The Speedwell Ironworks and the Lidgerwood Story.

Kerne's triple expansion steam engine was built in about 1912 by W.V.V. Lidgerwood, Speedwell Ironworks, Coatbridge, Scotland.

Here is the story and back story of the company.

Why Speedwell? The name **Speedwell** has a great resonance in the early colonial history of North America.

In July 1620 the ship **Speedwell** set sail from Delfshaven in Holland carrying English Puritans who had fled England some years earlier to practice their form of religion in Leiden Holland. The **Speedwell** set sail from Plymouth UK later that year in company with the Mayflower carrying those who have become known as the Pilgrim Fathers to the New World.

When the ships were about 300 miles offshore she was forced to return to Plymouth as the **Speedweel** was making too much water. Both ships returned to Plymouth and one third of **Speedwell's** compliment were accommodated on Mayflower and the voyage commenced again.

Mayflower made landfall at Cape Cod in November 1620 and the "Pilgrims" of Mayflower and **Speedwell** contingent set up the Plymouth Colony.

In 1656 another ship, also named **Speedwell** after the first vessel, left UK and set up a colony in Massachusetts Bay.

By 1710 the colonists had moved a few miles inland to set up water powered Iron Works on the fast flowing Whippany River in what is now Northern New Jersey. Ironstone was available in the surrounding hills as was a plentiful supply of timber for fuel. In 1736 one of the ironworks was listed as **"The Old Speedwell Forge"** and it is possible that the founder of this works had associations with either the 1620 Speedwell contingent aboard Mayflower or the 1656 Speedwell ship. This area became akin to a UK Ironbridge Gorge of North America.

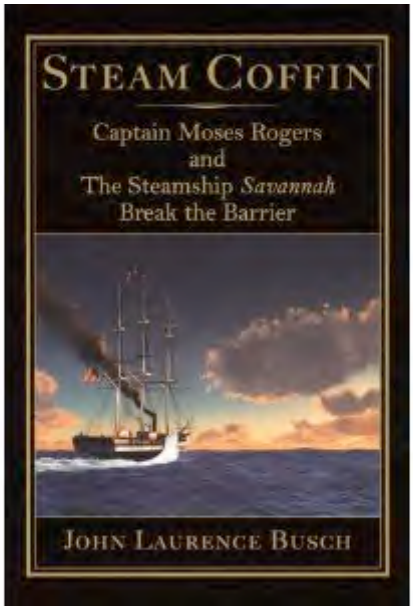
In 1802 (later Judge) Stephen Vail (1780 -1864), a blacksmith, with two others bought Speedwell Ironworks, at that time an iron splitting mill and forge. Lead by Stephen Vail, who became known for his precise calculations and methods, the splitting mill was converted into a wrought and cast iron smelting works and became very successful. Vail had bought out his partners by 1815. His engineering achievements were many and varied and he is regarded as one of the founders of the American industrial revolution

In 1818 whilst Vail was installing a steam engine in a mill in Savannah he became friends with Captain Moses Rogers. Between them they planned to build a steamship that could cross the Atlantic. The ship which was only 98ft long by 25ft 10 inches beam was built for the Savannah Steam Ship Company at Fickett & Crockett shipyard New York; it was fitted with cabins for about 40 passengers and had little cargo capacity. Stephen Vail built the steam engine at **Speedwell Ironworks** New Jersey for the S.S. Savannah which became the first steam powered vessel to cross the Atlantic. The ship was brought to Elizabethtown Point the nearest accessible place to Speedwell Ironworks which was at Morristown, 18 miles distant. The **Speedwell** engine which had one cylinder 40inches in diameter with a stroke of 5ft was accompanied by a smaller air pump was installed together with two iron boilers 24 ft long and 6 ft diameter running at 20psi “for safety”. She carried 75 tons of coal and 25 cords of wood. The paddle wheels could be dismantled in about half an hour when the weather was unfavourable for steaming. Savannah sailed and steamed from New York to Savannah, a large cotton exporting port in the Deep South which had close trading links with Liverpool. Her she was viewed by the US President James Monroe. She then sailed and steamed for Liverpool on the 22nd May 1819. Sceptics dubbed it The Steam Coffin.

I would guess that the engine builder’s plate said.

Stephan Vale
Engineer
Speedwell Ironworks
Morristown.

Images of S.S. Savannah and the S.S. Savannah Commemorative Fountain at Savannah.



