



THE TREVITHICK SOCIETY

KOWETHAS TREVITHICK
NEWSLETTER 179 SPRING 2018



Figure 1: The side-wheel paddle steamer *Ticonderoga* in the grounds of the Shelburne Museum, near Burlington, Vermont, where she has been berthed since 1955.

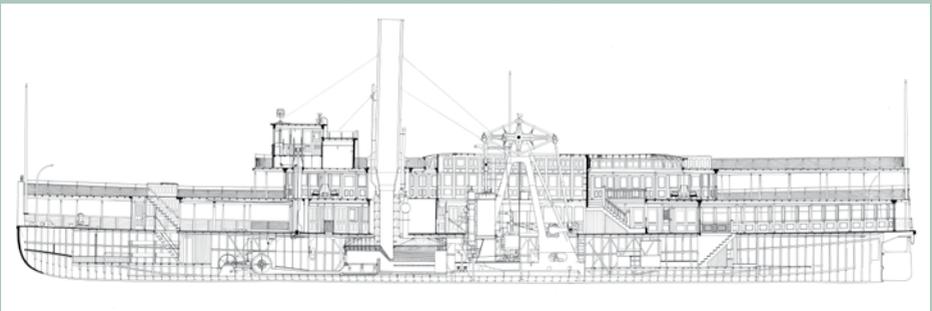


Figure 2: Inboard profile of the *Ticonderoga* drafted for the Historic American Engineering Record (HAER) as part of the *Ticonderoga* Recording Project in 1988
Reg. Charity (U.S. Library of Congress).
No. 1,159,639

CHAIRMAN'S PIECE

LEVANT (revisited)

Of late our mailbox has been swamped with comment, (ranging from the negative and sceptical to the downright outraged) on the subject of the recent measures introduced at Levant by the National Trust for the purpose of enhancing safety of visitors to the site, with many demands to know what, "we" (the Society), were going to do about "it". The Society's Council of Management has debated the matter at length and concluded that "it" is a matter for the National Trust, (the owner of the site), advised by the Health and Safety Executive. Both of these organizations have a Duty of Care in law, to assess risk, and carry out such measures as are deemed necessary to reduce, and wherever practical, negate said risk to the health and safety of persons accessing the site.

It is, I feel, important to understand (if not appreciate) that the actions that these organizations take in respect of this goal are largely forced upon them by legislation, (they have no more choice in the matter than we do). That having been said - it is understandable that some will regard the measures taken as unnecessary - nothing more than authoritarian opportunism or "clueless vandalism" and considering them to be just further incomprehensible restriction on their freedom. The usual view being taken that - "Health and Safety is out of control and that common sense should prevail".

In reality of course, common sense does not, and never has prevailed, which is why we ended up with the Health and Safety Executive in the first place, and while this huge, bureaucratic entity may well appear to have been created for the sole purpose of infuriating "Joe public", it is worth remembering that in our fatally flawed world, they have the responsibility of investigating, analysing and, (based on years of well documented tragic history) determining an appropriate course of action intended to best protect us all from hazards both hidden and apparent.

Of course, they do not always get it completely right, and there are always calls for them to look at ways to improve what they do and the way in which they do it - a process they say they are always prepared to engage with.

My own view is that irrespective of whichever side of the debate you sit on, sadly, despite every best effort and intention, such measures as those taken at Levant can never be wholly effective while visitors continue to treat these locations as theme parks and film sets as opposed to what they actually are- the derelict remains of the business end of very hazardous heavy industry.

Brian Jones

Copy date for next newsletter:

May 30th 2018



Established 1935

LETTER TO THE EDITOR

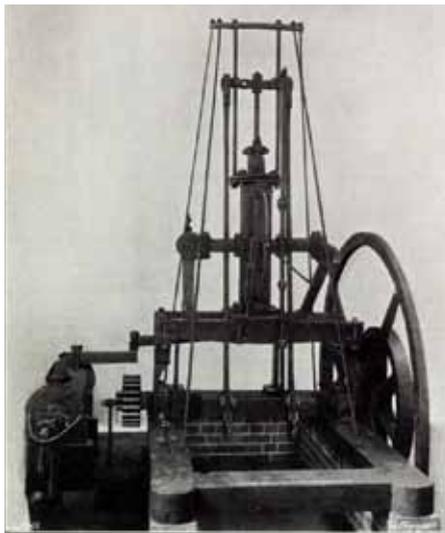
Dear Editor,

Having spent my early years at Lariggan, I was happy to read in Newsletter 178 the summary of the Wherry Mine's story. I remember an experimental re-opening of the mine in 1967, which involved assembling a scaffold-pole walkway linking the shaft to the shore. But the quality of material extracted at that time evidently did not justify further investment. Courtney's article mentions the conversion of the workshops into dwelling houses. In my youth, many of these housed small domestic workshops where serpentine (presumably from the Lizard) was turned into decorative objects, marketed in local curio shops. All this was ended by the Ash Wednesday storm of 1962; see <http://morrablibrary.org.uk/morrab-library/a-stormy-history/>.

