-box between Christmas and the end of February. He has no way of knowing how many or who sent them. If any member sent a cheque during that period and it has not been debited to his account will he please send a replacement.

There are still a number of members not fully paid up and this newsletter will be the last item they receive until the full subscription (£5.50 for single members, £7.50 for man and wife) is sent. The Membership Secretary's address appears on the front page.

Correspondence

Dear Editor,

Old Prints of Cornish Mines

May I, through the Trevithick Society newsletter, appeal to members for information about old engravings or prints of Cornish Mines?

I have been collecting such items for the past sixteen years and find that some are well-documented and readily available whereas others are very hard to find. It is relatively easy to locate prints from old books such as "Cornwall Illustrated" of 1831 (containing drawings by Thomas Allom) or "Mines and Miners or Underground Life" of circa 1868 by L. Simonin. I am now particularly anxious to trace pictures from 19th Century magazines, especially "The Illustrated London News" and "The Graphic". I feel certain that there must be a great number of mining pictures in these magazines but, to date, I have managed to find only three: 'Great Wheal Vor Tin Mine' from "The Illustrated London News" of 19.9.1857, 'Botallack Mine' from "The Illustrated London News" of 24.3.1860, 'Botallack Mine' from "The Illustrated London News" of 5.8.1865.

Copies of these old magazines are often for sale through dealers nationwide but one does need to know the exact dates required before sending away. I'm sure that several members of The Trevithick Society will know of pictures in such magazines and I would be extremely grateful to hear of any.

Yours sincerely

Mike Lindley

Gorman Court, Arnold, Nottingham NG5 7LR

* * *

Dear Editor

Jefferson Memorial

How interesting it was to see the picture of the Jefferson Memorial at St. Louis on the front of the Society's August 1981 newsletter. About 12 months ago, I had the good fortune to see the arch myself, visit the museum underneath and travel to the summit. As a mining engineer, it was a breathtaking experience to go up in a transport system in conditions somewhat akin to those in mines. The engineering aspects of this arch are unbelievable, and there is a scheme in the museum, which is underneath the arch, which describes the technologies of its construction which I consider to be one of the modern marvels of technology. My visit to Western Illinois University was associated with vocational education and I would like to thank you for refreshing my mind on what was a most enjoyable and pleasant visit.

Yours sincerely,

J. H. Dickinson

Principal, Wigston College of Further Education,
Wigston Magna, Leics LE8 2DW.

* * *

Dear Editor,

Trevithick's Coalbrookdale locomotive

Regarding the letter in newsletter No 36 on Trevithick's Coalbrookdale locomotive, Mr. Tomalin suggests the death of William Reynolds in all probability put an end to any further development of the project. It is easy to imagine the restive mind and volatile character of Richard Trevithick being unable to accept any opposition or biased opinion blocking his endeavours. Procrastination on the part of the partners at Coalbrookdale would have been sufficient for him to lose immediate interest in the project and walk out. His inventive mind would already have been occupied with further ideas and his eagerness for something new always was a predominant part of his character. It was not until his friendship with Samuel Homfray, the iron master at Penyarden, that Trevithick again took an interest in the locomotive engine.

There is no doubt that the moral and financial backing given to Trevithick by Homfray created the new incentive and the first travelling railway engine, the Penyarden locomotive, was born. How far the original locomotive at Coalbrookdale progressed is uncertain but it does seem that under the jurisdiction of William Reynolds some attempt was made to

build a loco which probably was not entirely completed and ended up as a stationary pumping unit or similar. At this time I believe there were five or six engines of various types under construction at Coalbrookdale for Richard Trevithick. This leads to further confusion regarding whether an attempt was made to complete a locomotive. Trevithick's obvious enthusiasm for his engine at Penydarren is shown by his letters to Davies Gilbert on the subject.

It is not inappropriate here to make a comparison between the characters of both Richard Trevithick and James Watt and their contribution to Cornish engineering. The former's greatest achievement was the adaptation and use of steam at sufficiently high pressure to eliminate the condenser, which enabled steam engine development to progress rapidly into more convenient and efficient forms. This was essential as far as locomotive design was concerned. Richard Trevithick can be considered as the first man to make really practical use of this form of power. A brave attempt for those days especially as James Watt had expressed himself so forcibly against its use.

