

CORNWALL'S HOUSE OF INVENTIONS





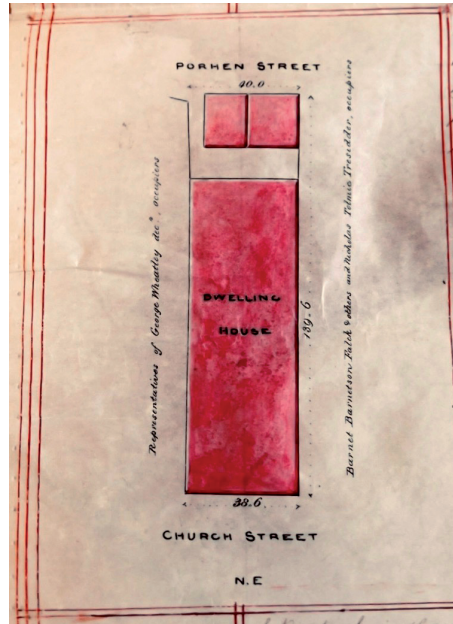
The Polytechnic Hall today

The Cornwall Polytechnic Society – the Poly – was formed in 1833 *to encourage Mechanical and Scientific Inventions, and also the Fine and Industrial Arts, and to elicit the ingenuity of a community distinguished for its mechanical skill.* The Industrial Revolution was at its height, and the emphatic word *mechanical* meant Progress.

This new society was the brainchild of Anna Maria and Caroline Fox, the young daughters of Robert Were Fox – senior member of the most active and successful family in Falmouth, natural philosopher, and inventor.

R.W. Fox heartily promoted his daughters' philanthropic proposal, which could also offer an interesting business opportunity for the family firm, G.C. Fox & Co.

The booklet *Founding the Poly* describes the industrial conditions that called for the creation of the new Society. *Cornwall's House of Inventions* tells the story of those inventions and the Hall that was built to exhibit them, and how the Poly ended up re-inventing itself.



The first Prospectus stated:

The 'spot of ground' granted to the Poly in 1835

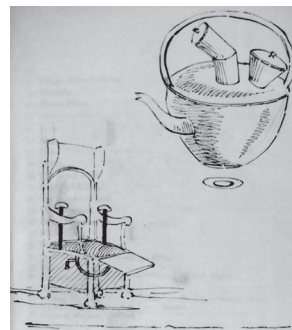
The object of this Society, is the encouragement of the arts, and particularly of any new & useful inventions. An exhibition to be held once a year (in the autumn) when prizes will be awarded...

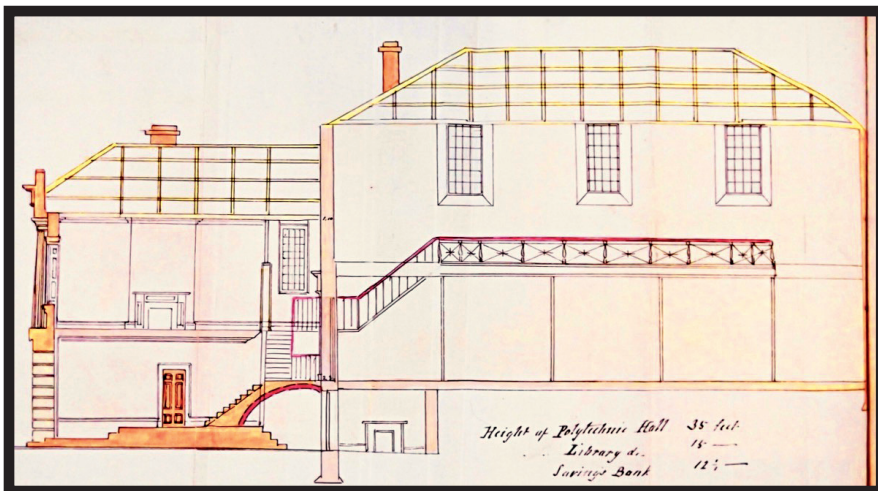
and listed the multitude of objects and skills which might be displayed:

Machines, Instruments, Models, Paintings & Drawings, Maps, Charts, Japaning, Inlaying, Stuffed Birds & Insects, Artificial flowers & fruit, Fancy Work.

Clearly, the Poly had a broad definition of what constituted an invention – any new concept or idea in the arts and sciences – and provided an opportunity for those who might otherwise have no chance to showcase their ideas.

Having no premises of its own, the Poly's first exhibition was held at the Falmouth Classical School.



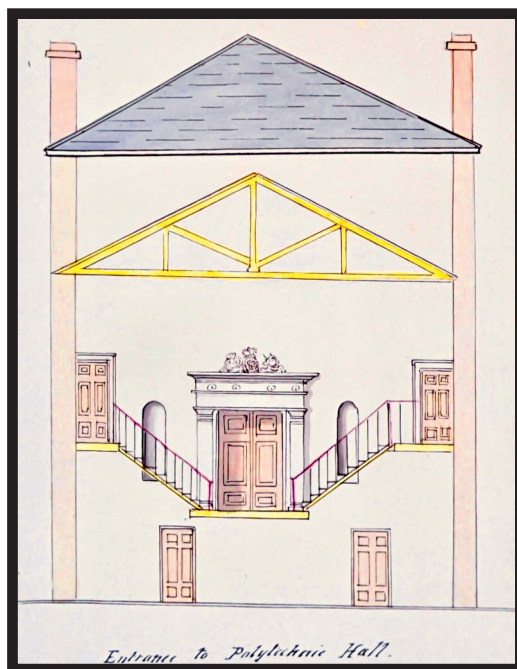


George Wightwick's profile of the Polytechnic Hall

It was very well attended, which may have been partly thanks to its being held two days before Christmas.

Most of the first exhibits were small portable objects such as *An Apparatus for making Tea on improved principles*. Also, models of steam engines and a number of ship models, charts, maps, paintings and drawings such as the mechanical lounge on page 2, and, indeed, some Fancy Work. Each of the 46 exhibits won a prize.