There is an article about Wherrytown to be found on Wikipedia. In 2012 I wrote to the Town Mayor in Penzance suggesting that the 50th anniversary of the destruction of the Wherrytown community (only the Mount's Bay Inn survived) might be marked with a plaque. The Penlee House Museum responded with a small display of newspapers recording the consequences of the storm, but nothing further. Might the Council of the Trevithick Society now consider making a fresh proposal for a memorial plaque to be erected on the site of the Wherrytown industrial community?

John Robinson

John@robinson-crusoe.eu



The request for information about the engine above (featured in the last newsletter) has resulted in two responses:

It appears to be a fairly primitive version of a "table engine". The date would be about right, (circa 1790 for the early versions of this type of engine). The basic design was improved on by Maudsley. Trevithick did apparently produce a version of this type of engine in the early 1800s. Incidentally these were one of the first types of stationary engine to be factory built as opposed to house built (like the Large beam engines which were house built). They were designed for relatively low speed and low power applications.

Brian Jones

I have discovered the engine appeared in the Volume 113, page 660 (21st June 1912) of 'The Engineer', published by The Institute of Mechanical Engineers.

John Sawle

Unfortunately a copy of this article has not been traced. If any member can locate a copy please forward it to:
cnfrench@talktalk.net

BEAM ENGINES IN NORTH AMERICA XII: THE STEAMBOAT TICONDEROGA

In contrast to Britain, where they were the power source of the Industrial Revolution, rotative beam engines were used in their greatest numbers in North America, not in mining and industry, but in shipping. Specifically, they were used as the “walking beam” engines of side-wheel paddle steamers that, throughout much of the 19th century and well into the 20th, served the continent’s lakes, bays and inland waterways in their thousands. The walking beam engine functioned in much the same way as the rotative, double-acting condensing engines used on mines in Cornwall and Devon to drive stamps or crushers, except that they were supported by an A-frame rather than an engine house and had paddleswheels instead of flywheels. They could also be much larger, with cylinder diameters of up to 110 inches and strokes of up to 15 feet.

Commonplace in their time and in use from 1811 until 1957, only two of these walking beam engine paddle steamers survive to this day. The larger and more utilitarian of the two, the Eureka, was built in 1890 as a railway (and later car) ferry in the San Francisco Bay and remains afloat at the San Francisco Maritime National Historical Park. It has an overall length of 291 feet, a beam of 78 feet at the guard rails, and a 65-inch walking beam engine with a 12-foot stroke (for a full description, see Newsletter 176, p. 9-17). The second is the graceful, 220-foot Ticonderoga, which was built in 1906 as a passenger day ferry for Lake Champlain in New York and Vermont and is now berthed some two miles inland as the outdoor centrepiece of the Shelburne Museum, south of Burlington, Vermont, where she has been painstakingly restored to her former grandeur (Fig. 1 - front cover). The following is a description of the Ticonderoga and owes much to Larry Head, a visitor guide at the Shelburne Museum, who proofed the text and led the author on an authoritative tour of the ship



Figure 3: Views of the *Ticonderoga*'s port (right) and starboard (left) Morgan feathering paddlewheels, the 1988 HAER photograph (right) showing five of the ten buckets (U.S. Library of Congress).

and its engine room and boilers in August 2017. The description also makes use of the book "Ticonderoga: Lake Champlain Steamboat" by Richard Strum, published by the Shelburne Museum in 1998, and Bob Whittier's book "Paddle Wheel Steamers and their Giant Engines" published in 1987. Additional information was obtained from "SS Ticonderoga", an article by Bob Shaw published in the November/December 1980 edition of Farm Collector, and from drawings of the Ticonderoga drafted for the Historic American Engineering Record (HAER) by Ellen Stoner and Leslie Ullman in 1988. High resolution copies of these drawings, together with a collection of 1988 HAER photographs of the Ticonderoga by Jet Lowe, are available on-line through the U.S. Library of Congress (<http://www.loc.gov/pictures/item/VT0105>).

The Steamboat Ticonderoga

The side-wheel paddle steamboat Ticonderoga was built to the design of the naval architect and engineer J.W. Millard for the Champlain Transportation Company. The prefabricated steel hull was constructed at the yards of the T.S. Marvel Company on the River Hudson in Newburg, New York, in 1905. Dismantled and shipped by way of the Champlain canal to Lake Champlain, the hull was reassembled and the vessel completed at the Champlain Transportation Company's Shelburne Boat Yard on the lake's east shore, from whence the vessel was launched on April 16, 1906. The total cost of the Ticonderoga was \$162,232.65 or about £3.25 million in today's currency. She took her maiden voyage on July 31, 1906, and began regular service of August 6.



Figure 4: The electrically and naturally lit stateroom hall on *Ticonderoga's* saloon deck, with its overhead turtle dome, wood panelled walls and engine compartment, mirror, plush embroidered carpets and upholstered mahogany chairs; the latter from the 1888-1936 Lake Champlain steamer Chateaugay. With a writing desk at its forward end and a news stand aft, the hall gave access to five passenger staterooms.