J.L.Busch's excellent book gives the full story of S.S. Savannah.

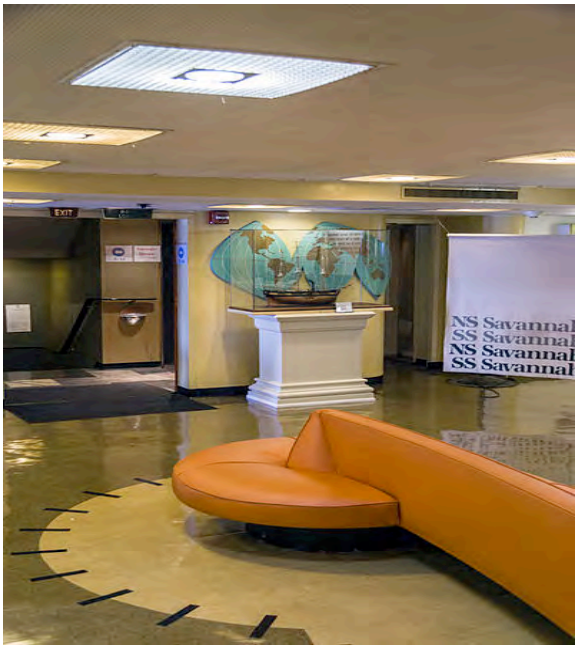
The 20th June 1819 was a perfect summer day; S.S. Savannah had sailed up the Irish Sea having exhausted her coal bunkers. At the Mersey entrance, whilst awaiting the tide to cross the bar she stowed her sails, deployed the paddle wheels and lit the fires on an emergency wood supply. At 5pm a thin trail of smoke could be seen from the Wirral shore rising on the Western horizon. The signal station at Bidston Hill having given warning, every vantage point along the River Mersey and the rooves of building were thronged with sightseers who had been advised to expect the arrival of the steam ship. A flotilla of boats put out to greet the ship. Having taken 29 days of which 18 were under steam, she arrived at Liverpool to great praise and acclaim, berthing at Liverpool "without the use of a single sheet of sail". As she carried no cargo she anchored in the River Mersey off the village of Tranmere. She remained for 25 days and was served by Mersey ferry steamboats which ran to Tranmere Jetty to transport the many "worthy and curious" visitors to the ship. The British government were worried by her arrival. They realised that the US were far ahead of them in sea going marine steam technology and they sent representatives to view the ship. They feared it would be offered to the French who Britain had only recently defeated. The exhausted coal bunkers having been refilled, presumably with Lancashire coal carried by sailing flat to Tranmere anchorage, she sailed to Elsinore, Denmark thence to St Petersburg There, she was viewed by interested representatives of the King of Sweden and The Russian Tsar. Whilst well remembered in the US, the SS Savannah and her first steam crossing of the Atlantic has been largely expunged from British popular history. To commemorate the voyage the 22st May is designated National Maritime Day in the USA.

http://www.youtube.com/watch?v=SFz9ZUoZflg

The first nuclear fuelled steam turbine cargo ship was built in the US in 1962 and was named N.S. Savannah after the S.S. Savannah to commemorate the earlier Speedwell engine steam vessel.

She is preserved as a museum ship at Baltimore and is supported by a preservation society. Most of her winches were built by Lidgerwood (Superior-Lidgerwood-Mundy).

Below is the main lobby of NS Savannah with a model of 1819 S S Savannah on show.



Speedwell Ironworks built parts for some very early American steam railway locomotives. They supplied parts for Tom Thumb of 1829, the first successful American railway locomotive. In 1838 they completed the loco **Speedwell** for the Baldwin Locomotive Company of which Stephen Vail became a Director, The Company for a time becoming Baldwin, Vail & Co.

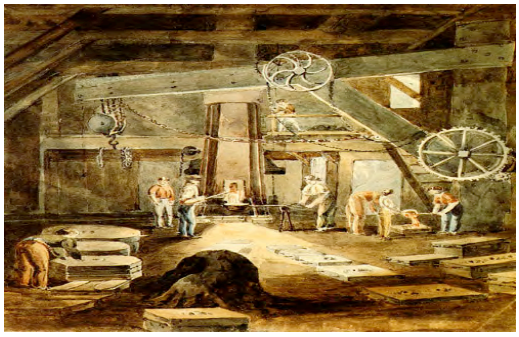
Judge Stephan Vail had two sons Alfred and George who went into the Speedwell Ironworks business. Alfred Vail worked with Samuel Morse at **Speedwell Ironworks** to perfect the electric telegraph. In 1838 the first successful transmission of the electric telegraph using Morse code was made from a building at the **Speedwell Ironworks,** (building now preserved at Morristown, see photo below). The Vail family and the **Speedwell** company shared the patent rights to the system with Morse.