However the fact remains that Boulton & Watt made a great contribution with their improved engine to the industry of this country and especially to the mines of Cornwall at the latter end of the 18th century. The newcomers' engine had reached the limits of its power and was outmoded. There is no doubt the Watt engine 'saved the day' as far as the Cornish mines were concerned with its more efficient pumping power. After this the improvements made by Richard Trevithick were numerous and essential which led to the development of the Cornish engine in the early part of the 19th century.

Richard Trevithick — this giant of a man — was an inventive genius who through his own volatile nature failed to gain any secure financial reward for his efforts but gave the benefit of his ability to others to follow. (After his disastrous adventures in South America he had to borrow money from Robert Stephenson for his passage home!)

Had our 'Great man of Cornwall' had the backing, financial support, intense business acumen and partnership of a man like Matthew Boulton, who was the backbone of Watt's endeavours, engineering history might have been very different.

Incidentally was it not Anthony Hill of the Plymouth Iron Works who laid the bet of 500 guineas with Samuel Homfray on the Penydarren adventure, not Richard Crawshay?

Yours sincerely
John F. Wellington

'Wheat Rose', Smithaleigh, Plympton, Devon.

Cornish type angle-bob in Nevada

News has come in of the rescue of what the Americans incorrectly described as a Cornish pumping engine — in reality an angle bob driven by an unspecified prime mover — which used to work Cornish type pitwork in a mine shaft in Nevada.

In 1977 members of the Nevada County Historical Society dismantled the angle-bob and it is now set up minus pump rods at the Society's mining museum on Allison Ranch Road wherever that is. Drive is by a long fitch beam from a crankpin on a large spur wheel, though what drove the countershaft pulley and pinion is not made clear.

This type of pumping set-up was commonly used in North America where it made a major contribution to opening up the gold mines of the Far West. The editor has written to the Society to glean more information.

Henry Francis (1784-1853)

From member David Bick in Gloucestershire comes this note on Henry Francis of Wheal Virgin. The Francis family of mining engineers and agents was well known in Cornwall and Wales (see my *Old Metal Mines of Mid-Wales Part 1* for the 'Cardiganshire' family tree). Through the courtesy of Mr. Grenville Francis, I have been able to arrange for the National Library of Wales to make a facsimile copy of Henry Francis' Account Book for the years 1837/8. This book chiefly concerns Cornwall and to some extent Wales. There are many references to dealings, and notes on East Wheal Rose in 1836.

Brains Trust tapes

The first batch of tapes of the proceedings of the Society's three Brains Trust on Cornish engineering has now been despatched to members who ordered them and the Publications Secretary is taking orders for a second batch.

A synopsis of the discussion subjects on the tapes is given below, Mr. R. J. Law being in the chair on each occasion.

Brains Trust 1, 7 April, 1978. Cornwall Technical College, Pool, Camborne. Panel members: T. R. Harris, J. H. Trounson, G. Richards and F. B. Michell.

Side 1

Casting beams and cylinders; vugh holes in castings; repairs to Pascoe's 80"; North Tincroft stamps engine; South Tincroft Man-engine whim smash.

Side 2

Phoenix 80"; Wheal Busy 85"; Holman horizontal winding engines; cylinder boring; fagotted iron; rust-caulked joints; guiding pump rods in shafts; aligning halves of beams; Cornish waterwheels.

Brains Trust 2, 1 December, 1978, venue as above. Panel: J. H. Trounson, G. Richards, F. B. Michell and S. Sweet.

Side 1

The Michell family of engineers; Harvey engine weights and prices; valve gear on East Pool whim; unmachined cast gearing; early pumping engines; Cornish stamps.

Side 2

Flexibility of cast iron; Marshall's 60 at Condurrow United; Moorstone boilers; Perran Foundry 70" at Hodbarrow; square tube mills.