With a length of 220 feet 5 inches, a beam of 59 feet 11 inches and a depth of 10 feet 2½ inches, she displaced 892 gross (344 net) tons (Fig. 2 - front cover) and was originally licensed for 1087 passengers. Yet she drew only 6 feet of water when stationary and 10 feet when under way, which enabled her to travel almost anywhere on the lake. The last steamer to be built on the lake, she was propelled by two side paddlewheels, each 25 feet in diameter with ten 9-foot by 30-inch buckets, and remains essential unchanged to this day. The paddlewheels are of the Morgan feathering type (Fig. 3), a design that ensured the buckets were vertical when they entered and left the water so that power was not wasted by lifting the water displaced.

The *Ticonderoga* or “T” was built for the luxury tourist trade and was mainly used to carry day passengers and excursion groups on the waters of Lake Champlain, a duty she performed

between April and September (“ice to ice”) from 1906 until 1953. Keen to promote tourism, the Delaware and Hudson Railroad, which owned the Champlain Transportation Company, went as far as publishing *Summer Paradise*, a guidebook to the region and its many fine hotels. But the *Ticonderoga* also carried freight, including livestock, Vermont apples and cars, and, while she was never intended to be an overnight boat, she had five spacious staterooms on the saloon deck for passenger accommodation. In this way, passengers arriving on the evening train from New York City could avoid having to wake for the 6 am departure of her scheduled run from Westport, New York, north to Plattsburgh by way of Burlington, Vermont.

The boat’s beautifully restored interior exemplifies the grand tradition of American steamship building, best illustrated by the stateroom hall on the saloon deck (Fig. 4) with its butternut and



Figure 5: The *Ticonderoga* confronting her last obstacle, the tracks of the Rutland Railroad, during her final approach to the Shelburne Museum on April 6, 1955 (Shelburne Museum).

cherry panelling, upholstered chairs and lush embroidered carpeting, all naturally lit by an overhead turtle dome. Electric lighting was supplied by two General Electric dynamos run by the engine. Forward and aft promenades furnished with benches, deck chairs and folding, carpet-seated "camp stools" provided passengers with outdoor spaces to walk or sit, and a stately dining room at the aft end of the main deck served wholesome meals of the highest quality.

Except for the Great Depression years of 1933-35, the *Ticonderoga* ran regular schedules and special excursions for a period of more than 40 years, to the delight of passengers that included such dignitaries as President Howard Taft. But after the Second World War her working life drew rapidly to a close. Often idle and sold several times, she was saved from

the scrap yard and returned to service in 1950 only through the efforts of a public fund-raising campaign. In 1951, she was purchased by the Shelburne Museum, recently founded by Electra Webb (of the Domino Sugar-owning and avid fine art-collecting Havemeyers family) to house her collection of Americana. Under the ownership of the Shelburne Steamboat Company, which the museum established for the purpose, she was kept in operation as an excursion boat and floating museum until 1953. However, with qualified engineers hard to find and steep working costs it proved too difficult to continue this practice and, on September 29, she made her last voyage under her own steam. It was also deemed impractical to maintain her as a moored museum and so, in November 1954, the huge task of moving her overland to the museum site, a

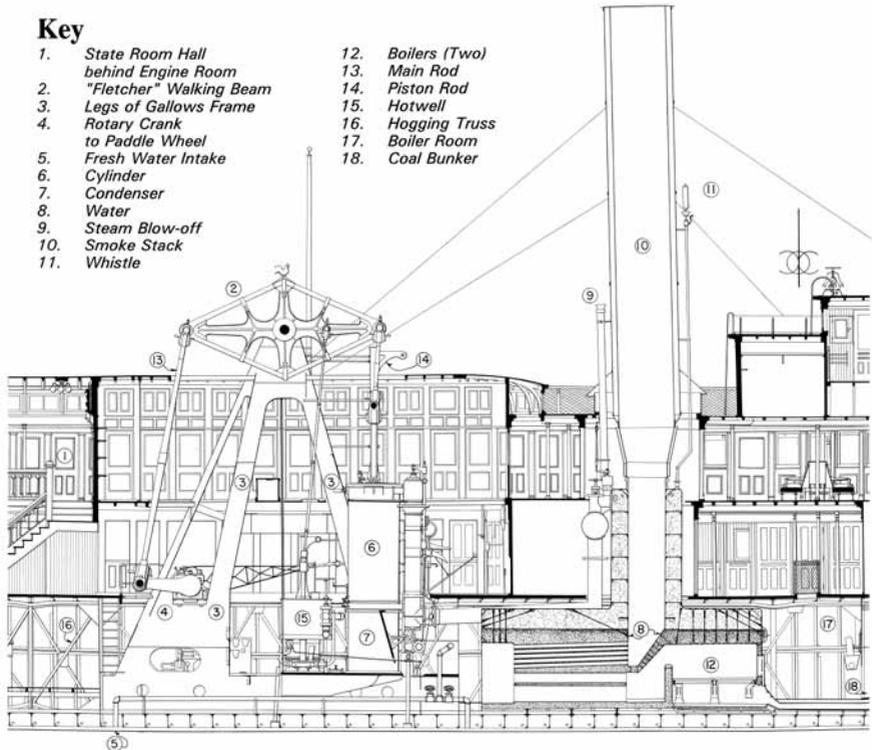


Figure 6: Detail of the 1988 HAER inboard profile of the *Ticonderoga* taken amidships, showing the arrangement of the walking beam engine, its modified A-frame support, and the hotwell, condenser and boilers (U.S. Library of Congress).

distance of almost two miles, was begun.

