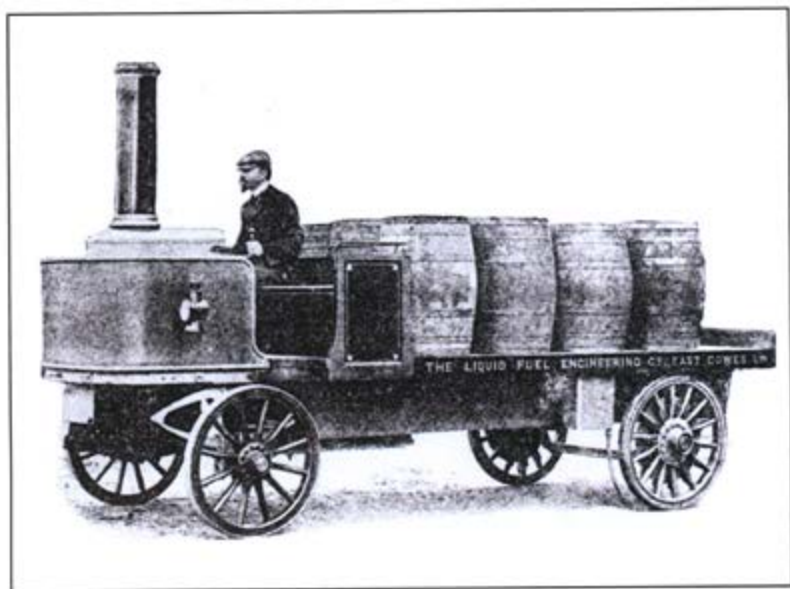


# THE LIQUID FUEL ENGINEERING Co.

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EAST COWES HERITAGE CENTRE

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## HENRY HOUSE AND THE LIFU COMPANY

*An American inventor in East Cowes*

Henry Alonso House was an American born in Brooklyn, New York. A prolific inventor whose successes included an automated buttonhole-making machine which made him a fortune providing the American Civil War with uniforms, a machine for producing and packaging Shredded Wheat, machines that made hats, processed buffalo hides at high speed and ones that made paper plates. He could turn his engineering mind to most things. His son, also Henry A. House, joined the Hiram Maxim Armaments firm in England in 1890, after serving his apprenticeship in his father's firm, and began working on a steam-engined aeroplane. It may have been a House-designed boiler that Hiram Maxim used on his first attempt at flight in 1890. The tethered steam-powered plane actually left the ground.



*Henry House Senior. Photographed at the height of his inventing and manufacturing successes in Bridgeport, Connecticut.*

Two years later, H.A. House and Son set up a firm building liquid fuel steam engines for which they constructed launches beside the Thames at Teddington. Sir Thomas Cassell and the English financier Robert Rintoul Symon seem to have been the backers.

In 1893 Mr Henry A. House senior was fined for speeding on the Thames in a launch that he had built at his Teddington workshop. The witness said that the launch must have been going at 26 knots! House must have been quite pleased at that advertisement, although it cost him a £10 fine. The launch was driven by his patented new device - a steam engine powered by Liquid Fuel.

LIFU 2



*A LIFU launch on the Medina River at East Cowes*

Coal took up a lot of space on board a steam boat. To do the same amount of work, the necessary liquid fuel (petroleum) was half the volume, and was cleaner. Symon and House had taken out numerous patents perfecting their boilers and engines, creating a range of engines from 10hp to 125hp. 'Mineral oil' was widely available, priced between 2d and 6d a gallon.

In March 1894 Henry House moved to East Cowes creating LIFU, taking over a boatbuilding works formerly occupied by G.A. & A. Spencer, Columbine Yard. There were no speed limits out on the Solent!

East Cowes was the hub of 'Yachting' - and those who owned yachts had money. Many of these vessels were of 100 ft. or more, with professional crews. They needed launches as tenders, and their owners were prepared to pay for the latest technology and speed.

LIFU advertised their engines as having, "No smoke, and no smell, lightweight and with perfect combustion and automatic supply." Among their customers were H.R.H.



LIFU 3



A LIFU launch in the foreground at Cowes Week around 1900.

The Prince of Wales, Dukes, Lords, Barons, and men such as Mr. Jameson (whiskey), Mr. Singer (sewing machines) and Thomas Lipton (tea). Many influential members of the Royal Yacht Squadron kept their vessels at East or West Cowes and LIFU were building every part of their engines and launches. There were 12 workshops which included pattern making, foundry, coppersmith, sawmill, joinery and painting. Up to 220 craftsmen were employed. The LIFU yard was on the site of the present day Columbine Shed.

R.R. Symon, financial backer of LIFU was a member of the Royal London Yacht Club, and had a 63 ft. steam yacht fitted out by LIFU, and in 1896 White's built him a 100 ft. steam yacht, *Manitou*, with some LIFU machinery on board.