This was encouraging, and the next two exhibitions, also



The entrance, omitting the central staircase

held at the Classical School, were so popular, and so over-crowded, that the Committee declared their ‘unexampled prosperity’ called for the Poly to build its own exhibition space. Partners would be invited to share the premises, and the expense. Founders and supporters looked to the future with complete confidence.

The Poly’s first President was Sir Charles Lemon, who gave his loyal support in that post for the next 34 years. He was invited to appeal to the landowner, Lord Wodehouse:

Resolved that Sir Charles Lemon be requested to write to Lord Wodehouse, to beg his Lordship’s kindness in granting a spot of ground to erect a building for the accommodation of this Society, in conjunction with the Dispensary and Savings Bank.

Lord Wodehouse leased to the Society and its partners a site in central Falmouth that had been a hillside meadow until 1654, when it became a building plot and a sail loft. The architect George Wightwick, well known in Cornwall, was commissioned to design a great Hall on the same footprint of land.

Since the land sloped downward to Church Street, the new building would have to be designed in two sections at different levels.

The Savings Bank and the Dispensary would own the four front rooms, while the Poly would own the great hall itself. This would be lit by six very large windows, and a spectators’ gallery would be built along each side wall.



The Poly on a rainy Exhibition day in 1854



The Poly's earliest photograph – the Hall in 1859. The floor was level, though the perspective makes it look raked

The entrance would be by a staircase from the lower level and through central double doors, or else up to the spectators' gallery on either side.

Work started in May 1836, and by September, at a cost of £1,170 from 'sundry donations', the building was ready for that year's exhibition, though without plaster, ceiling, or galleries, unaffordable for another three years.

At the opening ceremony the foundation stone was laid, with medals cased in glass in a special cavity (presumably they're still there). Chairman Mr Enys gave a speech to a large crowd of friends and members. It was all very grand and exciting '*until the spectators gave three cheers and the business of the day closed*'. After only three years, the new Poly had for its home a huge, lofty

exhibition space accessible from busy Church Street.

In 1850 the partners bought the freehold, including the two dilapidated tenements behind the hall on Porhan Street. With the Hall built, the Society could now concentrate on the Inventions.

One of the first inventions, and perhaps the most valuable of the many hundreds that ever appeared at the Poly, was promoted at the second exhibition when Charles Fox offered a 'premium' of £10 for *the best improvement in the method of ascending and descending mines*. This problem had become critical in Cornwall's most important industry. It all boiled down to *ladders*.

As the demand for copper and tin grew, the mines not only increased in number but also went deeper, and the deeper they went, the hotter they got. Dolcoath mine had twelve miles of workable tunnels and went down over half a mile, every foot of which the men had to climb down, and then up again at the end of their eight-hour shift or 'core'.

The ladders were killing men. Some died falling from rotten rungs, some through simple exhaustion, and others from heart and lung ailments after climbing 'up to grass' and then tramping home in all weathers in the winter darkness. The average life expectancy for a miner was 37.



Those endless ladders, photographed by John Burrow



An improved version of the Loam Man Engine

The ladders had become a deadly serious problem - just waiting for somebody to invent a way of getting the men down to work, and then safely back up to grass again.

Charles Fox's premium was awarded to a mine Captain, Michael Loam, for his invention of what came to be called the Man Engine. His invention was successful, but was soon improved, as shown on page 16. Every deep mine eventually flooded and had to be de-watered by a pumping engine at the surface.



The Dolcoath Man Engine descended 240 fathoms

Loam's invention worked on the constant up-and-down movement of the beam engine, from which hung a series of connected 12 foot wooden rods equipped with small platforms and handles; similar platforms ('sollers') were installed 12 feet apart on the wall of the shaft. Each time the engine paused between strokes, the miner would step onto a sollar, and at the next pause, step back onto the rod, and so continue, descending in 12 foot 'steps' until he reached his work level, or ascending back 'up to grass' again by the same method.

A very simple idea, but a frightening process in the dark and working by feel rather than sight.

In 1842, thanks to encouragement and funding from Charles Fox and other members, the first Man Engine was installed in Tresavean Mine, the second deepest mine in Cornwall. At first the men called it 'an engine to kill people', but a couple of years later, 391 men

from Tresavean wrote a letter of thanks to the Poly:

No machine could be better for the purpose. To us, it is of more importance than we can find language to express.

There were unexpected benefits, too. From the *West Briton* November 1842:

"There never was a better machine than that at Tresavean Mine," said an aged and venerable man a short time ago. "It will do wonders for the liver complaint." At this expression the old man's auditor burst into a fit of laughter, which much incensed him. "You young gentlemen may laugh at what you call foolish, but what we old people know

is true. I believe Mr Michael Loam's Man Machine will do more good for the liver complaint than all the pills in Truro."

And perhaps it did.

Before the Man Engine, it had taken the men employed in the lower levels at Dolcoath between two and three hours to descend and return to the surface by ladders, which meant they could work – and be paid – for not more than four or five hours a day. Now they could travel that distance in 20 minutes.

The Man Engine also proved profitable for the owners. The men could work more efficiently, for longer hours, and it was estimated that the cost per man worked out at less than a penny a day, as opposed to up to 6 pence in lost labour before its installation. There was never any suggestion that the men's pay should be increased.

Sixteen mines installed Man Engines and the safety record was very good, until the Levant tragedy in 1919 when a badly maintained engine broke and 31 men and boys were killed. By that time wire rope and cages had replaced the first really successful invention to emerge from the Poly.



*The engine by which he is raised from below
Now supersedes climbing, health's deadliest foe.
This miners know well, and their gratitude show.
Their core being over, from labour they cease
And delighted avail them, O Loam, of the ease
Thy genius procured them, and joyfully ride
On the rod, while others descend by their side.*

From 'Gwennap' by William Francis 1845

Up to grasss



In their new home the Poly's exhibitions became more and more popular, and the promise that prizes would be awarded had its effect. The premiums were remarkably generous, from £3 up to £10, when a miner could work a whole year for about £40.