To achieve this engineering feat, the contracted firm of Merritt-Chapman and Scott first excavated a 450-foot basin at the southern end of Shelburne Harbour that was filled with water to enable the *Ticonderoga* to be floated over a cradle set upon sixteen 4-wheeled railway freight cars, onto which she came to rest when the basin was drained. Over the course of the winter when the ground was frozen, the New Hampshire house-moving company of W.B. Hill slowly hauled the vessel across the intervening swamps and meadows along a pair of railway tracks (Fig. 5). Laid ahead of the vessel in 300-foot sections, the tracks were taken up and re-laid in front as soon as the boat had passed. Finally, on April 6, 1955, after an unprecedented 65-day journey that made national headlines, the *Ticonderoga* reached her final destination and rapidly became the museum's most popular exhibit. She was declared a National Historic Landmark in 1963 and, in 1995-98, was painstakingly restored to the way she looked in her heyday during the 1920s at a cost of \$1 million.

The Walking Beam Engine

The *Ticonderoga*'s engine (number 193) was built in 1906 by the Hoboken, New Jersey, firm of W & A Fletcher Co., best known of all walking beam engine builders. Mounted on a modified A-frame anchored to the keelsons, the encased engine rises through all three decks (main, saloon and hurricane) of the vessel (Fig. 6) and remains essentially unaltered. The cylinder (Fig. 7) is 53 inches in diameter with a 9-foot stroke. Her two side-by-side, fire-tube return flue boilers (Fig. 8) developed 50 psi of pressure and provided 750 horsepower apiece. These were built in 1905, also by William and Andrew Fletcher at their company's North River Iron Works in Hoboken, New Jersey. At full speed (23 mph), the boilers burned two tons of coal per hour. Cruising speed was 17 mph.

The hollow-work beam is of a flattened diamond shape (Fig. 9) and, like that of the *Eureka*, is made up of a cast iron hub with several projecting arms, over the ends of which a wrought iron strap was shrunk for strength. At its forward end, two links connected the beam to the crosshead, the piston being kept vertical in the cylinder by crosshead guides anchored to the A-frame (see Fig. 7). At the aft end, a long wrought iron connecting rod (or Pitman arm) turned a massive two-armed crank (Fig. 10) linked directly to the shaft of the paddlewheel.

The engine was double acting with four valves (stem inlet and exhaust, top and bottom) operated by curved cams or "wipers" that acted on followers or "toes" affixed to vertical lifting rods or "lifters" (Fig. 11). These, in turn, operated the valve gear that worked poppet steam and exhaust valves at the upper and lower ends of two "side pipes", which stand vertically behind the valve gear and are linked top and bottom by transverse steam chests. The



Figure 7: The *Ticonderoga*'s top steam chest and valve nozzles, 53-inch cylinder top, piston rod, crosshead and crosshead guides.



Figure 8: *Ticonderoga's* two coal-fired, fire-tube return flue boilers built by W & A Fletcher Co. in 1905.



Figure 9: Diamond-shaped hollow-work beam on *Ticonderoga's* hurricane deck, showing linkages to the piston rod (left), hotwell and air pump (centre) and connecting rod (right). The rooster is not original but was added by Electra Webb for good luck.

curved cams that operated the valves are set on a pair of in-line, horizontal arbors or "rock shafts" in the centre of the valve gear that share a common central bearing and were rotated backwards and forwards by actuating arms from two sets of eccentrics on the shaft of the paddlewheel.

The engine's "jet" condenser, in which condensation was achieved by injecting cold lake water into the steam, sits atop the bed plate immediately beneath the cylinder (see Fig. 6). The air pump (with a crosshead-guided pump rod) is located ahead of the condenser, and was worked by a connecting rod attached to "indoor" side of the beam, with the hotwell mounted above (Fig. 12). The engine's two reciprocating boiler feed pumps sit at the base of the hotwell on either side and were driven from the air pump crosshead. But only a portion of the condensate was used in this way, the rest being discharged overboard.