Brains Trust 3, 4 September, 1980. EEC Laboratory, St. Austell. Panel members: J. H. Trounson, G. Richards, S. Sweet.

Side 1

First cylinders cast in Cornwall; repair to Pascoe's 80" cylinder; 36-inch engine for Goonbarrow; Robinson's 80"; applewood pins in gearwork; Battersea 112"; engines with separated top nozzles; windmill pumps.

Side 2

Wm. West's St. Blazey Foundry; top nozzle and steam case joint design; engine duty in relation to pitwork; double-beat pump valves and Davey-type compounds; Wheal Busy 85" and its plate beam; fagotted iron and Wheal Kitty 65"; boring cylinders and Pascoe's 80" reborings; Cornish and Lancashire boilers; derelict machinery at New Consols.

Members are invited to place orders NOW with the Publications Secretary, enclosing the remittance appropriate to the number of tapes required. The cost is £3 per tape or £9 per set of three. For package and posting add 25p for one tape, 50p for two or three tapes.

This offer closes on 21 June, 1982. Despatch to members will be a few weeks afterwards.

The Cornish Gauge

From James Hodges comes news that a Cornish Gauge of the type made by J & F Pool of Hayle is on view at the Helston Museum. Mr. Hodge dealt with this subject in an article in the Society's Journal No 8, 1981, page 70.

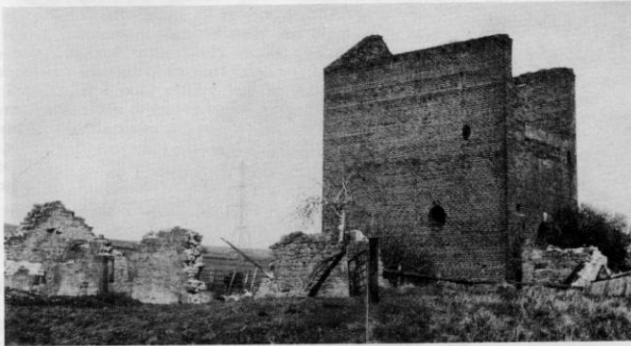
Wanted ...

Loan of catalogue of products of F. Bartle & Sons, Carn Brea, and picture of horizontal cylinder straight line steam air compressor. This had a flywheel and a sleeve to disconnect the air cylinder and allow the engine to be used for pumping etc. (16" x 30" stroke and 16" air cylinder). Made 1901, installed at Great Dowgas Mine, and offered at auction in September 1913.

Can anyone lend me photographs or negatives of Great Dowgas and also of Kingsdown (Hewas) mines please?

E. W. A. Edmonds. "Newlands", Perranwell Station, Truro TR3 7NW.

Cornish engines at Stonecroft and Settlingstones lead mines



Engine and boiler house of the Stonecroft 70-inch engine today. The square brick stack was felled many years ago.

Kenneth Brown has been to the lead mining area west of Hexham in Northumberland where at least two Cornish pumping engines were employed during the closing years of the 19th century. Information about both of them is incomplete.

Among the papers of the late Tom Harris was an extract from the proceedings of the Institute of Mining and Mechanical Engineers 1871-2 containing a paper by a Mr. F. W. Hall describing tests on the pumpwork of a 60-inch Cornish pumping engine at Settlingstones lead mine in Northumberland. According to the author, the engine had been built by Harvey & Company for Chiverton mine in Cornwall in 1864, but it only worked there for six months. It was subsequently purchased by the Mr. Hall and in 1868 was shipped by sea to Newcastle and erected at Settlingstones. It had strokes of 10 ft and 9 ft and worked three lifts of pumps from a depth of 56 fm.

So one sunny afternoon in early April found me threading my way through the country lanes near Fourstones, west of Hexham, to see if the engine had left any traces. Approaching the hamlet of Settlingstones the narrow road begins to rise, affording a splendid view over a partly wooded valley. I stopped to admire the view and there, with farm building nestling around, was a roofless red-brick Cornish engine house, about half a mile to the north.