In addition to the premiums, medals were awarded with equal generosity. They showed the head of the inventor James Watt, and engraved on the rim, the name of the recipient and the date.

The medals were graded: 1st and 2nd class Silver, 1st and 2nd class Bronze. Four Gold medals were awarded, but that experiment was not repeated.

The first winner of a Silver medal was Neville Northey Burnard, the 16-year-old son of a mason in Altarnun. The prize was given for his slate relief of the *Laocöon* statue, unearthed in Rome



Burnard's Laocöon



RCPS Bronze and Silver medals with their boxes

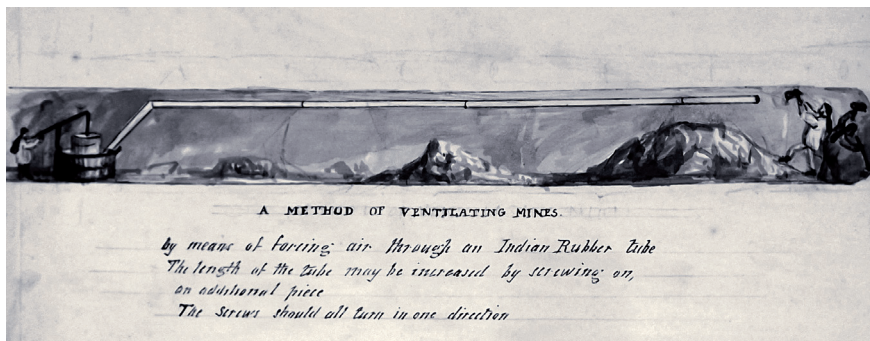
in 1506, and now in the Vatican. Burnard had used chisel-edged tools which he had fashioned from six-inch nails. He was not satisfied with Laocöon's first head, so he cut it out and replaced it – the lines are undetectable to the naked eye.

In 1865 a Silver medal was awarded to Alfred Nobel. The gunpowder used in the mines was nasty, dangerous stuff and caused many injuries and deaths. Nobel's invention, nitroglycerine, was judged to be much safer and more effective:

The Judges saw a wrought-iron anvil, of about three hundredweight, blown to pieces, with a charge of less than an ounce; and with a charge of four pounds, from forty to fifty tons of rock were completely scattered and the surrounding rock rent in all directions.

Almost as dangerous as gunpowder were the unreliable fuses, which were often a goose quill filled with gunpowder – light it and run. Poly committees offered premiums for a safer fuse, as they did for improved ventilation in the hundred degree deep mines, but these problems needed professional expertise.

The exhibitions remained popular and successful for some years, and a wide range of new ideas saw the light at Cornwall's House of Inventions. The majority



Does it work?

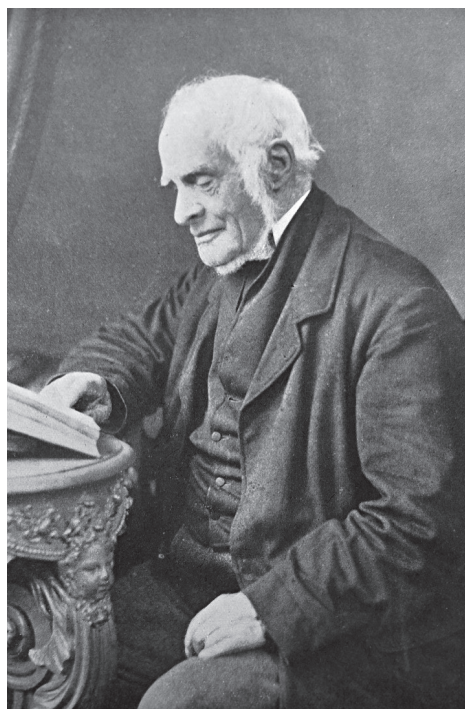
were mechanical, of course, and distinctly masculine, but there were always some of more general or domestic use.

Poly Chairman Robert Were Fox was himself a successful inventor, and designer of the Fox Dip Needle which was supplied to ships of the Royal Navy for onboard magnetic observations.

A domestic machine that worked well for years was a 'Hydrostatic Lock' installed in the offices of G.C. Fox & Co. As ship agents, the company was responsible for quantities of bullion, requiring a large, totally secure safe.

The Fox safe was sealed at night by closing the heavy iron door so that the locking bar on the inside of the door fell into the slot in the piston. There was no key – no keyhole.

In the morning, water was poured from the top floor down the tube in the wall, into the basement



Robert Were Fox

and along the pipe in the floor to the piston; water pressure raised the piston, which lifted the locking bar. Open Sesame.

The safe and locking mechanism are still there in the basement of the old office building.

Every year the Committee produced a Report which gave an optimistic account of the Poly's progress, and published learned papers and scholarly essays which were exchanged with

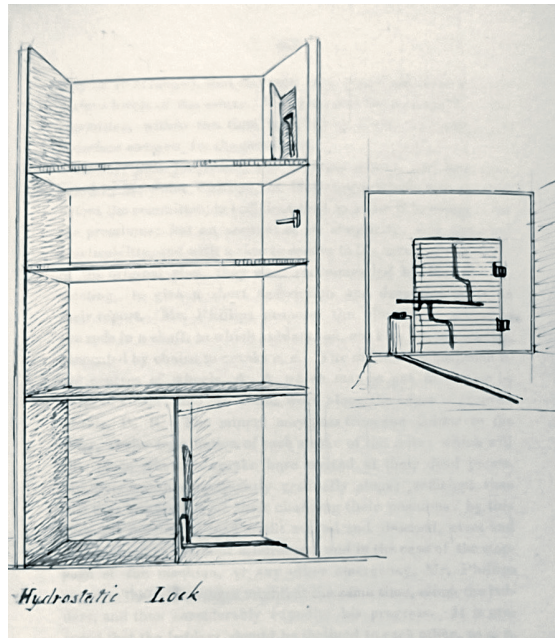
Universities and Societies

in Europe and America. Well-to-do scholars with deep interests were a feature of the Victorian era, though by the end of the 19th century, Government and new Universities were making their research redundant.