An account of the way in which

walking beam engines were worked accompanies the description of the ferryboat Eureka in Newsletter 176. But on board the Ticonderoga, their operation is graphically summarized with reference to the numbers on Figure 13. Steam enters the engine from the boilers at the steam inlet (21) at a pressure of about 50 psi, passes through the throttle (20) and moves upward to the closed poppet valve (27). When the piston (13) is at the upper end of the cylinder (12), the eccentric (4) horizontally moves the hook (22), causing the wiper (24) to contact the toe (25). This, in turn, raises the lifting rod (26) and lifts the poppet valve off its seat. The steam pressure then pushes the piston down and, with it, the piston rod (14) and crosshead (28), producing a clockwise motion of the walking beam (6), which is supported by the A-frame (1). As a result, the connecting rod (5) at the opposite end of the walking beam rises and, as it does so, converts straight-line movement into rotary motion



Figure 10: View of Ticonderoga's paddlewheel crank and connecting rod.



Figure 11: *Ticonderoga's* in-line, two-piece arbor, eccentric-arm operated valve gear (steam side pipe and steam inlet valves left, exhaust side pipe and exhaust valves right) with steam gauge (left), clock (centre), vacuum gauge (right) and crank indicator (far right); the latter used to prevent the engine from stopping on dead centre. Threaded lifters (centre) allowed the lower (left) and upper (right) steam valves to be adjusted. Paired handles to the left controlled the condenser water valves, whereas those to the far right controlled the boiler feed. The crank indicator was used to prevent the engine from stopping on dead centre. Inclined lever (lower right) is the starting bar.



Figure 12: *Ticonderoga's* hotwell, air pump, air pump rod, crosshead, crosshead guides and linkage to the connecting rod by which it was operated.



by means of a crank (3), which is attached to the paddlewheel shaft (2). The exhaust steam (19) exits through poppet valves to the jet condenser (16), where cold lake water drawn into the injection water inlet (18) mixes with the steam and passes through the injection plate (17). The condensation of the steam creates a partial vacuum that further draws the piston downward, adding to the engine's efficiency. During this process, the air pump rod (15) descends forcing the piston in the air pump (9) to close the check valve (7), which allows water and steam to escape through a one-way valve into the space above the piston. This water, now heated by the exhaust steam, is carried upward through a one-way valve in the top of the air pump and into the hotwell (1). A portion of this water is used as feed water for the boilers (8), but the remainder is discharged overboard (11). Once the engine's piston reaches the bottom of its stroke the process is reversed marking one complete revolution of the paddlewheel.

The *Ticonderoga* had several auxiliary engines. A blower engine helped fan the fires in the firebox of the boilers when a hotter fire was required and a power steering engine controlled by the ship's wheel operated cables linked to steering rods that ran the length of the ship to the rudder (Fig. 14). A donkey boiler provided

steam to several other auxiliary engines used when the boat was in port and the main boilers were idle. A small steam engine supplied water to the fire hoses on each deck and to a sprinkler system installed in 1917, and steam from the donkey boiler was also used to operate the steam heating system, electric generators, and the trim tank pumps, which were used to compensate any uneven weight brought about by movement of the passengers. In the Spring, the boiler also ran a feed water pump used to fill the main boilers with water.

The Shelburne Museum is open to the public seven days a week from 10am until 5 pm from May 1 until October 31 at a fee of \$24. Guided tours of the *Ticonderoga* are offered twice daily. Other portions of the museum are open for the same hours during the Fall (November 1 to December 30) and Winter (January 2-April 30) seasons at a cost of \$10. Although Shelburne is off the beaten track for most trans-Atlantic tourists, the museum is well worth a visit and its magnificent ferryboat is not to be missed by any whose travels take them to Vermont. Further information about the museum and its exhibits is available on their website:

(<https://shelburnemuseum.org>).

Damian Nance



Figure 14: *Ticonderoga's* auxiliary blower engine (left) and power steering engine (right).

