



The Consuta Trust

The advancement of education in the history of steam launches, by preservation, maintenance and exhibition of the steam launch **Consuta**

Consuta Trust Newsletter - Spring 2021

Dear Supporter,

We are looking forward to having Consuta afloat this summer to start carrying out steam trials of the new boiler and its installation work, so are hoping to start making preparations as soon as it is possible to do so safely. Paul and I have already had visits to Beale Park over the last twelve months, mainly to check that all is well.

We are wondering what sort of boating year will be possible in 2021, but will certainly make all endeavours to get Consuta afloat and steaming ASAP. It might be possible to start preparing Consuta by late April.

Possible events for the year

The Henley Royal Regatta have changed their regatta date to August and are considering moving the Regatta onto Dorney Lake. The Henley Trad Boat Festival are keeping their fingers crossed that the Trad event will be possible. The annual Boat Race is to be held at Ely on 4th April; remember Consuta was there for the Diamond 44th commemoration event in 2004. The Steam Boat Association are planning their 50th anniversary event on Windermere during early August. So at this stage there is much optimism but nothing can be guaranteed.

Some sad news,

William Rose died on 11th February. *Quote from The Henley Standard* "Adored by his wife Penny and their late son Myles, a much loved grandfather of Will and Imogen. Bill dedicated his life to the restoration, conservation and history of Traditional Thames Boats".

Many will know that Bill and Penny have a private museum of Thames vintage boats plus many boating items on display at their Shiplake home. Their fast Victorian steam launch Pierrette is a contemporary of Consuta, built by G.F.G DesVignes it was occasionally displayed at the Beale Park Boat show and also the Henley Traditional Boat Festival. Adam Toop had made arrangements with Bill and Penny to be future custodians of this important collection. The Henley Standard reports more on this, see link:- <https://www.henleystandard.co.uk/news/river/159117/collector-buys-hobbs-boatyard.html?cmpredirect>

An interesting selection of Saunders boating history was published in the Christmas edition of the Thames Vintage Boat Club magazine "The Boater", editor Jayne Percival and John Llewelyn the author have kindly agreed that we can reproduce this here in the Consuta Newsletter.

Many thanks for your continuing support.

Brian Smith on behalf of the Trustees.

The Thames Boatyards : Saunders of
Goring

From College Barge to Flying-boats

An innovative genius who took out more than a hundred patents, Sam Saunders founded a company which was to move to the Isle of Wight and become Saunders-Roe of flying-boat and hovercraft fame

Samuel Edgar Saunders was born in 1857 at Streatley, the eldest of seven children of the landlord of The Swan Inn. His grandfather had been responsible for the construction and maintenance of locks in the area and would have built his own rowing boats, so the family naturally became involved in boat-building, with a yard adjoining the inn.

Sam seems to have been born with a natural capacity for this craft. When "quite a lad" a dinghy he had built entirely by himself was paraded around the village at the head of a procession to show what had been achieved by a local boy.

The family were sufficiently well off to send Sam to a private school, and when he had completed his education he began work in the yard that had been founded for him and his brothers in 1870. An early activity was producing punt poles. Every year the family would buy 100 fir saplings and sink them with chains in a river inlet. Every third year they would be lifted, dried out and shaped. It was Sam's proud boast that he would pay £20 to anyone who had broken one by punting. It was never claimed.

His first steam powered boat is believed to have been the 'Flying Dutchman'. of 1876, having a length of 58ft and what was claimed to be a record speed of 17.4mph. This was a remarkable achievement for a man only 20 years old.

Probably the largest boat to be built by Sam in his early years is the University College

Barge of 1878. A splendid example of Victorian fantasy river architecture with a 26ft saloon and upper promenade deck, she was restored in the 1980s but until recently rested in a dilapidated state on land near the Thames and Kennet Marina, Caversham.

In 1877 Sam married Kate Baigent, said to be the daughter of a gypsy, at Brighton. The age on his marriage certificate shows him as being 21. In fact he was only 20. Perhaps his parents did not approve and he wanted to avoid delaying the wedding. In all events, the marriage proved a happy one and lasted until his death in 1933.

In the late 1880's Sam began constructing electric launches. By this time the Saunders family, which included boat-building brothers Arthur and Harry, had built an extensive boat house on the Goring side of the river which

THE THAMES ILLUSTRATED. -Advertisements.

 ELECTRIC CHARGING STATION. IMPORTER OF CANADIAN CANOES. BOAT BUILDING OF THE HIGHEST CLASS IN ALL ITS BRANCHES. SAUNDERS' BOAT FITTINGS ARE UNEQUALLED. 	LAUNCH BUILDER AND ENGINEER ESTABLISHED 1870 S. E. SAUNDERS, BOAT, PUNT AND CANOE BUILDER, GORING-on-THAMES, At the new Springfield Works on the Moulsford Reach is the largest Slipway, Launch Building and Repairing Works on the Upper Thames. First-class Moorings for Houseboats, Safe from Floods. Telegraphic Address: "SAUNDERS, GORING, OXON." Station, Goring, G.W.R.	 STEAM, ELECTRIC, AND OIL LAUNCHES BUILT TO ORDER. LAUNCH AND BOAT FITTINGS OF ALL DESCRIPTIONS KEPT IN STOCK. HOUSING, REPAIRING, AND VARNISHING EXECUTED IN BEST POSSIBLE MANNER. 
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An advertisement in the 'Thames Illustrated' of 1897 showing Sam Saunders' claim that his company was established in 1870.

