

THE TREVITHICK SOCIETY

NEWSLETTER No. 39

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Great Perran Iron Lode visit: members inspecting the huge openwork at Treamble on 25 September. Story pages 4-5.

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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

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Editorial

The November issue of the newsletter has to be prepared in some haste so as to include an account of things that happened during the weekend of the Annual General Meeting. As recorded elsewhere, the number of members attending was highly satisfactory, especially in view of the fact that last year's subscription increase inevitably cost the Society a few members. A major plank of the Society's policy for this coming year is a recruiting drive. Every member is asked to use his personal contacts to help achieve a substantial boost in membership, in keeping with our status.

While the article on page 4 covers the Friday evening lecture and Saturday field trip, the proceedings of the AGM itself will be produced in the form of Draft Minutes and circulated with next August's newsletter. Only the salient points from the meeting have been plucked out and recorded as news items in this issue. Two new members of Council were elected to fill vacancies — Bill Newby and John Corin.

I regret having to hold over an article on a "forgotten" engine: the 48-inch cylinder atmospheric pumping engine at Elsecar in South Yorkshire. It is gratifying to learn that this unique survival is once again receiving attention, though it looks as though steaming is still some time off. The author of the article is Charles Blick, President of the Historical Metallurgy Society and it will appear in the February 1983 issue of the Newsletter.

We are pleased to welcome our Treasurer, Marcus Trinick, back in harness after being away on an extended course; we owe our thanks to fellow Council member Tony Brooks for stepping into the breach in the meantime. Our Publications Officer, Eric Edmonds, will be abroad for part of January and February 1983 and asks that members contemplating placing orders from the Publications List published on page 8 do so without delay.

Attention is drawn to the Journal Editor's change of address which is duly recorded on the front page.

Press day for Newsletter No. 40 will be 1 January, 1983.

Kenneth Brown

Drive for more members

One of the important decisions taken at the AGM was that there will be no increase in subscriptions this year. They will remain as now — £5.50 for an individual member, £7.50 for family membership — through 1983. However the Society still needs to increase its income so as to maintain and improve its services. Each member is therefore asked to enroll at least one newcomer to the Society before next year's AGM.

With each copy of this newsletter the Membership Secretary is enclosing a membership leaflet with enrolment form; he will willingly supply more on request. It has been proved in the past that personal contact is the most effective way of gaining new members. Everyone must have friends who are on the fringe of the Society's activities, and anyone who gives his copy of the newsletter away to an interested party can obtain a bona fide replacement from the Editor, free of charge, while stocks last.

It is perhaps not always appreciated that in addition to receiving the quarterly Newsletter and the annual Journal, members enjoy free admission (in season) to the following Cornish attractions:

- Poldark Mining Museum, Wendron
- Tolgus Tin, near Redruth
- East Pool Mine, whim beam whim and pumping engine.

It is hoped to extend this concession to other places of interest in the field of Cornish engineering history.

Recording — plan of action formulated

Although Cornwall must be the richest part of Britain for mining and industrial remains, no systematic survey of what survives has ever been carried out, nor are most of the remains under any kind of official protection.

It was announced at last year's AGM that the Society had appointed a Recording Subcommittee to study the problem and

recommend what part members might play, and after several discussions in Council, a plan has now been formulated and was presented by Bill Newby at the 1982 AGM. (Mr Newby is the Recording Sub-committee's convener.)

There are basically two requirements. One is to report what survives on nominated sites (i.e. those which have never or not recently been surveyed) and the other is to assemble lists of people all over the county who could step in at short notice whenever an important piece of evidence is under threat of destruction.

For various reasons, the first operation cannot start until the Institute of Cornish Studies has completed an index of industrial sites. This takes the form of a desk study working from old O.S. maps and other documents. It is due to be completed in February and it will then become possible to start drawing up a list of sites for possible action. To deal with the second contingency, Mr. Newby would like to hear now from any member wishing to be included in a rescue team in case the need suddenly arises to record a site under threat.

To encourage volunteers, the Society plans to hold a special weekend next summer when members interested will be given guidance in the process of identifying and interpreting evidence on the ground and presenting the findings, working both in the lecture hall and in the field.

In the meantime, Mr. Newby would be pleased to hear from any member interested in participating in the exercise. No previous experience is needed, nor is any special equipment essential though a camera, measuring tape and notepad are. He has a two-page document entitled 'Crisis in recording' ready to send to any member who sends him a stamped addressed envelope. His address is Bill Newby, "Gonew Viscoe", Lelant Downs, Hayle TR27 6NH. Phone: 0736-740337.

Highest output for 63 years

The year 1981 saw Cornwall's highest tin output for 63 years, representing 48 per cent of the nation's requirements. That is the proud message contained in the 33rd annual report of the Cornish Mining Development Association. The actual tonnage, 3898 of metal in concentrate, compares with 3027 in 1980. In addition, the tonnage of zinc (10,855) and copper (665) were both more than double.

However tin's wildly fluctuating price coupled with inflation made 1981 a year of anxiety for Cornwall's traditional industry: one that nevertheless saved the nation some £33 million in replacing imports.

Progress by the principal active companies may be summarised as follows: Mount Wellington was connected with Wheal Jane underground, enabling the two mines to be worked together, and the year saw a start of a 2-year project to deepen Clemow's Shaft at Wheal Jane to 1600 ft in order to reach new orebodies. With an output of 1500 tons of tin and 10,855 tons of zinc, a modest profit was made. (Carnon Consolidated which operates Wheal Jane is now wholly owned by RTZ.)