### **Kariat**

*Kariat* was built by LIFU in East Cowes in 1897 using an engine of 1896. and was believed to be the only LIFU launch with her original engine. She was constructed for Captain R. Dixon, owner of a large yacht moored

LIFU 4



*Kariat* steam launch moored at Cowes. Once the only surviving LIFU vessel with original engine. Length 35 ft. Beam 6 ft. 9 ins, Engine 35 shp. Boiler pressure 200 lbs. Speed about 12 knots.

in Cowes for which he needed a steam tender, and he used it to cross the Solent to and from his Hythe home.

Subsequent owners lived in Christchurch and Shoreham, and after 1953 *Kariat* was on inland waterways in the Midlands. In 1985 she was restored at Lake Windermere, being given a new boiler, and went to Co. Down in 1997. John Power bought her in 2003 and brought her back to Cowes. On 3rd June 2012 she was one of the 670 boats chosen to take part in the Queen's Diamond Jubilee River Pageant on the River Thames.



LIFU 5

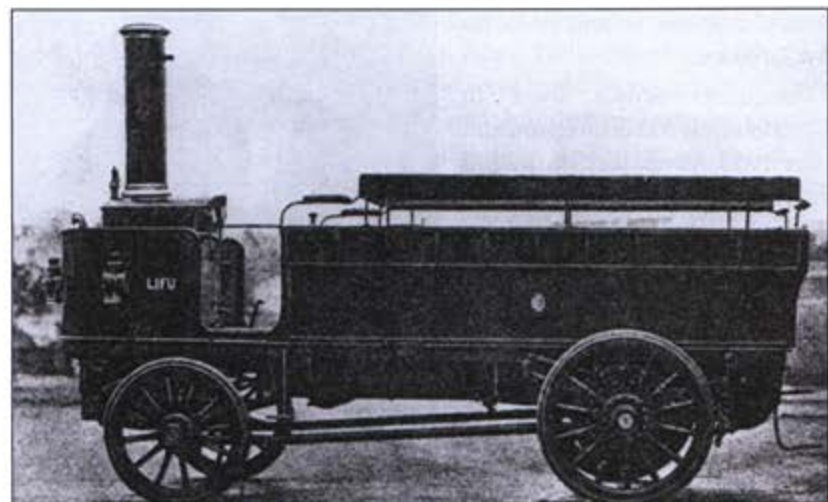
In January 2016 a large fire at Cowes destroyed buildings where many historic vessels were stored for the winter. Unfortunately *Kariat* was one of the boats lost to the flames.

### Steam powered motor vehicles

Work began on using the engines in motor vehicles in 1895 when Henry House concentrated on haulage vehicles, omnibuses and light vans, he tested them extensively before taking orders. Mr. Henry House junior was the manager, his father having returned to Bridgeport, Connecticut in America.

House Snr. returned to the Island in 1896 with modifications to his engines. Several complaints were made to the police about the speeds that he was driving at around East Cowes. It was only earlier that year that the requirement for a man to walk 20 yards in front of a motor vehicle waving a red flag had been withdrawn and the speed limit had only been raised to eight miles an hour.

In January 1899 the police set up a speed trap in York Avenue. Two policemen synchronised their watches. One stayed by the Queen's Gate,



The LIFU Waggonette could reach speeds of 18mph.

LIFU 6

and the other went down the hill to the bottom, 1,633 yards away. Mr. House passed the first policeman at 10.07p.m. and the second at 10.10p.m.

His waggonette was advertised as being able to do 18 miles an hour on flat roads and according to the police it sped down York Avenue, at more than double the speed limit! The evidence stated that Mr. House "drove very furiously down York Avenue" and "people seemed to be terrified at the pace these motors travelled."

In his defence Mr. House said that he much regretted it, as he would naturally be one of the last men to wish to endanger the public by the use of motor cars.

He said that the road in question was straight and very wide, and as there was absolutely no-one about there was no danger to life or limb. The court thought differently and Henry House was fined the sum of £3 with 11 shillings costs. This was the first motoring offence to be prosecuted on the Isle of Wight.

Letters to the County Press followed with several praising the police for catching Mr. House. There was strong condemnation of the 'Horseless Vehicle.' House replied in a letter stating that motor cars were here to stay and their numbers would increase on Island roads and become the accepted form of transport. He also stated that the opposition on the Island would hasten his departure to the mainland. Customers needed to see the vehicles that he was manufacturing driven at speed and the only place he could do that was on the roads.

Speeds were quoted in his advertising brochures and these must have been



Sculpture by the artist Glyn Roberts showing the first speeding offence on the Isle of Wight. It stands at the junction of Newbarn Road and York Avenue, where the policeman stood in 1899.

LIFU 7



The Motor Train which worked a route between Cirencester and Fairford. Parcels were carried in the front and passengers travelled in the rear.

tested in East Cowes. York Avenue would have provided the hill and perhaps Clarence Road was the good flat straight road! Mr. House regretted that a move to the mainland would have an effect on the working classes of East Cowes - 200 of whom were employed in the works.