Premiums were offered for papers of public benefit: *Best plans for ventilating mines; Best essay on the diseases incidental to miners; Best plan for lighting mines; Best design of a detached cottage to be built by the poor.*

For many years Members' research filled the Annual Reports, often extending them to over 300 pages.

One of the Poly's most prolific academics was William Pennington Cocks who produced eleven lengthy and scholarly articles on the Fauna of Falmouth, and presented a library of 200 volumes to the Poly. He was a fine illustrator as well

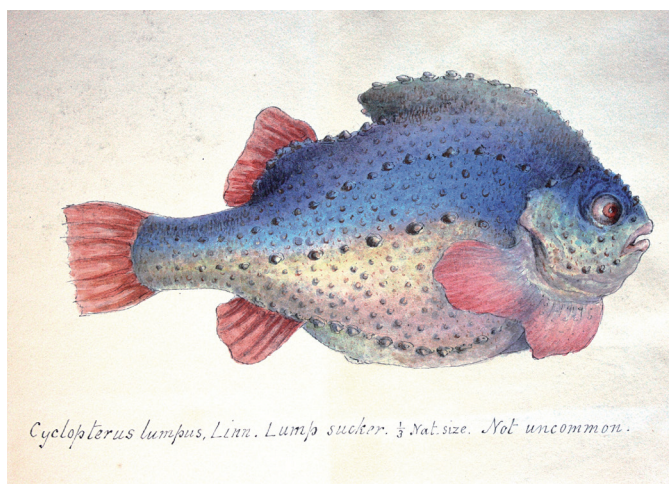


Hydrostatic lock operated by water pressure

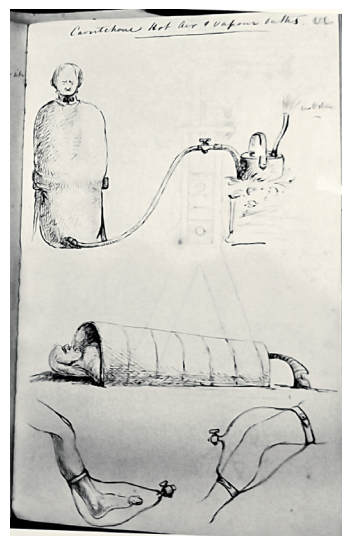


as a caustic social critic and an inventor.

The Committee remained active and confident, but they had not planned for the time when the Poly's initial success would inevitably slow down. In order to keep the exhibitions competitive, in 1837 cash was offered in place of medals. For a 1st Silver medal (cost 15/-), the cash in lieu was an extraordinary £7. The cash equivalents immediately proved so popular that for many years they placed the Poly in constant financial jeopardy.



Cyclopterus Lumpus



Caoutchouc Hot Air and Vapour Baths (W.P. Cocks was interested in the uses of rubber.)

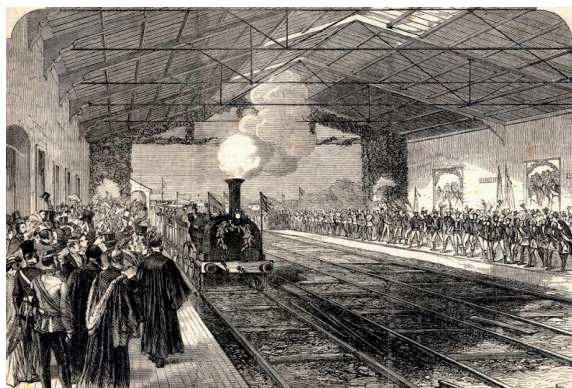
It became clear that membership subscriptions of ‘at least five shillings’, designed to attract members other than the gentry, were both insufficient and unsuccessful, and were raised to ‘Gentlemen at least ten shillings, Ladies five shillings’. Exhibition prizes were reduced, and the cash grants in lieu of medals were reduced, though not by very much.

Conditions were changing. Originally many mines had supported the Poly financially, but in due course some of the old mines became exhausted, and copper was discovered in Australia, with many men emigrating. The value of tin and copper fluctuated widely, affecting the lives of thousands of men and women in the western half of Cornwall.

Worst of all, by 1850 the Post Office Packet Service was moved to Liverpool and Bristol, resulting in serious unemployment, a deterioration in the condition of Falmouth, and fewer visitors. The premiums had been offered to encourage new inventions, but clever new ideas would now be quickly patented to protect the inventor, making them ineligible for cash prizes, and reducing the exhibitions to something closer to trade shows. By 1857 the number of new mechanical inventions had begun to fall off, as had visitors to the exhibitions.

In 1863 the railway branch line reached Falmouth, and for three years attendance at exhibitions grew; but receipts did not increase as the costs of transport also increased.

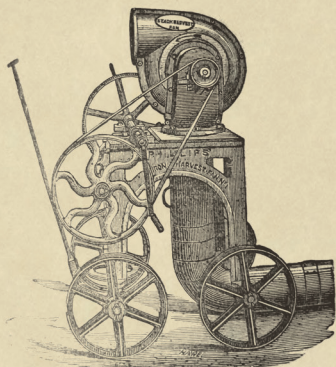
By 1869, nearly 1,000 medals had been awarded, and cash in lieu to the value of £4,000 – an almost incredible sum when comparing the value of currency then and today.