Southwest Consolidated's diamond drilling at Redmoor gave encouraging results and July 1981 saw the company apply for planning permission for full underground mining. Wheal Concord came into production during the year, more than 8,000 tons of ore being despatched during the last quarter. South Crofty still failed to make a profit. Her mill treated a quarter of a million tons of ore during 1981, nearly 35,000 tons of which came from Pendarves. Double-shifting of all underground operations was introduced and further expenditure, both above and below ground, authorised.

Geevor's operations during 1981 were unremarkable. Larger worked-out areas in the old Levant mine than had been expected impeded progress in dewatering to the 350 fm level. Allen's Shaft (Botallack) was concreted to a point 23 m below the collar, the surrounding area cleared and a steel headframe brought on to the site. (This still awaits erection at the time of writing.) Although the mill treated more than 200,000 tons of ore, this included some low-grade material off the dumps.

The CMDA report concludes with an urgent appeal to Parliament by its chairman, Jack Trounson, to sort out the very unsatisfactory legal situation regarding mineral ownership, which is hampering development in Cornwall.

St. Ives Consols visit

On Friday 6 August Mr Eric Edmonds gave an illustrated lecture to a small but appreciative audience in Redruth on St. Ives Consolidated Mines Ltd. The company was formed in 1907 after obtaining leases from several disused mines which included Giew, Rosewall Hill & Ransom and Wheal Trenwith. In spite of progressive policies, such as using electric power throughout, it went into liquidation in 1915 although the Giew mine was worked until 1922.

The overhead transmission line from Giew powerhouse to Consols and Trenwith was the first high voltage line in Cornwall. The Mirrlees diesel engines at Consols power house were the same pattern as the first ever diesel engine, now in the Science Museum. In 1910, experiments in the electric smelting of tin oxide were carried out using power from the Consols sub-station. Pitchblende from Trenwith was sent to a subsidiary of the company at Limehouse to be used by Madame Curie in her experiments to extract radium.

To see what remains of the venture, a select group of members and friends met on the following Saturday at the Engine Inn, Crippleasease, where the 50-inch pumping engine house on Frank's shaft of the old Giew mine still dominates the skyline. Ore was kept in the empty enginehouse before being trammed across the road to the crushers and the mill. Beneath blackthorn and bramble were found the plinths of Skip Road shaft headgear, the loadings of Robinson's Shaft winder and the foundations of the crusher on either side of the sunken tramway. The foundations of the various levels of the mill and the square brick chimney of the calciner are virtually unaltered.

At the St. Ives sites little remains. Sump Shaft is recognised by the upright steep rails which reinforce the granite wall along Higher Stennack. Part of the buildings have been made into a bungalow and houses have been built on the site of the old Consols power house at Lower Penbeagle Place.

It is a pity that Mr Edmonds' meticulous research and preparation was not enjoyed by more members. WN



Society members on the site of Frank's Shaft electric winder on the Giew Section of St. Ives Consols. Beyond is the house of a 50-inch pumping engine used in the previous working, boilerhouse walls on right.

SHADOWS ON THE WALL

by Kenneth Brown

It is dark outside but warm and cosy here in the engine-house. With the soft swish of steam, the click-clack of the highly-polished gearwork and the dancing shadows on the wall, what more could a steam-minded lad wish for ...?

A slight thump from overhead — then another, a little louder. "Will you take a little steam off the governor, Mister?" says the soft Cornish voice in my ear. I rise obediently, reverently spin the wheel back half a turn, then rejoin the grey-haired driver on the high-backed settle.

"I mind the time this engine worked at Wheal Grenville", the voice went on "and when Goold's 80-inch engine on the same mine broke her bob". (A mental picture flashes of the two enginehouses as they are today, derelict on a windswept hillside).

How did the mine keep going after a broken beam?

"This engine was speeded up, but working alone she couldn't hold the water" says my friend. "Holman's cast a new bob in a hurry for Goold's engine and the iron was still so hot when it arrived that the men putting it up had to wrap rags round their hands. But they put the engine to work again in seven weeks and the mine was saved."

We sit and ponder this achievement.

Beside us, the great engine relentlessly pursues its task. Up, pause, down, pause, the brass ring on the plug rod doing a little dance down the hole in the floor at each stroke due to that bounce of an engine draining a mine in depth. What would happen to us sitting here if that great bob rocking away upstairs in the darkness did what Goold's engine did and the piston came down in a shower of debris? I dismiss the thought.

Suddenly a roar of steam and a bang as the stoker, perspiring from his efforts on the four boilers, comes through the door from his domain. He and the driver greet each other in broad Cornish. "You'll be on your own a minute, my son," says the driver to me. The two men disappear into the boilerhouse with another roar and a bang as the door slams.

Silence again save for the clickety-clack, clickety-clack, the

intermittent hiss of steam through the top nozzle and 'choonk' from the exhaust valve. Outside in the darkness a steaming river of water from the subterranean depths cascades in great gulps down the wooden launder. Then a bell jangles. Behind me an arrow at the top of its slot shows that our engine is not quite keeping pace with the water entering the labyrinth of workings a third of a mile beneath my feet.