Some time was spent finding the lane leading to the farm but finally I drew the car up right in front of the imposing but empty engine house. The farmer Jimmy Short, busy with his lambs with a feeding bottle that had once contained something more potent, willingly consented to my exploring the site. But he adjured me first to call on his neighbour who had obtained from the local record office a photograph of the mine taken in its heyday, possibly around 1875-80.

This is reproduced on page 1. It is a general view of the mine from the south with the Cornish engine indoors and a very tall shears with a small poppet wheel. The smithy and stores still exist as farm buildings and the mine manager's house and office are lived in. But another group of buildings serving the hoisting shaft has almost completely disappeared, along with the shaft itself.

My first suspicion that the engine might not be the one I was looking for was when Mr. Short insisted that the mine was called Stonecroft, although close to the village of Settlingstones. This soon turned out to be the case!

The pumping shaft directly in front of the engine house is capped with concrete but one side of the fill has fallen away and through the opening falling water can be heard. This emerges through an adit in the steep valley close to the mine, where the dressing floors were. Mr. Short said the shaft is 120 fm deep and that the mine closed in 1890; but not before the miners had taken back underground some lead ore which they did not want to fall into the hands of people they thought were taking over the property!

I then began a systematic check of dimensions in the house. Two of the cylinder holding down bolts protrude some distance above the bedstones, and by clearing soil and muck I soon located two more. This proved that there were five on a pitch circle of 3 ft 7 in, which corresponds with a Cornish-built

70-inch engine, not a 60. Longitudinal dimensions confirmed the strokes given by Mr. Hall, the stone seating for one of the shear legs beside the shaft giving a useful pointer to the position of the pump rod. Most remarkable is the fact that the engine's cistern, which is of wood held together by a cage of tall bolts, is still largely intact — after 90 years of idleness!

I then turned attention to the boilerhouse. All four walls are partly intact and there is room for at least four Cornish boilers. By now I was beginning to have grave doubts about the mine's identity, particularly as Mr. Hall's description gives two Lancashires. The farmer says he has located the ends of four flues though only two can now be seen. The door opening from the driver's floor to the firing aisle is intact, as is the opening for the drain from the steam case and, at middle chamber level, that for the steam pipe.

Subsequent enquiry of the Northumberland Record Office confirmed the surprising fact that there were **two** lead mines with a Cornish engine in the Settlingstones area; and that the engine at Stonecroft was indeed a 70. It will now be a case of digging through the Harvey letter books at Truro to see if there is any record of either engine being sent up north from Hayle. Unfortunately the site of the Settlingstones 60 has been flattened: the two engines were only ¼ mile apart.

In an attempt to validate the history of the latter as given by Mr. Hall, I have searched in vain through established sources to see if there was a 60-inch engine at any of the Chivertons which could have been moved to Northumberland. There was a 60 at Wheal Chiverton, known as Cookney's engine, which started work about the right time but is reputed to have continued at work for ten years. She appears frequently in Lean's reporter in the '60s. Moreover she was of 9 and 8 ft strokes having (according to Barton) been converted from the 100 and 60-inch Sims engine at Perran Great St. George known as Katty Dawes' Engine. No other 60 at any of the Chivertons can be traced.

I present this piece of incomplete research in the hope that another member, perhaps somebody living locally, can throw more light. The enginehouse of the Stonecroft 70 is most charmingly situated and is, I understand, the subject of a preservation order. The house is constructed of a hard cement called 'Black Jack' faced with brickwork on both sides — a most very tough form of construction which helps to explain its continued existence and splendid condition. The boilerhouse and other buildings, by contrast, were of ashlar masonry, but the stack was of brick, it was felled many years ago.

In the course of a very pleasant two hours at Stonecroft I examined the large dump. This was reworked in comparatively recent times but has recently been planted with young trees. I found some superb specimens of galena (lead ore) set in what appears to be a porous type of quartz almost like pumice. (I am no geologist!) Also visible is the loading of what appears in the photograph to have been a very small overcrank winding engine, close to the site of the now-filled hoisting shaft.