First train to Falmouth

SOME OF THE INVENTIONS

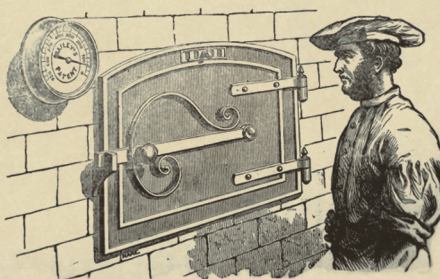
These illustrations have all been taken from the first fifty years of the Poly's Annual Reports.



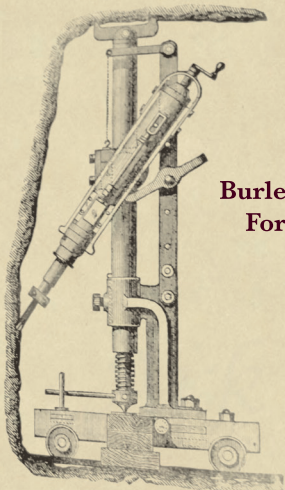
Iron Blast Fan



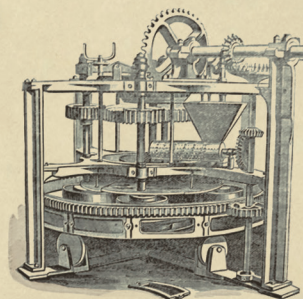
"Cornish" Rock Drill



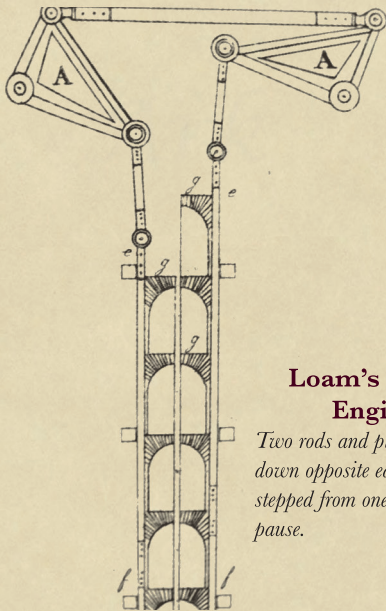
**Bailey's Pyrometer Adapted To
A Baker's Oven**



**Burleigh's Rock Drill
For Tunnel Work**

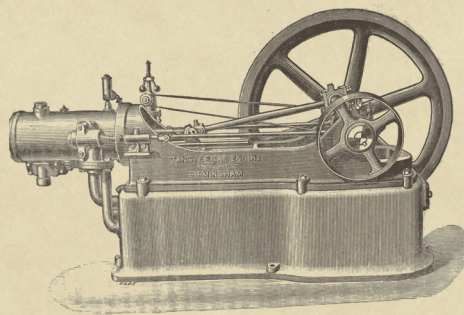


Patent Pulverizer

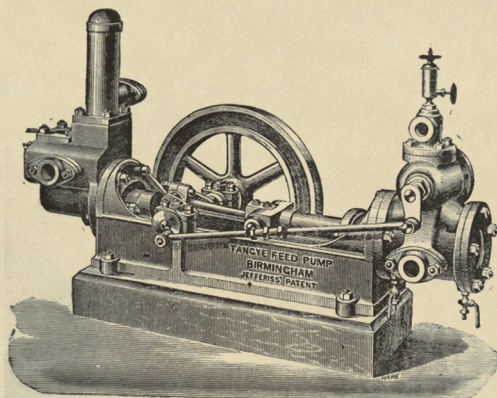


Loam's Original Man Engine Design

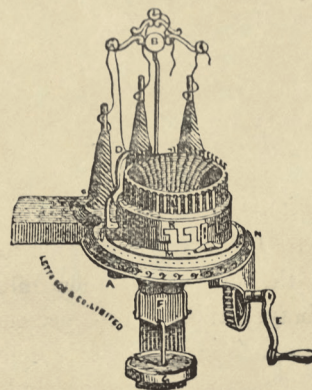
Two rods and platforms moving up and down opposite each other, so the men stepped from one to the other at each pause.



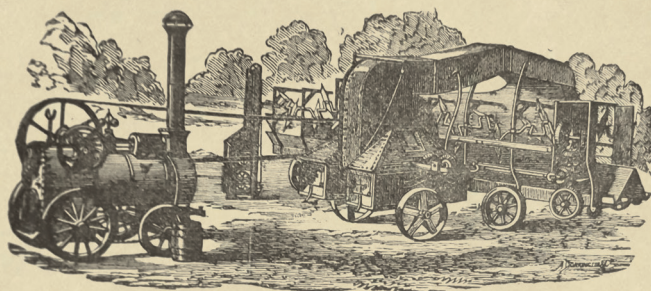
Tangye Gas Engine



Tangye Feed Pump



Little Rapid Family Knitting Machine



Gibbs Harvesting Machine

Although the Committee remained optimistic, the Poly's finances had become a constant concern

Another problem was that the Poly still owned only the empty hall, which had become quite uncomfortable. No room for everyday use or meetings, no office space, no library. Expansion was essential.

The two dilapidated tenements were demolished, and a successful appeal was made for £600, of which £165 was granted on one condition: No Theatricals! The Fox family were Quakers and disapproved of this form of entertainment, and they were supported by a number of members, including the Rector of Falmouth who declared *'the encouragement of strolling players the greatest curse that could befall the town'*.

The 'No Theatricals' prohibition was reluctantly accepted and the extension was built, providing an office for the Secretary, a Committee Room, and a Library. The hall was still reserved for its original purpose, but empty for the rest of the year. In twenty years the 'theatrical purposes' argument would recur.