I rise and twirl the brass cataract wheel near the floor clockwise a quarter turn as my friend has taught me. The bell gives a short ring then stops. Back on the settle I admire for the hundredth time the engine's gleaming brightwork, the huge 90-inch cylinder, the green painted bottom nozzle with little gold embellishments by my driver friend, the well-scrubbed table top, the rhythmic sound accompaniment to the moving shadows on the wall.

Who outside Cornwall could ever imagine that such splendid yet primitive machines are still pumping, day and night, 100 years after Dr. William Pole wrote his famous treatise? The handles move up and down as if guided by an unseen hand. I try to imagine St. Aubyn's 80-inch engine at Tregurtha Downs on wet days going at 13 strokes a minute, three times as fast as this one ...

Then I think of my friend the driver. He must be well past normal retiring age, but men of his calibre and experience are not easy to find today — not in wartime. He has spent all his working life on the mines. For many years he drove the beam whim at Pascoe's Shaft on the South Francis section of Basset Mines, walking there and back every day in all weathers from his home in Pool village. Traditionally winding engine drivers earn better money, but since the responsibility and physical effort are greater, they tend to be younger men.

My friend works a strange shift pattern with his two mates, 12 hours on and 24 off. Only on a Sunday is he likely to be called upon to stop the engine and put her to work again, when

Concluded at foot of page 7

AGM weekend — a resounding success

Some fifty members attended the Friday and Saturday programme of the Annual General Meeting weekend which was most gratifying for the organisers after certain difficulties in finalising the arrangements.

The programme began on the Friday evening, 24 September, when Ross Polkinghorne, a retired mine manager and lecturer from the Camborne School of Mines gave a fascinating discourse on his favourite subject, the **Great Perran Iron Lode**. This massive vein, 50 ft wide in places, extends over four miles inland from Perran Beach, through Penhale Sands and Treamble. It has a long history — Dr. Borlase wrote about it in the 18th century. Production figures are impossible to assess with any accuracy but if the known iron ore tonnages of Treamble, Duchy Peru and Great Retalack — the principal workings — are added together, they amount to 67,150 tons in the 90 years 1850 to 1940.

In 1937 Lloyds Perran Iron Company introduced, for the first time in Cornwall, heavy earth-moving equipment to their vast opencast working at Treamble, the remains of which can still be seen. The bulk of the ore in the Perran lode is iron carbonate with an iron content of 26 to 48% compared with 70% for hematite. The extra cost of roasting the ore to convert it to oxide made the venture uneconomic. However, work continued during the war to meet the extra demand for iron.

An interesting by-product was discovered at Treamble. The dark iron oxides in the killas or slate walls of the lode had been leached out to leave a near white soft powdery rock. The source of the leaching agent, believed to have been sulphuric acid, is uncertain. This powdered material made an excellent glass polish and in the 1920's it was sold under the name Trewin at 10½d (about 4½p) per tin. During the war a more important use was found; being highly absorbent the material was mixed with bitumen to provide a quickly laid surface for airfield runways.

Mr. Polkinghorne gave a summary of the ores found in the lode and suggested that, as technology increases the possibility of working lower grade ores, there might still be a future for the Perran Iron Lode. A number of ore specimens were displayed and these created considerable interest in an audience already infected by Mr. Polkinghorne's great enthusiasm for his subject.

Unfortunately due to ill health Mr. Polkinghorne was unable to lead the Field Trip to the Great Perran Iron Lode on the Saturday, 25 September. The breach was most ably filled by our president Jack Trounson, who extended the tour to include West Chiverton and the St. Agnes district. There being insufficient time to organise a coach, Messrs Trounson and Bullen planned the tour on the basis of a convoy of cars — and 24 turned up at the appointed meeting place! It is a tribute to their detailed planning that seven points of call were made during the afternoon without the schedule going adrift by more than 10 minutes, and arrival at the Camborne Community Centre for tea was two minutes early.

The first call was at **Duchy Peru mine**, east of Treamble, where the Great Perran Iron Lode had been worked by deep mining methods. Mr. Trounson pointed out the timber-built count house, now a private residence, and Roebuck's engine shaft on which a 60-inch pumping engine had stood. Duchy Peru worked from about 1858 to 1886, by which time it was down to 80 fathoms, and was notable for the amount of zinc produced, some 20,000 tons compared with 21,400 tons of brown hematite, the main product.

The long convoy then proceeded along a narrow lane for about half a mile to the west where members were able to obtain a breathtaking view down into the huge openwork at **Treamble**. Though now very overgrown with bushes, it is still an impressive sight.

Records of production at Treamble start in 1859 at which time the Great Perran Iron Lode was being worked by underground methods with a 60-inch pumping engine to keep out the water. More recent opencast methods brought the first use of heavy earthmoving equipment to Cornwall, and crawler-hauled scrapers and mechanical excavators appeared in photographs of the working when active which Mr. Trounson passed round. As a point of interest, Treamble when being

deep mined was served by a branch of J. G. Treffry's Cornwall Minerals Railway, from Newquay via East Wheal Rose and Shepherds, the Treamble end of which was closed in 1888. In 1905 the Shepherds-Newquay section reopened as part of the GWR Chacewater-Newquay branch, and the Treamble branch saw brief service in World War 2. Mr. Trounson drew the party's attention to the stack of South Mount Mine, and Penhale Point on which the 60-inch enginehouse of Wheal Golden used to stand, away to the North-west.