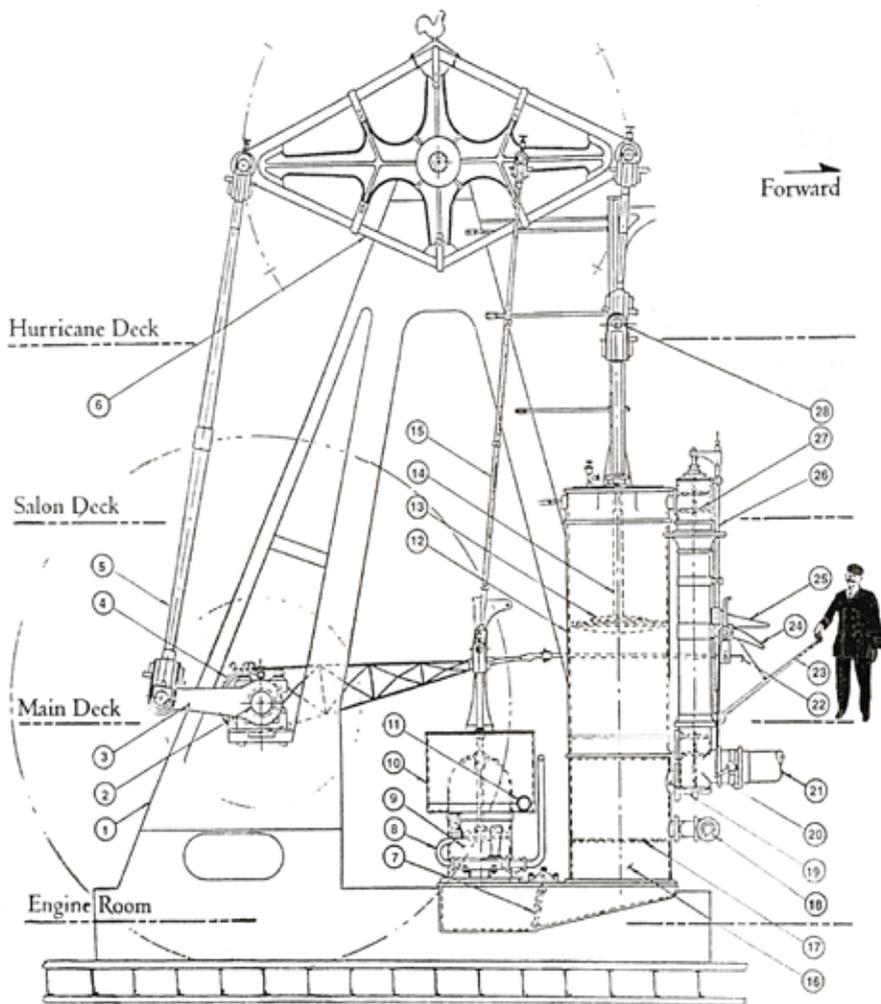


Figure 13: Main parts of *Ticonderoga's* walking beam engine used to explain its operation. See text for explanation (Shelburne Museum).

PUFFING DEVIL

On February 10th the Puffing Devil was in steam in front of the Royal Cornwall Museum to help celebrate the museum's bicentenary. This day marked a relaunch for the museum, which had been closed to prepare special commemorative exhibitions. The morning was cold and drizzly but this did not put off the visitors to the museum or to Truro itself. There was a steady stream of onlookers, especially once the engine was steamed up and operating, a high proportion of which were excited young children.

A student from Falmouth University, Billy Brookes, had also arranged to come along and video the engine and interview the crew for his undergraduate project work. The two photographs opposite were taken by him. We should next see him on Trevithick Day when he wants to film the engine driving through the streets of Camborne, as well as fit a go-pro camera to capture more unusual shots from the engine itself.

Special thanks are due to John Sawle who transported the engine and helped to steam it, and to Dave Crewes who handed out Society leaflets and answered the many questions.

Trevithick Day will be on Saturday 28th April. The crew will assemble at about 0630 outside Glasson's garage to steam the engine, and provided everything goes to plan, will shortly before 0900 drive up to the town centre, past the church, in Basset Road and onto our pitch for the day in Basset Street.

The engine will also appear at East Pool Mine for the National Trust's Trevithick Tuesday on 29th May.

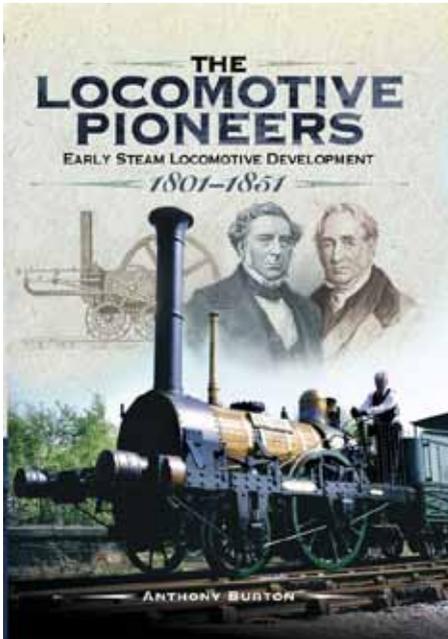
CNF



Photos: Billy Brookes



BOOK REVIEW



The Locomotive Pioneers by Anthony Burton. ISBN 9781473843684. 192 pages. Publisher: Pen & Sword Transport. Price: £25.00 hardback.

This interesting and very readable book succinctly summarises the development of locomotives from Richard Trevithick's Puffing Devil of 1801 up to the 1851 Great Exhibition.

Initially uptake was slow and largely restricted to collieries, where the economic advantages over horse drawn trams was most readily apparent. In these early years many engineers incrementally improved Trevithick's design, others ignored fundamental aspects of the Trevithick design such as sending the exhaust steam up the chimney, whilst others pursued other ideas such as the rack and pinion railway developed by Blenkinsop and Murray.

Consequently, the evolution of the locomotive did not follow a linear path. Instead it often had to await technological developments elsewhere, such as the rolling of wrought iron rails capable of

carrying much heavier rolling stock and replacing the brittle cast iron plates that beset early railways. Innovation was also driven by the changing needs of the burgeoning railway system such as the move from freight to passenger carrying and the ever increasing demands for speed, and more powerful and reliable locomotives that could operate over much longer distances.