Disappearing landmarks – the Redmoor enginehouses



The pumping and whim engine houses and stack at Redmoor, near Callington, seen here in 1981, have been demolished in connection with SW Consolidated's bid to reopen the mine for tin. The pumping engine erected by Harvey & Co. for the short reworking in 1888 is believed to have been a 78-inch of upcountry origin.

A little-known Woolf invention

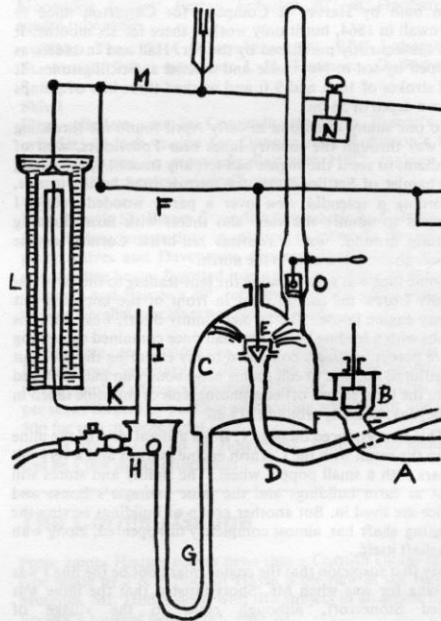
This extract from 'Nicholson's Journal of Natural Philosophy' in 1802 (Vol 2, page 203) was found in the Society's archive material. It is reproduced in full together with the sketch.

Description of an Apparatus for heating Water by waste Steam. Invented by Mr. Arthur Woolf.

The following apparatus was erected at the extensive brewery of Messrs Meux and Co in August, 1800, and has been in use ever since. I saw it work a few weeks ago, and observed with great pleasure the facility and precision with which it operates, and I have great satisfaction in presenting it to the reader as a very judicious and useful combination. In the diagram (plate IX):

- A represents a steam pipe from the brewing copper
- B a valve with its weight
- C the vessel in which the steam is condensed
- D a pipe that conveys the cold water from a reservoir
- E a conical valve through which the water is injected. It is connected with the lever F
- G is a bended pipe to prevent any of the steam from escaping with the hot water
- H is a small receiver from which the hot water may be conveyed to different situations by means of pipes and cocks
- I a pipe open to the receiver to present a vacuum in case the water should be made to descend in any of the pipes
- K a small pipe to convey the steam into the regulator
- L the regulator which is composed of three cylinders, the outside and inside being closed together at bottom, leaving a cavity between, which is filled with water; the middle or moving cylinder is inverted and closed at top. It serves for a piston, and is connected to the lever M, on which is a sliding weight N, by which the quantity and heat of the water may be varied at pleasure.
- O is a valve through which the steam is let out when not used for heating water.

The effect of this engine may be easily understood. The weight of the inverted hollow piston L presses down the valve E by means of the levers, and this pressure may be regulated by fixing the weight N nearer or farther from the centre of the upper lever. When the steam through A has acquired a certain



degree of strength in the vessel C, it raises the piston by its action through K, and consequently opens the Valve E. A sheet of water immediately dashes through, as represented in the figure, and by condensing the steam, suffers L again to descend; and, after a vibration or two, the effect of the steam to raise the piston and of the injection to depress it, balance each other, so that the levers remain nearly motionless. It is evident that the injection will be less, the steam stronger, and the water which passes off through G hotter the nearer the weight N is to the centre of motion. And in this respect the apparatus is so effectual that the water may be heated to 210 degrees, and the quantity that passes off is from 100 to 180 barrels per hour, according to the temperature, as governed by the position of the weight M.

Boiler explosion at East Uny

(from 'Mining Journal' Nov 17 1883)

There was a boiler explosion at East Uny on Sunday which fortunately caused no injury to limb or loss of life. It is a wonder that the consequences stopped where they did. The boiler was the centre of three in the old enginehouse and had been brought from Great South Tolgus, and the casualty is regarded as being due to a weak plate.