From Treamble the party made its way to the famous **West Chiverton** lead mine near Zelah and assembled inside the enginehouse which was built in 1868 for the Loam-designed, Harvey-built 80-inch engine on Batters' Shaft. Mr. Trounson drew attention to the unusual design of the house with the stack in the middle of the rear wall (on the style of some of the pumping engines in the Christow lead-mining area of Devon). Batters' 80 had the cylinder opening in the north wall of the house which Mr. Trounson believes was done in order to make the house more impressive when seen by shareholders visiting the count house some distance away. This arrangement meant that the engine bob had to be heaved in over the shaft, for which purpose the shaft was equipped with a particularly massive tubular iron shear legs. It also made the side wall of the enginehouse weak, the strength being made good by iron tie rods.

Mr. Trounson pointed out the site of Hawke's Shaft, now obscured, where another 80 had stood, and the remains of the stamping and crushing engine house demolished wantonly by explosives after the war. The engine that had stood here later became Fortescue's whim at Wheal Grenville. West Chiverton continued production until 1886 by which time Batters' Shaft had reached a depth of 120 fm below adit and some 45,100 tons of lead ore had been sold, in addition to blende and a little copper. Batters' 80 was taken back by Harveys and later resold to Gwennap United Mines, where it was erected on Garland's Shaft. It only worked here for seven months: in 1905 it was sold to Condrurrow United, near Camborne, and was scrapped during World War 1. As a point of interest, all three enginehouses this 80 occupied are still standing.

Next the convoy proceeded to the St. Agnes district where the first call, down a track which tested everyone's car suspensions, was **Wheal Coates**, spectacularly perched on the cliffs north of Chapel Porth. The party first visited the complex of ruins comprising the house of an all-enclosed beam whim (later moved to Trevaunance); the house of a geared horizontal Holman winder; the house of a long-indoor-stroke stamps engine and the foundations of a gas engine used to drive stamps in a short-lived 1919 reworking.

Mr. Trounson pointed out the house of the 36-inch pumping engine at a lower level which had been splendidly restored by the National Trust. This house also contains the foundations of a horizontal Tuckingmill Foundry rotative pumping engine moved from the eastern part of Wheal Agar and used in the last working. The mine extends to a depth of 80 fathoms below adit and has produced both tin and copper, but never in large quantity.

The convoy then moved about a mile along the coast road to **Trevaunance**, marked today by an enginehouse for the beam whim from Wheal Coates, and by the stack and part of the boilerhouse of the Harvey 50-inch pumping engine which later went to Gooninnis and still exists at Goonvean Clayworks. Chief point of interest is an ancient open working whose age is not known with certainty but which exhibits a large number of small lodes dipping seawards.

Last call was a piece of high ground near Turnavore Shaft, **Polberro**. Here the long snake of cars caused consternation as it passed down the side of the St. Agnes Football Club ground, with a game in progress! Mr. Trounson pointed out the principal mines of the district: Penhalls (marked by a bungalow count house) and Wheal Kitty across the valley to the north, West Kitty to the east and closer at hand Wheal Friendly and Polberro. Turnavore Shaft has an enginehouse with Gothic windows which was occupied by a 60-inch engine until 1892 and used as recently as 1937-41 as a miners' change house. In this most recent working, the shaft was deepened

Right: Some of the party outside the famous Batters' 80-inch enginehouse at West Chiverton



Below: Our President describing operations at Wheal Coates inside the house formerly occupied by a horizontal geared whim



from 108 to 162 fathoms, making it the deepest in the St. Agnes district. The intention was to intersect the rich tin lodes which had been worked by Wheal Kitty and West Kitty until the slump killed Wheal Kitty in 1930. Some tin from the latter's lodes was indeed produced, but wartime conditions put an end to this promising trial.

The last call was to the surface works of **Wheal Concord**, near Blackwater, Cornwall's newest mine and which started producing tin only 18 months after starting to clear the site. Wheal Concord was honoured by a visit from its mineral lord in the shape of HRH Prince Charles early this year. Mr. Trounson, who has been largely instrumental in directing the company to explore the property, explained the considerable achievement by a team of Cornishmen only 45 strong. The company recently received planning permission to intensify its operations for the next 60 years and prospects are looking good, both to the south where some cross-cutting has been carried out, and to the north. With the shaft now down 380 ft from the surface, the mine is working on 7 or 8 lodes. At the time of the Society's visit, the quantity of tin ore that had been sent to Wheal Jane for processing was in excess of 16,000 tons. The mine was also producing considerable quantities of zinc.

Early history of Wheal Concord is now lost in the mists of time but it is known to date back to the 18th century. At the time of a reopening in 1811 the 'Royal Cornwall Gazette' reported that the mine had been idle for the past 19 years. The mine was working on a small scale when an engine was erected in the 1820s. As a postscript, may I quote from Lean's Engine Reporter dated October 1824: "Wheal Concord, 42 inches, single, strokes 7 ft and 5 ft 9 in, beam over cylinder. Working three lifts of pumps 8, 10 and 12 in in two shafts perpendicularly; 40 fm of horizontal rods, connected by two balance bobs, at surface. Engineer: Gray". Today's generation of miners have found spanners and other evidence of early machinery underground. **KB and WN**

Correspondence

Dear Editor,

Major White's punchbowl

Far be it from me to question any statement by Jack Trounson on mining matters, but I have to cast doubt on a legend he quoted on page 17 of his admirable 'Mining in Cornwall', Vol 2. The caption to the photo of Major Dick White, purser of Levant Mine, records: "It is said that his particular brew of punch was so potent that the smell of it a quarter of a mile away would knock any man blind drunk"!