The Stephenson's appear to have been particularly good at adopting innovative ideas and in finding practical solutions to such demands, especially at key moments, such as the development of the Stockton & Darlington railway and the Rainhill Trials. This facet may partially explain why their name has become synonymous with railway development. However, the history of steam locomotive development is woven from many more threads, and that is amply demonstrated in this book, where the author explores the contributions made by a multitude of engineers and gives a sense of their relative worth, and in so doing provides context to this fascinating story.

Whilst, this book concentrates on the evolution of early railway locomotives in Britain and makes scant reference to road vehicles, it does cover developments abroad, especially in North America and Europe, where following the initial reliance on British technology, different local conditions, necessitated local solutions. In the case of America the reliance of wood as a fuel, coupled with less robust railway infrastructure and less stable track, led to the development of the locomotives so familiar in Western films.

Overall, *The Locomotive Pioneers* is a well balanced synopsis of the people, events, and the technological improvements, at home and abroad that characterised the first fifty years of railways.

CNF

LEVANT REPORT

This last winter season has proved to be a trying time for the volunteers and staff at Levant. We missed valuable good autumn weather due to the Historic Environmental Officer stopping us from doing even basic maintenance. These problems have now been mainly resolved, but the inclement weather then closed in preventing further work until mid-January.

Fortunately before the restrictions were put on us, John Woodward and the volunteers had been able to remove the Hot-well pump diaphragm deflector plate and it was decided that it needed to be re-cast. These parts are in the process of being fitted at the time of writing. Whilst the Hot-well was exposed, a long score mark was noticed on the west side of the piston bore. As the mark was not there on last season's strip-down, it certainly was caused by a foreign object falling between the piston and its bore. There is already a substantial wear ridge in the bore from many decades of running, but fortunately the score line is not at the thinnest part of the liner. However, in not so many years time, that liner will have to be replaced!

Several new volunteers have attended during the winter, and training of guides has started. Driver training and refresher courses will commence as soon as the engine is running again. In the meantime cleaning and painting of the engine has been completed, but trouble has been experienced with the tyres on the electric barring motor. This is used to move the engine when the boiler is not in steam, or by the duty driver if the engine is stopped at top or bottom dead-centre. The new tyres slipped on their rims so the job had to be repeated and increased pressure applied to the tyres.

Ron Flaxman



Institution of
**MECHANICAL
ENGINEERS**

STOP PRESS!

The Engineering Heritage Awards committee of the Institution of Mechanical Engineers has approved the 'Levant Beam Engine' application for an Engineering Heritage Award.

The Engineering Heritage Awards celebrate the contribution of mechanical engineering, to our past and present. Recognising significant sites and artefacts, the awards aim to raise public awareness of the vital role mechanical engineering plays in modern life.

The award will be presented at a suitable ceremony, to be arranged, where the plaque will be unveiled.

Ron Flaxman

PUBLICATIONS

As I write this in late March, our new book *Wheal Trewavas* is going through the press. It will be available at the AGM Weekend, price £10.00. Also printing is a new impression of Courtney Rowe's, *Marconi at the Lizard*, our second most best-seller of all time. If you don't have a copy, now is your chance. Peter Joseph has just put the finishing touches to the Tour Notes for the AGM Weekend and there may be spare copies available after the weekend itself. Despite the unfortunate problems with the inserted disc, The Tavistock Canal book remains on sale; the hardback edition will not be reprinted in the foreseeable future and copies are beginning to run low.

Graham Thorne

LAST NEWSLETTER

The production and distribution of the last newsletter had the air of a Brian Rix West End farce. Apart from the fact that it has cost time and money to overcome the situation.

It all started with the editor succumbing to one of the prevalent bugs that appear to have affected a high percentage of the population and the consequence of this was that we were late out of the starting blocks. He eventually managed to complete the compilation and duly despatched it to our usual printer at Pool.

In normal practice the writer then takes over the newsletter and once he has learned that the printing is complete collects the two heavy boxes. On this occasion having turned up at the print works I was faced with the prospect of an empty building with a helpful felt-tip notice on the door which proclaimed "we have moved". To where they had moved appeared to be a secret.

Further delay now ensued. It was then found that the printer had moved to a small industrial estate at Newquay. So I then journeyed through the countryside and located the small trading estate, but could not find our printer. Seeing a firm that advertised "T-shirts printed" I wondered if our company had merged with another so decided to enquire within. The enquiry resulted in my learning that our printer was three doors along. So I ventured the short distance to the next port of call. Enquiring at the new venue I was told it was our printer so I said "You do not have the name on the outside". "No", came the reply "It has been like that for some time now". The printer must be waiting for a sign of the right type!

At this point in time I now have the assistance of the membership secretary who produces the address labels and we then have what we describe as a "stuffing session". Ribald comments will not be welcome at this juncture! The envelopes now duly labelled and filled with various titbits of information of importance to members are taken to a postage contractor who franks them and delivers them to the local Royal Mail office. By using this contractor we save 6p per letter compared with Royal Mail.