Below.

The old forge site at Speedwell Lake.

The preserved waterwheel house of Speedwell Ironworks, the Vail/Morse building, at Morristown.

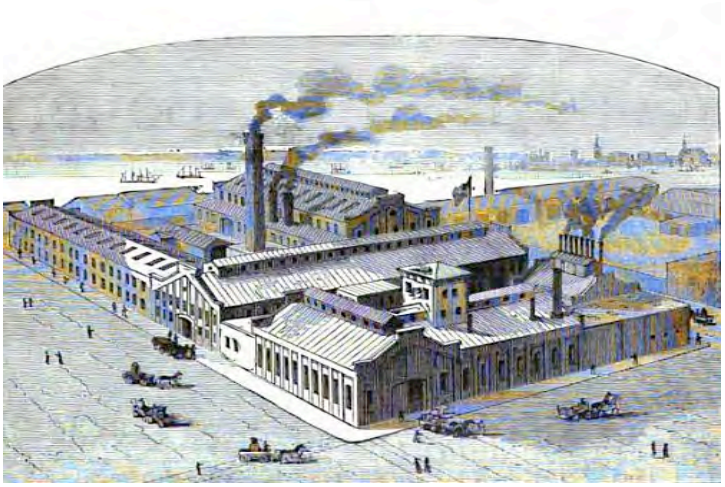
Early scene inside Speedwell Ironworks.



In 1847, his first wife having died, Stephan Vail married **Mary Lidgerwood,** a widow with five children. Her first son by her first marriage was **John H. Lidgerwood** who was “put to work to learn the Ironworks business” at Speedwell.

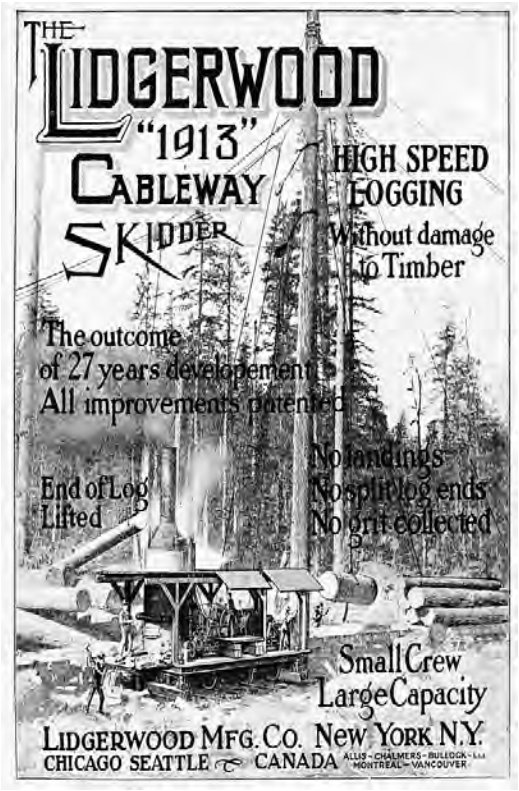
On Judge Stephan Vail’s retirement George Vail became Manager of Speedwell Ironworks, he was succeeded by **John H Lidgerwood (Snr)** who became President of the company.

In 1876 **the Lidgerwood Manufacturing Company** was reformed. **John H. Lidgerwood (Jnr)** and his brother **William Van Vleck Lidgerwood** seemed to control operations. They removed the works from the historic Speedwell site by the Whippany River (site now preserved) to the new **Speedwell Ironworks at Red Hook, Brooklyn,** near the Atlantic Basin and The **Speedwell Ironworks, Coatbridge, Scotland**. The machinery from Speedwell Whippany River was sent to Coatbridge and Brooklyn. The Red Hook building is subject to a preservation order.