The man standing on Major White's right in the photo is my grandfather but alas I never knew him and only have my father's hearsay evidence that the punch was a potent brew. However, the other day, by chance, I came across in a publication the recipe for a punch attributed to Major Dick White. It was not long before I found an occasion to brew this remarkable concoction in aid of a house-warming party. I have to report that although the smell was wafted through the windows to the approaching guests and the drink was highly praised it did not prove as potent as the legend suggests — which was perhaps just as well.

For any readers who may wish to indulge in this rather expensive but highly recommended punch the recipe is as follows: one bottle of Jamaica rum, half a bottle of cognac, one tumbler of lemon juice, one whole lemon rind in the piece, a dash of Benedictine, two pounds of sugar. Put the sugar, lemon juice and rind in a gallon jug, add the cognac and rum. Fill with boiling water poured from a height. (Make sure that you have a jug large enough to hold a gallon before you start, there are not too many about.)

The punch was a feature of the Count House dinners now long past. May the day come when the price of tin is so favourable that Cornish mines can dispense this brew at annual general meetings!

Yours sincerely,
John Corin

Gwel Efan, Church Street, Newlyn, Penzance TR18 5JY.

* * *

Dear Editor,

Cornish stacks

I have just read Jack Trounson's very interesting article on Cornish stacks and engine houses, in the latest Journal of the Trevithick Society. His account of the strange little stack at Wheal Treasure reminds me that there used to be two such stacks at the now vanished Hayes Iron and Steel Works, Stourbridge.

They stood side by side, serving two small billet reheating furnaces and they were of exactly the same construction as that at Wheal Treasure; old boiler flues stood on end, with a few courses of brick built on the top flanges. When the furnaces were built they would be coal fired and the brick extension would be necessary to get enough draught. In their last years the furnaces were fired on oil and the height of the stacks would be of no importance. In fact I knew of several such furnaces which had no stacks at all — just a vent pipe through

the roof. But the Hayes stacks served to the end. I have a colour transparency of them taken in 1963. It is not a very good picture but the construction can be seen with a magnifying glass.

Incidentally, there is a beam pumping engine house preserved near here. Cobb's engine, Warren's Hall, Dudley (on the western outskirts of Rowley Regis) used to drain a colliery. The house and square stack (of red brick) are preserved as an industrial monument by the local council.

Your sincerely,
Keith Gale,

19 Ednam Road, Goldthorn Park, Wolverhampton WV4 5BL.

* * *

Dear Editor,

Miners' scales

Reading your article in Newsletter No. 37 on 'The duties of a mine agent', renewed my curiosity into the use of a small pair of scales in my possession.

They consist of two shallow brass dishes, diameters 1½", which hang from a balance 4½" long. The pocket metal case is similar to an old fashioned spectacle case. Besides the scales it contains two small brass weights, one approx. ¼oz, the other less.

They belonged to my grandfather, Henry Eade, and on the birth certificate of my father in 1875 at Pensilva, Henry Eade describes himself as a mine agent. I should like to know what he weighed and why? Incidentally he worked at Caradon, East Cornwall, then went to copper mines in Chile.

Yours sincerely,
A. D. Eade,

Claremont Farm, Callington, Cornwall PL17 8EA.

* * *

Dear Editor,

Maritime industrial history of Bideford

Basil Greenhill's well-researched paper in Journal No. 9 on the maritime history of Bideford and the other 'Bar' ports — Appledore, Braunton, and Barnstaple — prompts me to add a short footnote.

My father's family are the Stribblings of Barnstaple, who were master mariners, mates etc. of many ketches, and occasionally schooners, and also barges on the Taw, Torridge, and Caen (Braunton) rivers. Of the former were the "C.F.H.", "Garlandstone" (still afloat) built at Calstock by Goss, the "Mary Stewart" — a schooner cut down to ketch rig, the "Emily Barratt" built at Runcorn, and the "Democrat". The "Result" now at Carrickfergus — originally a three masted topsail schooner — is still registered at Barnstaple so far as I know and was sailed by my forbears for some years.

When still at school, I was given a trip on the "Agnes", then owned and skippered by Peter Herbert of Bude, who is still very active in the coastal trade. The "Agnes" was a fair age, being originally the "Lady Ackland" — a smack, but lengthened into a ketch; she was a strong little vessel with almost "Apple cheek bows" — the opposite to "Clipper" bows, her fo'csle was small but cosy.

Yours sincerely,
Roy Shambrook,
29 Fairlawn Grove, Chiswick, London W4 5EJ.

* * *

Dear Editor,

Francis Trevithick at Crewe

The above article in Newsletter No. 32 (February 1981) gave no reason for the departure of Francis from Crewe, usually somewhat vaguely mentioned in railway literature. My contention that such references are unreliable has been borne out on reading Dr. Gourvish' work "Mark Huish and the London and North Western Railway — a study of management" (Leicester University Press, 1972).