Being Sunday, there was no-one at work on the spalling-floors and in connection with the blacksmith's shop, both in the immediate vicinity of the boilerhouse but separated from it by the enginehouse itself. The engineman was, at the time of the occurrence, in the boilerhouse attending to a kettle. He heard a sudden report as if a crack had taken place in the boiler. Thinking little of it for the moment, he was almost immediately made aware of the serious nature of the incident by observing the steam escaping rapidly. He found an exit by the rear door of the boilerhouse, and just after the explosion was heard.

The boiler parted almost in halves, and not only was the steam pipe knocked off the third boiler, the steam in consequence escaping, but the two windows in the enginehouse in the line of the explosion were smashed, and a portion of the roof of the enginehouse carried away. Of the boilerhouse only the two or three large beams running from one side to the other remain. The walls in some parts have fallen from the descent of the roof. The scene presented was a ruinous one; but the agents and Mr Teague, the purser were promptly at work, and matters were soon put straight again sufficient for all practical purposes.

Wheal Concord's plans approved

Wheal Concord, near Blackwater, which was graced by a visit from Prince Charles last year, has won full approval to its plans for further development in the next six years. These will translate the mine from exploratory to full production status and include sinking a new shaft. A nearby railway cutting on the disused Chacewater - Newquay line will be utilised for spoil disposal.

The duties of a Mine Agent

Captain Henry Boyns of St. Just (1819-91), became an underground agent at Botallack Mine in 1857, and six years later was promoted to underground manager. After a year in the post he wrote a memorandum for the committee of management of the mine, which is reproduced in full, in the original spelling:

"Since I heard so much about the duty of Agents at your meeting on Friday (18th November 1864) and what is expected of them to meet the wants of the times, I have taken stock of my own doings, just to see how it would tally and what I have been about under ordinary circumstances.

"For the last 12 months ending Sept. I have taken Charge and looked after on an avrage 154 men Tut and Tributers per month which broke on an avrage 302 fathom per month, see that there were all working answer all questions order and arrange all Traming, Two steem Whims one working the scip about 18 hours per day the other about 9 hours, 3 Timber men with there assistance and see that all Shafts Tramroads are kept in good order for the carrying out of the work. In refering to my report Back for the year I find I have been underground 190 days go every weare down and up throughout the Mine and old myself ready to give an opinion on every thing that take place in the mine make up the whole of the Tut Work and measurements, not a tgrifle to Keep the underground Book right of 120 pairs of men right with maks and prices Keep the account of the Smith Work relating to the underground men, being better prepared to check levels that may be practical Examine every sample of Tin Stuff and be satisfied it is right before it is settled for, make and keep up all plans for the working of the mine and dialings aranging and designing new work for keeping up the weire and tear of the mines filled with concern about the whole that they be successful not forgetting the price of Tin."

Yours very Truly

Novr. 21st 1864

(signed) H. Boyns

Book Reviews

A History of South Crofty Mine, by J. A. Buckley

Truran Publications, Trewolsta, Trewirgie, Redruth £7.95

In this most readable book, the author begins by tracing, briefly, the history of mining in Cornwall from Roman times to the early years of the 18th century when the Bassets of Tehidy were financing the driving of a deep drainage adit from the Red River valley to the village of Pool. The discovery of numerous lodes in the upper reaches of this adit led to the opening up of a number of small mines which ultimately amalgamated to form the extensive East Wheal Crofty.

Originally these workings principally produced copper but at increased depth the lodes gradually changed to tin. In 1854 it was resolved to divide this big concession or 'sett' into two parts, North Wheal Crofty north of the road and South Wheal Crofty on the south side. The former was ultimately worked out, and abandoned in 1874, but South Crofty continued through various vicissitudes until 1886 when its workings were temporarily flooded because of a dispute about pumping between its two eastern neighbours.

However, in 1899 work was resumed but South Crofty had always been worked on a small scale with antiquated plant and with little profit to the shareholders. In 1906 it was realised that there were excellent prospects if the workings were extended boldly westward, but if the mine were to be successful it had to be worked in a completely different manner and on a much larger scale. The old cost-book company was therefore reconstructed as a modern limited liability concern, new capital raised, the mine completely re-equipped and new perpendicular shafts sunk.