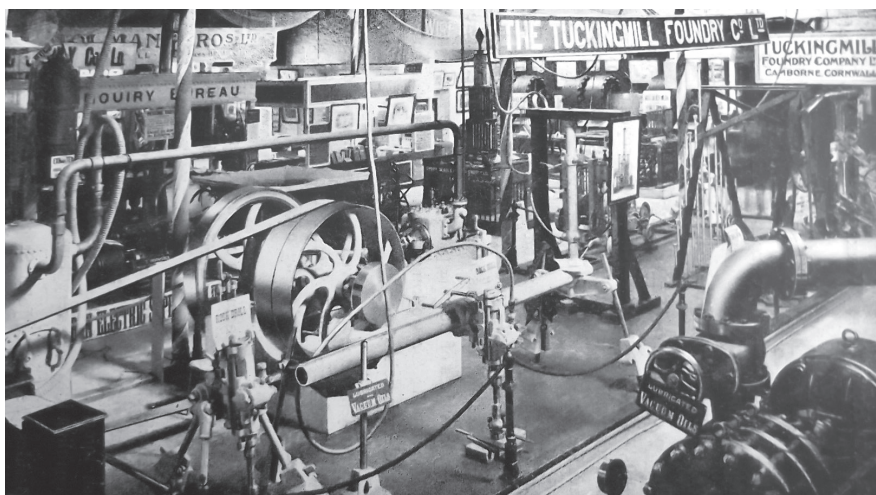
1882 Jubilee Exhibition Committee, Judges and Organisers
(compare with 1859 photograph on page 5)

The ‘unexampled prosperity’ of early days had been declining steadily, but the Committee determined that in 1882 they would present the most lavish exhibition the Poly had ever arranged – the Jubilee Exhibition. After 50 years, this was to be an event to remember and rejoice. The exhibition was to last eleven days instead of two, and would be bigger and more splendid than any other.

Committees were set up to organise the many features of the celebration, and it was accepted that the Hall would never hold all the planned activities. In any case, it would be impossible to bring any heavy machinery up the central stairway.

On the other side of Falmouth, the Volunteers Drill Hall, as large as the Polytechnic, was leased and ‘filled absolutely to overflowing’. Not only filled, but connected to the Poly by telephones, just six years after Alexander Graham Bell spoke the immortal words: “Mr Watson – come here – I want to see you”. Members of the public were encouraged to experiment with this remarkable new invention.

Just as astonishing was the illumination of the Polytechnic Hall by a hundred Swan electric lamps, just one day after Swan’s competitor Thomas Edison had thrown the first switch to light a number of office buildings in New York. Six brass corona were hung in the Hall and lamps were placed round the Gallery, powered by a generator outside in Porhan Street.



Heavy machinery in the Drill Hall

The Polytechnic Hall itself was devoted to the arts, and 457 paintings and drawings by amateur and professional artists were proudly displayed, as well as sculpture, architecture, natural history, maps, needlework, lace, and the ever-popular Fancy Work. Each of over 1,000 exhibits had to be recorded, mounted, hung, judged, rewarded and published in the Annual Report – then taken down and returned to the owner.

The comparatively new art of photography, amateur and professional, was very much on display, and all 250 copies of the Annual Report, which ran to nearly 500 pages, included the photograph on page 17 of the officers and judges. You may see one or two people on the galleries blurred by movement, but you won't see anyone smiling. You can't hold a smile for a minute, and in any case, portrait photography had to be taken seriously.

37	
PRIZES AWARDED.	
<i>Mechanics.</i>	
15 Model for giving Sliding Motion to Shafting while revolving, J. Tangye	Second Bronze Medal
W. Teague, Jun., ...	First Silver Medal for Collection
33 Model of Warning Apparatus for Warming Rooms, Saml. Terrell	First Bronze Medal
34 Roasting Machine in connection with kitchens, Saml. Terrell	Second Bronze Medal
39 Model of Engine ... J. Jobson	21 for Workmanship
43 Model of Drawing Appliances showing discharge and separation of stuff as working in West Peavor Mine, W. T. White	First Bronze Medal
44 Model of Skip Road as working in East Pool Mine, C. Bishop	Second Bronze Medal
45 Cornish Rock Drill, Holman Brothers	First Silver Medal
53 No. 10 Sewing Machine ... Wheeler, Wilson & Co.	First Bronze Medal
56 Case of Wire Rope ... J. Stephens & Son	First Bronze Medal for new flexible Rope
58 Patent Nautilus Grate ... J. B. Petter	First Bronze Medal
63 Locks—"Shrewsbury" Patent Springless, Wm. White	First Bronze Medal
64 Model of Railway Car showing the Parker Smith Automatic Brake, W. P. Smith	Second Silver Medal
66 New Pumping Engine Indicator, E. T. Newton	First Bronze Medal
67 Miners' Dial, J. Henderson	First Bronze Medal
70 Improved Theodolite & Miners' Dial, John T. Letcher	First Bronze Medal
71 Model of Self-acting Rag Frames, J. Hendra	21 for Workmanship
72 Specimens of Improved Concrete showing increased Tensile Strength, H. Fajja	First Bronze Medal
73 Model "Acme" portable Horse Rake, Davey, Sleep & Co.	First Bronze Medal for Collection
75 Machine for testing relative qualities of Road Metalling, Thomas Clarke	Second Bronze Medal
80 Patent Cotton Belting, Maurice Gandy	First Bronze Medal
81 "The Withers" 1/2 H.P., Gas Engine, J. C. Stark & Co.	First Bronze Medal
84 Navisphere for determining a Ship's course by the Stars without calculation	First Silver Medal
Tangyes Limited	Special Gold Medal for collection
122 Mennock's patent Lubricator Galwey, Bainbridge & Co.,	Second Bronze Medal
123 Attwood's patent Steel in Bars, Cast Steel, Striking Hammers, and Crucible Steel Casting, for mining purposes, Stanners Close Steel Co.	Second Silver Medal
125 1-b.p. "Otis" Silent Gas Engine, driving Siemens' Dynamo Machine and Swan's Incandescent Lights, Benjamin Perry	Second Silver Medal
127 Stephens' Rock Drill, Richard Stephens	First Bronze Medal
131 Self-starting Syphon, Frederick Sara	First Bronze Medal
132 Water Waste Preventer, or Flush Cistern, Wright & Stephens	Second Bronze Medal
134 Specimens of Graining, Light Oak, Pollard Oak, Maple and Pitch pine, Wm. Curtis	10s.
137 The "Shrewsbury" W.C. Wm. White	Second Bronze Medal
138 Patent Porte-Knapsack, Wm. White	Second Bronze Medal
141 Model Engine ... W. H. Andrewartha	10s. for Workmanship
<i>Naval Architecture and Fishery.</i>	
203 Model "Lady Vogel"	Edward Haly ... Second Bronze Medal
204 "Pilot Boat"	
205 "Twin Yacht"	

One of 35 pages of medals and cash prizes

Prizes and medals were distributed like confetti, and a Special Gold Medal was awarded for the thirty mechanical exhibits mounted in the Drill Hall by Tangye Limited of Birmingham.