The US operation, Lidgerwood Manufacturing Co., specialised in marine winches, logging winches and gear, coffee and sugar mills, stock yard (shunting) winches and general heavy lifting gear. The Lidgerwood Logging Tower Skidder (an overhead steam logging system) was particularly successful; one set of equipment is preserved with its 85 ft high rail mounted tower. The term *The Lidgerwood* came to be used as a generic name in the logging trade for the skidder and on railroads using there "rapid unloader" system. The skidder was said to be "more dangerous than war", but was very effective. Lidgerwood Manufacturing also set up a Speedwell works in Brazil. By 1892 they were said to be one of the busiest and most prosperous concerns in the US., employing 800 men and having sold over 8000 of their "famous engines". In 1896 Lidgerwood secured the contract for all cable and lifting systems for the building of the Panama Canal.

Below is the preserved 1913 type Lidgerwood at Tacoma. It weighs 260 tonnes.



In 1883 **W.V.V Lidgerwood** was co-founder of The Washington Association of New Jersey and with four other American gentlemen bought George Washington's house and winter HQ at Morristown and gave it to the nation as a museum to the great man. W.V.V. gave many of the original items that he had collected relating to the house and G.Washington. The area became the first National Park in the USA and the original Speedwell Ironworks building, where the electric telegraph was invented, was also moved to the site. A bust of **W.V.V.Lidgerwood** as benefactor is being displayed at the house until March 2014 as part of an exhibition about his life.

In 1886 **W.V.V. Lidgerwood** had built a $20,000 pleasure steam yacht the “Speedwell” which was launched in the Erie Basin. He was a member of The New York Yacht Club and lived on **Speedwell Avenue Morristown.** In 1888 **W.V.V. Lidgerwood** was listed as US Charge d’Affaires in Brazil where Lidgerwood Manufacturing set up a works, (still standing).

Above is an image of a builder’s plate offered for sale on eBay in B.A. Argentina, 2011.

W.V.V Lidgerwood who had become a global business man set up the UK based arm of the family business. He had a house and office in London in Hanover Square, Mayfair, London between 1906 and 1914.

The UK works of **W.V.V. Lidgerwood** was set up in about 1876 in the North of Glasgow. But soon after he either had built or more likely bought what was probably an existing iron works and factory at Tennant Street, Coatbridge in Scotland. The area was long established as a centre of iron smelting and manufacture due to both coal and ironstone being available in the area. As was traditional with **Lidgerwood's** they adopted the name **Speedwell Ironworks** to refer back to their beginnings in the Whippany Valley USA. Speedwell Coatbridge became known for "extremely fine triple expansion engines" for trawlers, tugs and a few coasters; they also made stationary engines to drive plant and machinery. It is said that a **Lidgerwood Speedwell Ironworks Coatbridge** engine was until recently still at work in Latin America driving a jam factory. The **Speedwell** Coatbridge works in the Whiffet area of the town was extensive and was served by private sidings from The North British Railway.

A W.V.V. Lidgerwood (1913) 59 nhp engined coaster leaves Birkenhead. Later owned by Coppack Brothers. Scrapped 1961.

How many marine engines were produced is not known, they seem to have been generally about the same size or somewhat larger than Kerne's engine. We know that Kerne's engine is numbered 397 and must have been built in 1912 or before. I can find no details of vessels with engines built by W.V.V. Lidgerwood at **Speedwell Ironworks Coatbridge** after early 1914. On the outbreak of war in 1914 the large firm of William Beardmore was given a massive munitions contract by The War Office. They had insufficient capacity to meet the demand and bought W.V.V. Lidgerwood's, amongst other factories including Alley and

MacLellan “Sentinel” works of Glasgow and Shrewsbury. (Kerne’s steering sheaves are made by Sentinel probably from the Polmadie works). They intended to turn **Speedwell Ironworks** over to munitions production. However some marine engine building seems to have continued at the **Speedwell Ironworks** under Beardmore ownership. The Beardmore, **Speedwell Ironworks, Coatbridge** engine of the preserved tug S.S. Masters is said to have been constructed in 1916. This engine is very similar to Kerne’s Lidgerwood built unit, the design does not seem to have changed. Or it may be a Lidgerwood product that was in stock and marketed as Beardmore after the takeover.

Two Speedwell Ironworks marine engines survive, both in working order.

SS Master engine 9.625” x 15.5”x26”, 18” stroke. 100rpm. 332 hp.

See http://ssmaster.org/gallery/videos/ Master is preserved in Vancouver, Canada.