This deeply researched and impartial work throws new light on a period in which the company organisation structure created in 1851 and continuing to evolve as the size and scope of management increased (with the railway) gave rise to difficulty and friction. Quoting Dr. Gourvish:—

"Moorsom (a prominent director) stated, in retrospect, that the crux of the company's difficulties had been the fact that administration ... had been hampered by the fitful interference of individual directors: 'It is this which has spoilt our chief officers, destroyed their responsibility, and made them a sort of hybrid' he wrote in 1858. Trevithick had also recognised this. In his letter of resignation he blamed the company's troubles upon the unsettled relations between directors and the executive, and his own dismissal not upon criticisms of his control of his department — the ostensible reason used by the directors — but upon disagreement over expenditure."

Against opposition, certain directors wished to centralise control of three locomotive departments under one man. Influential director Moon did not favour McConnell of the southern division, and although himself a very keen economist ignored the good work and economic housekeeping of Francis at Crewe. His protege Ramsbottom of the north-eastern division was given control of both northern divisions in 1857, and later of the entire LNWR locomotive department.

Dr. Gourvish opines that there could be some "Whitewash" in Trevithick's letter, but also notes that he and others who fell — including General Manager Huish — "were all officers of great experience, respected in railway circles. But their comparative autonomy worried the board."

Yet exceptional autonomy was enjoyed by a later protege of Moon when Chairman of the Board — the notable F.W. Webb. He is more remembered in the railway sphere for the vagaries of his compound locomotives than for his more numerous and longer-lived types, or for his outstanding advances in production methods. (A virtue of Francis in earlier days.)

Obviously Francis was victim of something not confined to the 20th century — The Power Game. As Dr. Gourvish's book makes apparent.

Yours sincerely,
Len Belk,

116 Irby Road, Heswall, Wirral, Merseyside L61 6XQ.

* * *

Dear Editor,

Serpentine

For some time I have been an avid collector of Serpentine but found it difficult to discover any information about its working and sale. I have discovered an article in *Country Life* dated 8 April 1971 by Derek Washington which describes the remains of a factory at Carleon Cove near Ruan Minor, Cornwall. I would be interested to know if any further work has been done on this site or on any other Serpentine working sites and whether any members are interested in the history and collection of artefacts made from this rock.

Yours sincerely,
Stuart B. Smith,
Deputy Director and Curator, Ironbridge Gorge Museum,
Ironbridge, Telford, Salop TF8 7AW.

* * *

Dear Editor,

Pen-y-Darren locomotive

With reference to Mr Tomalin's remarks in reply to my letter (Newsletter No. 31, May 1982) he has somewhat misconstrued its contents. No reference was made to Trevithick's London Carriage of 1803 or other inventions etc. of the time as the letter was primarily concerned with the Penydaren adventure.

I quote 'His inventive mind would already have been occupied with further ideas ...' of which the London Carriage would be one. This is not contrary to facts in any case, but I should point out that it was more than probable that it was the interest and financial backing of Samuel Homfray that made the Penydaren project possible. Although the London Carriage 'could in present day terms be considered a road locomotive' by some, it is rather irrelevant to the main point of the letter.

Referring to Richard Crawshaw, what Mr. Tomalin says is probably correct as Trevithick's letter "Life of Trevithick" page 160 refers to "Mr Homfray and the Gentleman", i.e. if Anthony Hill was acting as arbitrator, although Dickinson appears to give no credence for this. Perhaps Mr. Tomalin

would care to provide details and facts regarding the 'bet' as it would be important in correcting a long established belief that the bet was between Samuel Homfray and Anthony Hill.

Yours sincerely,
John F. Wellington
"Wheal Rose", Smithaleigh, Plympton, Devon.

* * *

Dear Editor,

Herodsfoot explosion

I am researching family history and am seeking to establish the correct date and circumstances of the Herodsfoot mine powder mill explosion or disaster. This happened about the turn of the century or even as late as say 1914 or so. The mine is marked on the O.S. map just north of Looe. I have tried several reference libraries with no success — including the School of Mines at Camborne.

Any information however small that your members might come up with would be gladly received.

Yours sincerely,
L. Devonish,
118, Dugdale Hill Lane, Potters Bar, Herts.

Book reviews

The Caradon & Phoenix Mining Area by Roy Shambrook
NMRS Publications, 41 Windsor Walk, South Anston,
Sheffield S31 7EL. Price £3.50 (including postage).

British Mining No. 20, the latest in the series of memoirs and monographs published by the Northern Mine Research Society, is devoted to the mines clustered around that windswept upland to the north of Liskeard called Caradon Hill. Compared with other mineralised areas in Cornwall, the period of activity was relatively short but highly intense as today's extensive ruins of enginehouses, railways and shafts bear witness.

The author is a member of this Society, a noted authority on the area, and the publication lives up to its expectations. He devotes a complete section to each principal mine in the two groups, South Caradon to the south of Caradon Hill and Phoenix United to the north. He deals at lesser length with some two dozen other copper and tin mines, the more obscure ones being dismissed in no more than a paragraph. The text is concerned more with the geology and the history than with the machinery but there are some excellent photographs published full or half A4 page size showing the ruins existing today.

There are also some useful maps and plans though Figure 1 is confusing in that it includes the run of silver-lead mines in the Menheniot district which are no part of the area in the title. Readers may research in vain for any mention beyond one sentence in the introductory chapter.

To sum up: a useful geographical grouping of mine histories gleaned chiefly from Mining Journal, with no great pretence at hitherto unpublished information. But it is suggested that NMRS consider a format more suited to a rucksack before producing any more in this admirable series. **KMB**

* * *

Wheal Concord Limited compiled by D. K. Congdon

The owners of Wheal Concord, Cornwall's newest tin mine, have produced a glossy A4-size 30-page booklet tracing the first two years of development. There is no publisher's or printer's imprint on the book but we obtained a copy from Smiths' bookshop in Treloar Warren Street, Camborne, for £2.50.