From that point in time Mr Buckley recounts the story in greater detail during the whole period of growth and expansion which is still continuing today. During the intervening 76 years the Company has experienced booms and slumps, periods of prosperity and others of great financial difficulty, but the mine still continues to work with, seemingly, still many years of life ahead of it. The present-day South Crofty embraces many smaller mines and, now that it has reached a depth of about 2,300 feet, it is the 3rd deepest mine ever worked in Cornwall and can be numbered amongst the half a dozen largest tin producers of the County.

To an old member of staff of the Company one can detect a few minor errors in the book. Furthermore, while not defending the low wages policy of the then management at the time of the strike in 1939, that dispute was not simply a matter of wages as the reader might think. Nevertheless, by and large, this book is an accurate and very comprehensive history of one of Cornwall's greatest mines and it will be of much interest to the mining man and layman alike. **JHT**

Mines of Devon: North and East of Dartmoor by A. K. Hamilton Jenkin

Devon Library Services, Barley House, Isleworth Road, Exeter EX4 1RQ. £13.50 post free

This last of the works of the late Dr. Hamilton Jenkin contains the remainder of his material on the mines of Devon, gathered over a period of many years. Unlike his previous books, however, this one has been produced in a limited edition, mainly for use in libraries, and it is not known how many copies may still be available for sale to individuals when this issue of the Newsletter appears. Early application is therefore advised: the book is obtainable by post, only from the address above.

The content is in the author's inimitable style and fully referenced. An objection to the book however is that it has been lithoed from normal typescript with the type widely spaced. This results in an unwieldy A4 page book, difficult to carry about and refer to on sites, in contrast to the handy size of its predecessors. Further, the picture captions are in the front of the book while the plates to which they refer are near the back! So while the Devon Library is to be congratulated on the steps it has taken to ensure that such valuable material is made available, it is to be hoped that increasing interest in the subject as the years pass will lead ultimately to republication in normal format. **KB**

ALSO RECEIVED

Handlist of documents referred to in footnotes in "Mines and Miners of Cornwall" and "Wendron Tin"

Cornwall Record Office, County Hall, Truro. 50p.
When Dr. Jenkin was carrying out the research for his "Mines and Miners" series very few documents at the Cornwall Record Office were catalogued and numbered, and consequently he was unable to give precise references. Most of the records which he consulted have now been listed and can be identified and located by means of individual reference numbers.

Those listed as **WH** with no following number were withdrawn from the Record Office some years ago; those described as **RH** are in the process of being re-catalogued and as yet have no reference numbers. **RIC** indicates that the document is at the County Museum.

A few of Dr. Jenkins footnotes are so vague as to be unidentifiable either by the Record Office or the County Museum; the Cornwall Record Office would be grateful for help with identification.

News from Australia

The following is an extract of a letter dated 5 March from member May Cocks of Macclesfield, South Australia, addressed to the Membership Secretary:

Today is St. Piran's day and at last I have three radio stations recognising same. Until now the only Saints that we have heard about out here are St David (Welsh) and St Patrick. In South Australia, the population has more Cornish and German background than Irish or Scots, etc.

In 6½ hours we will carry St Piran's flag and our Cornish banner through Adelaide — the occasion being our biennial Festival of Arts opening. The temperature today exceeds 38°C. I hope it will be a few degrees cooler for the 7pm street procession.

South Australia was saved from virtual bankruptcy in the early pioneering days by the productivity of the Cornish miners in our 'Little Cornwall' or Yorke Peninsula area. We are extremely active out here as seen by our biennial Kernewik Lowender, or Cornish Festival. Last year in excess of 32,000 Cornish folk (or descendants) attended the fair at Moonta, whilst at least another 30,000 did not get in but stayed in the streets of Moonta, Kadina and Wallaroo.