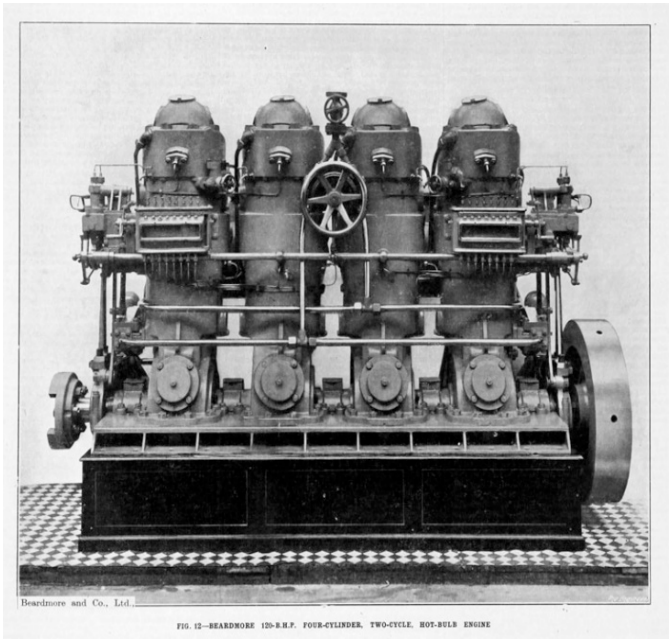
ST Kerne engine 10”x17”x28” stroke 18”, about. 100rpm. 400hp

See http://www.tugkerne.co.uk/apps/videos/videos/show/937461-kerne-s-engines

Kerne is preserved in Liverpool U.K.

In the 1920’s Beardmore produced cars at Coatbridge, including a small run of 4 litre cars the “Beardmore 30”at the old **Speedwell works.** Marine oil engines were also built at Coatbridge, none were very succesful. Between 1920 and 1922 John Reith (late Lord Reith

of the BBC) was General Manager of the **Speedwell** works. In 1928 Beardmore, by that time heavily in debt and under the control of Vickers, closed the **Speedwell Coatbridge** works.



Beardmore and Co., Ltd.

FIG. 12.—BEARDMORE 120-B.H.P. FOUR-CYLINDER, TWO-CYCLE, HOT-BULB ENGINE

In 1937 the works was sold to Martin Black & Co (Wire Ropes) Ltd and became **The Speedwell Wire Works, Coatbridge**. It closed in 1962 and the site is now modern industrial units.

Speedwell Ironworks, Coatbridge, under Martin Black (Wire Ropes) ownership in the early 1960's.

W.V.V.'s grandson also William Van Vleck Lidgerwood was a keen supporter and patron of The Farmington Museum, The Hillstead Museum and The Wadsworth Athenaeum and a member of The Farmington Historic Society He was born in the old family home "**Speedwell**" and died at Martha's Vineyard in 2011. He is survived (in 2011), by two daughters.

Lidgerwood Manufacturing relocated to Elizabeth, New Jersey in 1944. In 1947 The Superior Iron Works of Superior, Wisconsin was purchased. It formed J.S. Mundy Hoisting Engine Company and Superior-Lidgerwood-Mundy. By the 1950's all manufacturing was at Wisconsin with offices in New York City.

Today the company of Superior- Lidgerwood- Mundy has consolidated all operations to Wisconsin and still manufacture marine winches and lifting equipment its web site proudly traces its roots back to Speedwell Ironworks in 1802 and John H Lidgerwood in 1873.

SLM SUPERIOR LIDGERWOOD MUNDY

Lidgerwood Manufacturing, our parent company, has a long and illustrious past starting in 1873 as a continuation of the Speedwell Iron Works of Morristown, New Jersey. Speedwell was established in 1802 by Judge Steve Vail, stepfather of John H. Lidgerwood Sr. In Speedwell Works, the predecessor to Lidgerwood, much of the important engineering work of the early part of the 19th Century occurred. Among the highlights were the development of the electric telegraph, which was first designed and operated in one of the Speedwell shops by Professor Morse and Alfred Vail. The machinery for the SS Savannah, the first steamship to cross the Atlantic, was also built in Speedwell Works.

http://www.lidgerwood.com/

Kerne's, 1912 Lidgerwood, Speedwell Ironworks, Coatbridge engine, can trace its historical lineage directly to Stephan Vail's Speedwell Ironworks, Morristown USA.

It is remarkable and happy coincidence that Kerne is preserved in working order at Liverpool, the port of arrival of the Speedwell Ironworks powered S.S. Savannah, which made the first steam powered crossing of the Atlantic 1819.