Lavishly illustrated with photographs of the mine and the miners, it contains chapters written by Jack Trounson and Messrs Warrell, Symons and Rottenbury of the mine's own management team.

Members' research

BROOKS, Tony. Polstrong Cottage, Polstrong, Camborne, Cornwall TR14 0QA. Great Rock Mine, Hennock, South Devon; loan of photographs or negatives of the mine and surface plant would be appreciated.

News briefs

News is to hand that the former Brunel atmospheric railway pumphouse between the main road and railway at Starcross has been turned into a museum. Can any local member give us details, opening times etc? Replies to the Newsletter Editor, please.

* * *

Kew Bridge Engines are restoring a Boulton & Watt bell-crank engine thought to date from about 1810, in preparation for installing it in the Science Museum.

* * *

A few Council members have visited the old buildings at East Cornwall Silver Mine, near Callington, in an effort to uncover evidence that they were built for a silver smelter (photograph and write-up on page 2 of Newsletter No. 37 refers). Results were inconclusive. Anyone having relevant information is asked to write to Bryan Earl, "Heathercliffe", Sennen, Penzance TR19 7AX.

* * *

Another well-known landmark disappeared during the summer, despite strong local protest. This was the 150-year old tide mill stack at Copperhouse, Hayle, which Penwith District Council alleged was dangerous. The owner, who lives in Kent, had given his consent.

* * *

WANTED: A copy of Roger Sellick's "The West Somerset Mineral Railway", by Dr. Richard Acworth; and Dines' "The Metalliferous Mining Region of South West England", both parts, by Kenneth Brown. Members who might be willing to part with either book for a modest sum are asked to contact Mr. Acworth or Mr. Brown whose addresses appear on the front page.

Coming events

Fri 19 Nov. Joint meeting with Carn Brea Mining Society, slide show of historic mining scenes in West Cornwall by Mr. J. A. Osborne. Main lecture theatre, Camborne School of Mines, Trevenson, Pool, 7.30 p.m.

1983

Fri 28 Jan. Illustrated lecture "Rise and fall of the Cornish coasting trade" by Mr. Clive Carter. Ambulance Hall, Redruth, 7.30 p.m.

Shadows on the Wall (continued from page 3)

maintenance jobs on the pitwork are undertaken. The delicate manoeuvring of the engine under his skilled hands at such times is a joy to watch ...

Another roar and a bang and the driver is back. "It's time I went home" I say, getting braced for the effort of tearing myself away. We exchange pleasantries, he tells me when he is next on shift, I take my coat off the nail on the stairway panelling, descend the few steps behind the cylinder and nudge open the big door which always seems to stick.

Out in the black night the peace is shattered as the wind howls around the enginehouse steps. Despite fine rain, my bike is dry because it has been leaning against the warm base of the stack. I mount the machine and pedal off into the darkness. Past the gently steaming engine pond I look back. Only dim lights in the enginehouse windows can be seen, a moving shadow in the upper one causing partial eclipses as the great bob rises and falls, seemingly for ever ...

* * *

It is 1982 — nearly 40 years on. The enginehouse stands gutted, its roof timbers bare. The wheels at the top of the headgear, now taller, still twirl as the skips are whisked up and down, but no longer by steam. The steps up to the great doorway lie smashed, done in the 1950's when all the engine parts were dragged outside for scrap. Why? Because one day the overloaded cast iron bob *did* break ...

TREVITHICK SOCIETY PUBLICATIONS

Obtainable from E. W. A. Edmonds, "Newlands", Tarrandean Lane, Perranwell Station, TRURO, Cornwall TR3 7NW. Tel: 0872-863931

JOURNAL OF THE TREVITHICK SOCIETY (Free to Members — all 240 by 180 mm with illustrations)