On arrival at the contractor's premises, a small two person business, I was told that the person who dealt with mail was unwell but was hopefully due in the following day. The letters were left with them but the following day a telephone call told me there would be a further delay due to further illness. The story ends abruptly at this point as there is an ongoing enquiry with the contractor and with Royal Mail, concerning missing newsletters.

As a result of his debacle many members never received their newsletters and for this we duly apologise and if anyone wishes to take over my job they are welcome but I will not hold my breath. Members who may still not have had their newsletter and new membership details should contact:

membership@trevithick-society.org.uk

or

telephone 01209 716541

KJTR



As this newsletter goes to press the 40th International Mining Games are being hosted at King Edward Mine.

The International Mining Games, is an event which enables students from across the globe to meet at a magnificent networking event within a constantly growing community. Around 350+ competitors are expected from countries around the world such as Germany, Brazil, South Africa, USA, Canada and Australia.

The competition itself is held over 4 days, during which competitors compete in a series of 7 traditional mining disciplines to commemorate those who have lost their lives in the mining industry and to preserve those traditional methods for many years to come.

The games will be supported by a display of the 10-metre-tall, fully functioning mechanical puppet - the Man Engine.

NOTIFICATION OF NEW DATA PROTECTION NOTICE

!!! PLEASE NOTE !!!

All societies and clubs maintain lists of their members and the Trevithick Society is no different. A new law is coming into place on the 25th May 2018 as a result of new legislation on the way from Europe. The new law is referred to as the General Data Protection Regulation (GDPR).

In preparation for the GDPR, we are contacting our membership, via this notice, to confirm that we will always use your personal information in accordance with current data protection legislation.

We shall only process your information for the legitimate Society business interest of keeping membership lists up to date and providing Society members with Newsletters, Journals and notices of meetings. You have the right to object to this procedure if you wish. If you wish to do so please contact Sheila Saunders (Membership Secretary), Sean Croft (Website Master) or Jerry Rogers (Treasurer); all of whom maintain this list.

We shall be producing a new Privacy Policy and which can be accessed by Society members when it is place

Jerry Rogers

SOCIETY MEETINGS PROGRAMME

KEM: 7.30 pm start at King Edward Mine, Troon, Camborne TR14 9DP.

Liskeard: 7.30 pm start at The Long Room, Liskeard Public Hall PL14 6BW.

Monday 9th April (LISKEARD)

Railways and tramways on Dartmoor.
By Paul Rendell.

Friday 20th April

Tregantle fort - a very informal tour of this fort that is still in military use.
FULLY BOOKED - to be rearranged.

Saturday 28th April

Trevithick Day in Camborne.
Come along to craft, heritage and steam exhibitions along with live entertainment.
Visit our Trevithick engine in steam.

Friday 11th to Sunday 13th May AGM Weekend

Sunday 20th May

Dartmoor tram roads walk. Meet at Meldon Old Quarry car park (SX567922) 0930 hrs until 1300hrs. Led by Paul Rendell.

Sunday 20th May

Plymouth Breakwater tour.
£10.00 per person. Contact Tracy to book.

Saturday 9th June

Plymouth Breakwater tour.
£10.00 per person. Contact Tracy to book.

Sunday 24th June

Whitsand Bay Fort tour - a tour of this fort, taking in parts not open to the public. The cost is £5.00 per person and will last 2 hours. Meet at 1245hrs inside the Heritage Centre (opposite reception). Contact Tracy to book.

Friday 20 July

Visit to COAST at Plymouth University
afternoon - ttbc

Contact:

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(07785 741287)

For up-to-date news check:

<http://www.trevithick-society.org.uk>

<https://www.facebook.com/trevithick.society/>

**Non members are welcome to attend.
Non-members £2.00 please.**

MEMBERS' BENEFITS

Trevithick Society members are entitled to free entry (on production of the membership card) to the following attractions:

- King Edward Mine
- Cornish Engines at Pool (East Pool Mine and Michell's Whim)
- Levant
- Geevor Museum
- Poldark – free entry to site and reduced fee for underground mine tour

Also:

- 10% off book purchases at Tormark.
- 20% off purchases at KEM shop.

TREVITHICK SOCIETY OFFICERS AND OTHER REPRESENTATIVES



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The Trevithick Society, a registered charity, is a recognised body of the study of industrial archaeology in Cornwall. Membership is open to all who are interested in the region's great industrial past, whether or not they live in Cornwall. The Society takes its name from one of Britain's foremost inventors and pioneers of the Industrial Revolution, Richard Trevithick, a Cornishman whose name is inseparable from the development of steam power. This newsletter is published quarterly and, together with the annual journal, is distributed free to members. Letters and contributions are always welcome and should be sent direct to the editor.

The views expressed in this newsletter are those of the authors and not necessarily those of the Trevithick Society.

ANNUAL SUBSCRIPTIONS:

Individual members	£28.00
Family/joint members	£33.00
Overseas members	£35.00
Corporate members	£35.00

PO BOX 62, Camborne. TR14 7ZN

The Chatline: 01209 716811

<http://www.trevithick-society.org.uk>