Society publications

The following charges for Postage and Packing supersede those given in Newsletter No 35 for November 1981, for single items ordered from the Publications Secretary:

Journals, Nos 1 to 7 40p. No 8 30p. Any four copies £1.20 (Devon & Cornwall £1.00) 5, 6 or 7 copies £1.57 (Devon & Cornwall £1.37).

Cornish Explosives £1.90 (Devon & Cornwall £1.70)
Industries of Penzance 25p.

Dolcoath — Queen of Cornish Mines 35p.

A.I.A. Tour Notes, 1978. 25p.

Industrial Housing in Cornwall 25p.

Illustrated Catalogue, Perran Foundry 35p.

Cornwall Newspapers 20p.

Sir Goldsworthy Gurney 30p.

Bound Newsletters, Vol II 1975/77 55p.

Account of Wrecks 25p.

Trevithick Society Tie 20p.

Gramophone Record, Trevithick Bicentenary Service, Truro Cathedral 1971 £1.40.

Newsletters, individual copies if available — 25p in stamps.

Charges for the items themselves remain as listed in the November newsletter: only the postage and packing charges have changed, to meet recent GPO increases.

Coming events

Saturday, 5 June

Visit to Morwellham and Tamar River Trip

Coach departs:

- 10 am from Camborne School, Cranberry Road
- 10.15 am Alma Place, Redruth (near bus and rail station)
- 10.40 am Truro, by-pass opposite UBM Harvey car park
- 11.30 am Liskeard Car Park. There will be a break for coffee, calling at the station for convenience of members travelling by train.

Return to Camborne School will be about 10 pm — traffic permitting. (Full particulars of this trip appeared on page 7 of the February Newsletter.)

Friday, 6 August

A talk on St. Ives Consols will be given at the Ambulance Hall, Redruth at 7.30 pm by Mr Eric Edmonds.

Saturday, 7 August

Field Trip to St. Ives Consols mine sites, led by Mr. Eric Edmonds. Recommended dress — as for blackberrying, in the rain!

1. Meet at Engine House Inn, Cripplease (SW500368) from 1 pm onwards. Bar food available here. Leave cars in the car park. At 2.30 pm walk to Robinson's section, via footpath from the inn, entering site at SW498370.
See crusher station, reservoir, Robinson's Shaft, mill, skip road shaft and pump station. Return by foot to car park.
2. Drive to Frank's Shaft, Giew, parking off the road (SW501372) see engine house, winder and compressor loadings and other ruins.
3. Drive to the car park of the Buffalo Club, Helleveor (SW503397). Walk across main road to East Virgin Shaft (SW504398). See loadings, substation, mine office, then walk on to Sump Shaft (SW506399).
4. Two sites have been omitted, because of parking difficulties and also because little remains to be seen. Members can make their own arrangements if they wish to see them:
 - (a) Victory Shaft, The Burrows, Trenwith (SW512401). Now enclosed in yard of South West Water Authority, with square pump-house over shaft and some concrete loadings inside fence by footpath.
 - (b) Consols Power House (SW509400). Now covered by pair of semi-detached houses forming Lower Penbeagle Place, and reservoir between houses and Higher Stennack now covered over.

24-25 September — AGM weekend

24 Sept. Lecture "The Perran Iron Lode", Ambulance Hall, Redruth, 7.30 p.m.

25 Sept. Field trip to the Perran Iron Lode, guided by Mr. Ross Polkinhorne. Assemble at New Inn, Goonhavern (on Redruth-Newquay road) at 1.45 p.m. sharp.

The field trip will end in time for members to make their way to Treviglas School, Bradley Road, Newquay, and have tea at 5 p.m. The Annual General Meeting will take place at the school, starting at 6.30 p.m. Further details with a booking slip for members ordering tea will be given in the August newsletter. Please note that the August newsletter will ONLY be posted to members whose subs are FULLY PAID UP.

Frank Booker

It is with sorrow that we inform members of the death in Essex of Mr. Frank Booker, who was a Member of Council for many years. An obituary will be published in due course.

The Trevithick Society for the study of the history of Industry + Technology in Cornwall incorporating The Cornish Engines Preservation Society and The Cornish Waterwheel Preservation Society