There were lunches and expeditions and speeches and excursions and more speeches. There was a Bee Exhibition on the Moor.

It had all been such a success that two years later the Poly was able to buy both rooms belonging to the Savings Bank, though the Dispensary's rooms only became available in 1927, when at last the Poly had the whole building to itself.

The Jubilee Exhibition should have introduced a new period of prosperity, but sadly, the exhibitions never regained their former popularity. Six years after the Jubilee, it was suggested that they be 'migrated' to other towns, and Liskeard, Camborne and Penzance were invited to host the experiment. There is no record of the results at Liskeard and Camborne, but Penzance was declared 'disastrous'.

In 1887 the Hall was filled with a Dairy Show, the exhibition for 1899 was cancelled, and it was recommended that in future they become biennial events. Exhibitions changed their nature to the 'fine and useful arts', often combined with lectures. The Poly's grand idea was becoming unviable.

A source of income might still come from renting the Hall 'for general purposes', or even for 'theatrical events', and in 1889 the 'theatricals' argument, which had simmered for twenty years, was resurrected. Essential repairs to the building brought the argument to a head with a proposal that the restrictive clause be cancelled. Legal opinion advised that, the society being governed by the wishes of its members, there would be no bar to another vote. This was duly taken, and by 15 votes to 7, the 'No Theatricals' clause was withdrawn.

No records have been found of any early use of the stage for theatrical events, but lectures and talks and music certainly became popular. Perhaps without recognizing it, the Poly was taking the first tentative steps towards the arts rather than the sciences.

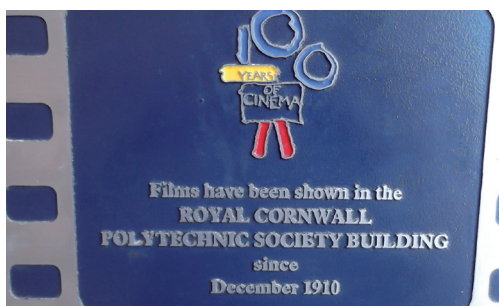
In 1910 the Poly acquired the first Cinema Licence in Falmouth. With its new licence, the Polytechnic Hall was leased to Mr G.S. King for a Cinematograph Entertainment for one month, which extended to three years. The lease brought in £5 a week (to include caretaker) and £25 towards the special alterations, which included the erection of a balcony. Mr King advertised shows *Twice nightly at 7 and 9. Prices: Pit 3d, Pit Stalls 6d, Balcony 9d. Standing room at the back. Smoking allowed.*



Certainly no popcorn

Films proved hugely popular – Mr King announced that ‘Owing to the large number of children attending the Saturday matinee, 765 being present that afternoon, he would throw open the entire hall to the children on payment of 1d.’ The mind boggles. Yet there is a record of an Edwardian cinema manager who used to patrol the children’s matinees cracking a whip.

In 1913 Mr King transferred his lease of the Polytechnic Picture Hall to the famous Harris brothers, partly because the hall was also rented out for other events, and partly because the caretaker objected to cleaning up after the shows. “Hale demurred to washing the lino each day, but he *DOES* IT.” The Harris brothers maintained their lease until 1938 and were extremely helpful to the Poly for their whole 25year tenure.



1946 was the lowest point in the Poly's history. Committee and members were fatigued and disillusioned by two wars, the failure of the exhibitions, and the deplorable condition of the Hall; in the general clean-up, an unexpected crocodile was discovered (stuffed). There were sad and serious suggestions that the time had come for the Poly to close down, if it couldn't find a new purpose.

To achieve even a small income, the Hall was leased out for various events, though *restricted from all uses connected with politics and religious controversy*. Four days a week it became a Dance Hall with bands, until the neighbours complained, and later on, Bingo was played three nights a week. The line was drawn at boxing matches.

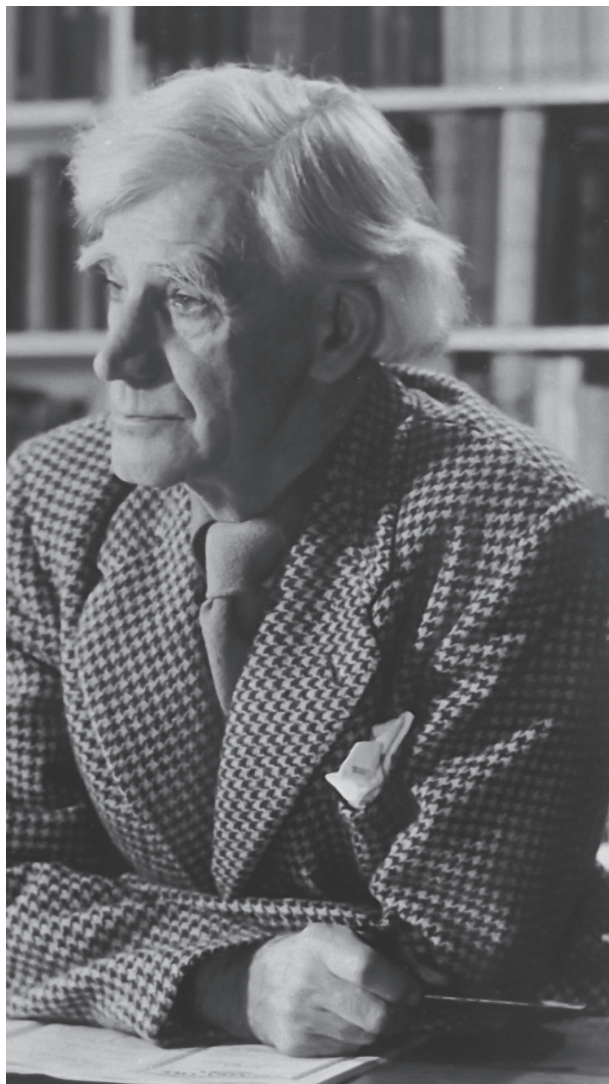
However, there was an active music group in Falmouth, also an amateur orchestra and the Falmouth Opera Singers. The Radford sisters were arranging professional concerts, which would grow if a suitable hall were available. There was a Drama study group and an amateur Art Group. Amateur dramatics were always popular. These were all new ventures, looking for a home.