- No. 1. Includes articles on: Richard Trevithick's place in Engineering History, Bodmin and Wadebridge Railway; Wheal Guskus; The Redruth to Penzance Turnpike Roads; The Liskeard and Looe Canal. £1.25 plus 40p postage.
- No. 2. Includes articles on: History of Camborne School of Mines; The West of England Bacon Co.; The Early Years of Richard Trevithick; Blowing Houses and Smelting Works of St. Agnes and Redruth. £1.25 plus 40p postage.
- No. 3. Includes articles on: Richard Trevithick, some unpublished contemporary documents; Iron in the Cornish Industrial Revolution; The Cornish Beam Engine and Patent Law; Notes on Cornish Industrial Literature. £1.25 plus 40p postage.
- No. 4. Includes articles on: The Hornblower Family; Brea Adit Works, Camborne; A Glimpse of the Cornish Mineral Industry in 1873. £1.25 plus 40p postage.
- No. 5. Includes articles on: Richard Trevithick in Costa Rica; Some Lesser Known Cornish Engineers; The Hornblower Family; Early Cornish Mineral Railways; The Cornish Metal Co. £1.50 plus 40p postage.
- No. 6. Includes articles on: The Cornish Copper Co.; Ore Dressing in Cornwall; Humphrey Davy and the Cornish Contribution to the Industrial Revolution; Holman T100 Gas Turbine Air Compressor; Wheal Owles Disaster; Liskeard & Caradon Railway; Industrial Housing in Cornwall. £1.50 plus 40p postage.
- No. 7. Includes articles on: Engineering Marvels, highlights of Jack Trounson's tour of Britain in 1938; Introduction of the Plunger Pole or Force Pump; Angarrack Smelting House; The Cornish Copper Co. 1693-7; Cornwall Newspapers 18th and 19th Centuries; South Wheal Francis and West Wheal Basset Boundary Litigation; Richard Trevithick as the inventor of Containerisation for Ships. £3.00 plus 40p postage.
- No. 8. Contains articles on Tregurtha Downs Mine, Marazion; Introduction of the Trevithick Steam Engine to North Staffordshire; Mineral Statistics of the United Kingdom; Man Engines in Cornwall; Diesel Engine Development in Penzance; Cornish Engineering Letters relating to Richard Trevithick & others, and The Cornish Gauge and J & F Pool. £3.00 plus 40p postage.
- No. 9. Contains articles on Trevithick's Track; The Boilers of Richard Trevithick and Arthur Woolf; New Light on the Hornblower and Winwood Compound Steam Engine; Prestongrange 70-inch Cornish Engine — A Myth Exploded; The Maritime Industrial History of Bideford; The "Hayle" of Hayle; Devon Great Consolidated Copper Mining Co.; The Last Years of Devon Great Consols; and Cornish Stacks and Engine-houses. £3.00 plus 40p postage.
1982. SPECIAL OFFER TO MEMBERS. Any four or more copies of Nos. 1 to 8 at 33½% discount on above prices, plus postage and packing extra — 4 Journals £1.20 (£1.00 Devon and Cornwall); 5, 6 or 7 Journals £1.57 (£1.37 Devon and Cornwall).

OTHER PUBLICATIONS

CORNISH EXPLOSIVES — by BRYAN EARL

A detailed history of the manufacture of explosives in Cornwall with illustrations. 240 by 185 mm hardback. £8.50 plus £1.90 (£1.70 Devon & Cornwall) packing and postage.

INDUSTRIES OF PENZANCE — by PETER LAWS

Illustrated, 150 by 200 mm, 48pp. £1.25 plus 25p postage.

CORNWALL NEWSPAPERS, 18th & 19th CENTURIES — by NIGEL TANGYE

Lists over a hundred newspapers. 175 by 250mm. £1.25 plus 20p postage.

DOLCOATH, QUEEN OF CORNISH MINES — by T. R. HARRIS

The first published history of probably the most famous of all Cornish Mines from its beginnings in 1790 to its final closure, and attempted revival. A5 (210 by 147mm) 108pp with illustrations and plan, £1.25 plus 35p postage.

SIR GOLDSWORTHY GURNEY, 1793-1875 — by T. R. HARRIS

Biography of the Cornish inventor, best remembered for his steam carriage. Published to commemorate the centenary of his death. A5 (210 by 147mm) 100pp with illustrations. £1.00 plus 35p postage.

ASSOCIATION FOR INDUSTRIAL ARCHAEOLOGY, Tour Notes for 1978 Conference, Penzance.

Illustrated, 32pp. 210 by 290mm and £1.50 plus 25p postage. Only a few left.

NEWSLETTERS OF THE TREVITHICK SOCIETY

Individual copies of some, but not all, newsletters are still available. Send 25p in stamps for any copy required; if not in stock, stamps will be returned.

BOUND SET OF NEWSLETTERS

Volume II, 1975-77. £3.00 plus 55p postage. Only 25 copies.

INDUSTRIAL HOUSING IN THE TIN & COPPER MINING AREAS OF CORNWALL, LATER 18th & 19th CENTURIES

Reprint of lecture by Veronica Cheshier in Newsletter No. 23 November 1978. Illustrated, 24pp, 210 by 290 mm. £2.00 plus 25p postage. Only 15 copies.

REPRINT SERIES

AN ACCOUNT OF WRECKS — by JOHN BRAY

Compiled at the request of R. S. Hawker and edited by the late A. K. Hamilton Jenkin, many aspects of the commerce of the North Cornish Coast in the period 1959-1830 are brought into focus. A5 (210 by 147 mm) 44pp. 50p plus 25p postage (25p plus 25p postage to members). Reduced as staples are rusty.

ILLUSTRATED CATALOGUE of pumping and winding engines and other plant manufactured by Williams' Perran Foundry Co. 285 by 220 mm, 36pp. £1.50 plus 35p postage.

OTHER ITEMS

TREVITHICK SOCIETY TIE — SOLD OUT.

GRAMOPHONE RECORDS

Truro Cathedral Bicentenary Service for Richard Trevithick, 13 April 1971. Two sides, 33 rpm, 300 mm diameter. £1.60 plus £1.40 postage and packing.

BRAINS TRUST TAPES

Tape cassettes of three Brains Trusts on Cornish Engineering, as detailed in Newsletter No 37 (May 1982) page 4. Price £3.00 each, plus postage of 30p for one and 50p for two or three tapes. About four weeks delivery if not in stock.

POSTAGE AND DELIVERY CHARGES

The Publications Secretary will consider any suggestion regarding the means of delivery of orders, in order to reduce the postage or carriage charges. Orders can be sent by carrier, or picked up by the representative of the customer by prior arrangement with Mr. Edmonds. Postage rates are as at February 1982. A charge may be made for delivery by hand.