In 1899 thirty road vehicles were made and twenty launches, every part manufactured in Columbine Yard, including the engines. Everything was built using the latest machinery, some of it American. An assembly line system was introduced, and movement of materials reduced to a minimum within the works. All the road vehicles had the same chassis, with different bodies added to fit with the owner's requirements. Components were all of regular sizes, to facilitate repairs - spares being held in stock by LIFU.

A steam road Motor Train was produced by LIFU, goods and parcels in the van and passengers in the rear car. This plied between Cirencester and Fairford in 1898 - 99 and could achieve speeds between five and eight miles an hour on fairly level roads. Omnibuses constructed by LIFU were used in Mansfield, Kent and Edinburgh. LIFU also made a steam tram which was used in Portsmouth from 1896 to 1901. It could pull two trailers at



Chivers, the jam makers from Cambridgeshire, one of the many companies who used the LIFU van for their deliveries.

busy times. A waggonette was produced with knife-edge seating. It was this vehicle Mr. House was using when he was fined for speeding.

The basic goods van could carry three tons and achieve a top speed of nine miles an hour with this load. Uphill it was only four miles an hour. The Postal Service and London shops successfully used the LIFU vans. The lorry could have sides fitted to it to safeguard loads, and travelled at up to eight miles an hour, reducing to four miles an hour uphill. LIFU allowed other firms on the mainland to construct their patented engines under licence, inserting them into different vehicles. Bellhaven, the Scottish brewery, used LIFU engines.

LIFU ceased production in East Cowes and moved to the mainland in 1900. In 1898 the 'Automotor and Horseless Vehicle Journal' had praised the site for the launch manufacture, but pointed out the extra costs involved in shipping road vehicles off the Island. The opposition and difficulties over testing the motor vehicles on the roads in the town also contributed to the decision to move away.



Top: The LIFU Charabanc and Right: The goods van shown in a sales catalogue and demonstrating the economies of using of different bodies on the same chassis.



The main reason for the closure of the East Cowes LIFU works was the death of R.R. Symon, the financial backer, which caused his executors to sell every last bolt and plank of wood at the Columbine Yard. The Maxim Automotor Company bought much of the stock. H.A. House was a protégé of Hiram Maxim, so perhaps Maxim funded the continuation of the LIFU name. LIFU moved to Hamworthy, Poole, and then to Bitterne, Southampton, by 1910.

Both Henry Houses returned to America where Henry Snr. continued to work on a wide range of items from metal beer kegs to the high-speed production of Shredded Wheat. He was still working and filing patents aged 89 but died the following year in 1930.

Although LIFU was only on the Island for six years, the firm played an important part in the East Cowes, Isle of Wight and national motoring

A CATALOGUE  
OF THE  
MODERN ENGINEERS' TOOLS,  
**PLANT, MACHINERY,**  
STOCK AND STORES,  
STEAM YACHTS, LAUNCHES & MOTOR VEHICLES  
AT THE  
LIQUID FUEL ENGINEERING WORKS,  
**EAST COWES, ISLE OF WIGHT.**

*For Sale by Auction by Messrs.*  
**Fuller, Horsey, Sons & Cassell,**  
OCTOBER, 1900.

The cover plate of the auction catalogue of 1900 which saw the sale of the entire LIFU company.

history. It was the first firm to produce motor vehicles on the Island, and these vehicles were in the forefront of motor engineering history in Britain. The LIFU oil-fired engine was a success, and led the way for more successful experiments.

One might think that these vehicles and engines should have been preserved in museums, but it was a time of great technological change. Motor vehicles became obsolete rapidly, and would have new engines or mechanical details altered as the motor industry advanced. One LIFU car exists at Ironbridge, but it was built at Hamworthy. Some of the steam launches remain, although sadly, now one less with the loss of *Kariat*.

REGISTERED **LIFU** TRADE MARK

## THE LIQUID FUEL ENGINEERING COMPANY.

*Steam Yacht & Launch Builders, Steam Van Builders, Marine & General Engineers, etc. etc.*

**London Office:**  
20 ABCHURCH LANE, E.C.  
Telephone: "PADDOCK, LEVONSON"  
Telegrams: No. 36, 8433.

**Paris Office:**  
24 RUE DE LA CHAUSSEE D'ANTIN.  
Telegrams: "PARIS-LEVEE"

**Glasgow:**  
EAST COWES, I.W.  
Telegrams: "PARIS-LEVEE"  
Telegrams: No. 3, EAST COWES



### Lorry.

To carry 5 tons. Platform space, 10 ft. by 6 ft. 5 in. area, 64 sq. ft.

Speed on fairly level roads, 6 to 8 miles per hour. Capable of climbing gradients of 10%, at 4 miles per hour.

**Capacity of Tanks**  
{ Oil—40 gallons, sufficient for a distance of from 10 to 20 miles.  
{ Water—80 gallons, " " " " " about 25 miles.

Thanks to Max Taylor for picture of Kariat Steam Launch  
and to Donald Hoke of the Virtual Steam Car Museum, Dallas, TX,  
for picture of Henry House

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Produced by the East Cowes Heritage Centre.

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