In 1947 the author Howard Spring gave a talk at the Poly – on 'Writing Novels' – and joined as a member. In 1953 he was elected President for the usual term of three years, and was re-elected twice.

Howard Spring and his wife Marion worked tirelessly for the Poly, raising funds and inspiring a new enthusiasm for the arts. He deplored the mechanization that was overtaking the world, and introduced a new emphasis on cultural programmes. He gave lectures and talks, and wrote a number of plays for the Poly which were performed successfully. The old Polytechnic Hall was being completely reinvented.

'I am glad our Royal Cornwall Polytechnic Society is more actively than ever encouraging music and painting and the drama as significant occupations for its members. It is a tendency from which nothing but good can come, for every man is a polytechnic society of a sort.'

Howard Spring



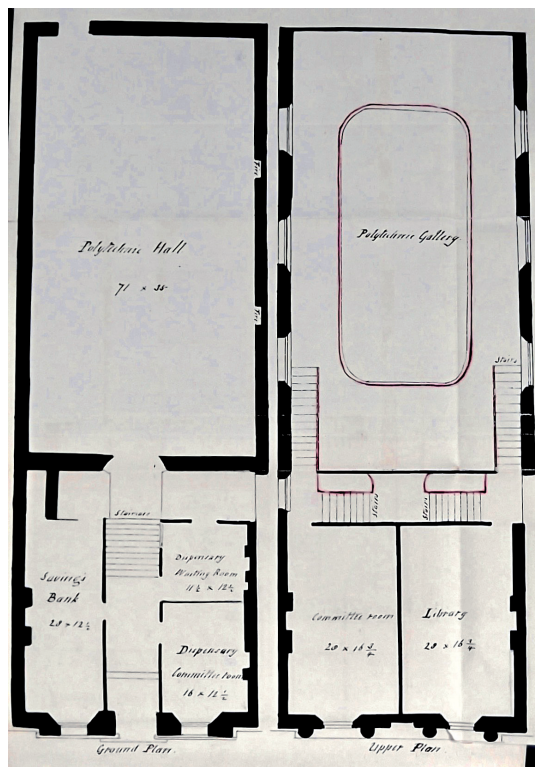
Howard Spring

In 1990 the Poly started Falmouth Film evenings as part of its arts programme, supported by the BFI who sponsored a film administrator and twin 35 mm projectors, while the animation films were shown on a 16 mm projector – a far cry from the surround sound and digital equipment used today.

One final invention deserves mention. Bound into R.W. Fox's copy of the Annual Report for 1835, two years after the Poly's foundation, is this plan for the new Polytechnic Hall, drawn by its architect George Wightwick. There is something strange about it.

On the left side of the drawing is the Ground Plan – a great empty hall, 71' x 35', and about 40' high. On either side of the foyer are the ground floor rooms belonging to the Savings Bank and the Dispensary.

On the right side, instead of a great emptiness, there now appears a mezzanine *Polytechnic Gallery* with a central 'well' to allow light into the floor below. Whose idea was that?



Ground plan for the new Poly

The answer must be that the prescient George Wightwick realised what the Committee may not have foreseen – that a huge empty hall would one day become impractical and need alteration. Indeed, if you look back to page 2, you can see the lines showing the new floor which he predicted would be needed some day, even if that day was a century away.

Which is just what happened. In 1932 the Borough Council invited the Poly to take over the

Falmouth Museum which had outgrown its space in the Town Hall. It is ironic that 95 years after establishing itself as a venue for new inventions, the Poly now agreed to become a museum for creations preserved from the past.

A new floor had to be built, leaving a central well to light the hall below, as the Ground Floor needed blackout for films and a ceiling for music. A heavy canvas had to be rolled on wires across the 'well', which cannot have been very successful and was certainly extremely awkward.

The Museum quickly presented problems – up two flights of stairs, no professional curator, totally inadequate financing for a disastrous 21 year contract. It became a tired and expensive distraction, described by an examiner as a *'jumble of heterogeneous cases with equally heterogeneous and dusty contents that must bewilder rather than educate or give pleasure to the visitor'*. In 1950 it was closed down by the Borough Council and the contents – all either donated or loaned – dispersed. The well was filled in 1961, creating a large gallery and performance space.



The Well, with wires just visible and a canvas roll at the near end, beneath the Burnard bust of the future Edward VII

This allowed the hall below to become a well-equipped, comfortable and popular theatre with raked seating and side entrances.

The Poly had finally found its new purpose in Cornwall, as a popular venue for the arts and sciences, a stage for ‘theatrical events’ and a new Young Generation of ‘strolling players’.



The Polytechnic Gallery



Joseph and the Amazing Technicolour Dreamcoat was the first performance by Young Generation, founded at the Poly in 1982

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Images

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