xviii <i>Salter's Thames Guide. -Advertisements.</i> SWAN HOTEL, STREATLEY-ON-THAMES. Proprietor A. E. SAUNDERS. The above is situate in the most beautiful part of the Thames Valley, and is much sought after by Visitors. Boats, Punts, Canoes, built to order, or Let at Moderate Charges. Boats Repaired, Varnished and Housed. Sam Saunders' brother Arthur advertising in Salter's Thames Guide in 1887 showing that he had by then taken over the Swan Yards at Streatley.	xviii. <i>Salter's Thames Guide. -Advertisements.</i> Station: "GORING AND STREATLEY." G.W.R. Telegrams: "SAUNDERS, BOATBUILDER, STREATLEY, BERKS." HARRY SAUNDERS, Boat and Launch Builder, STREATLEY-ON-THAMES. ESTABLISHED 1870. BOATS OF EVERY DESCRIPTION HOUSED, REPAIRED, VARNISHED, CARTED, &c. BOATS LET ON HIRE BY THE WEEK, MONTH, YEAR, OR SEASON. GOOD MOORINGS FOR LAUNCHES AND HOUSEBOATS. Sam Saunders' youngest brother Harry advertising in Salter's Thames Guide in 1911 that he was hiring out and repairing boats at Streatley. Also claiming to have been established in 1870.
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remains an attractive feature of the town to this day. A blue plaque commemorating him was unveiled in 2013 on an adjoining building now the post office. A 42ft long electric launch called 'Avalon' was built in the 1890s capable of 7mph. It had a tunnel stern to reduce wash. The peak of his achievement with electric vessels was a pinnacle bought for the Royal Yacht 'Victoria Albert' in 1904.

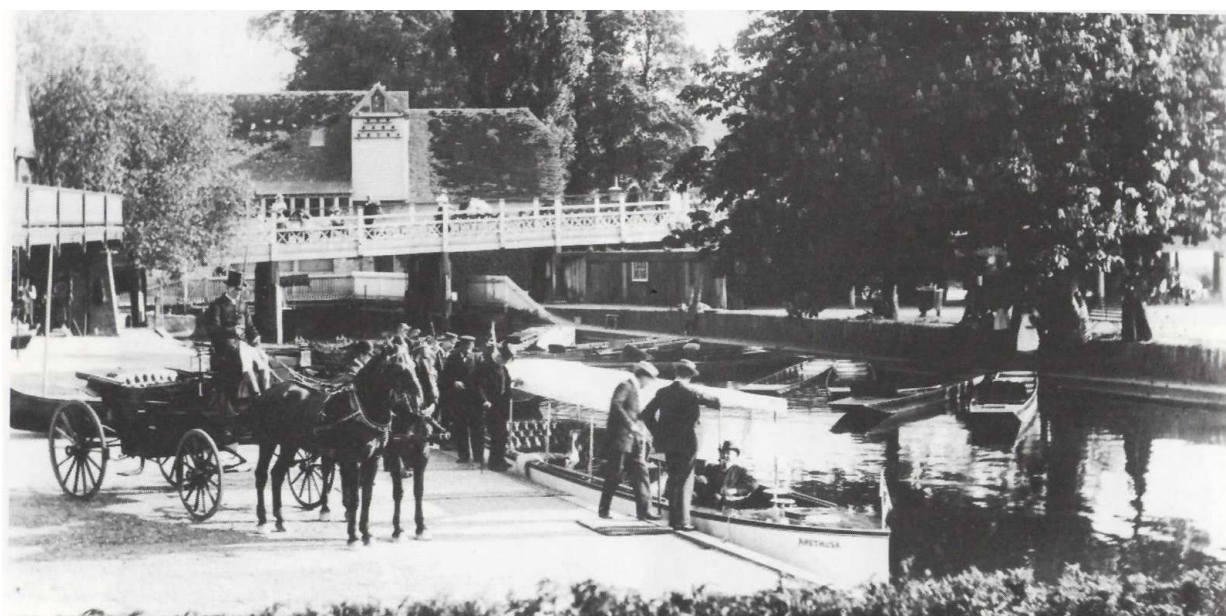
Business was so good in the 1890s that a new and much larger boat building yard was established 1½ miles up-stream from Goring. Known as the Springfield Works, it was situated on an inlet at South Stoke with a river frontage of 500ft extending back to the main GWR railway line.

Internal combustion engines caught the imagination of Sam in the early 1890s when he designed and built launches fitted with Daimler engines. He realised that to take full advantage of these lighter and more powerful units he would need to construct lighter and stronger hulls to reduce displacement. Like other boat-builders, he had experimented with plywood skins, but at that time no adhesives were available that could withstand immersion. As an importer of Canadian canoes Sam must have been aware that North American Indians made the skins by sewing

strips of birch bark together. Perhaps this inspired his invention of a radical new method of boat construction. This became known as the 'Consuta' method - a monocoque formed by thin layers of diagonal wood one eighth of an inch thick sewn together with copper or annealed brass wire. Three layers were used for small boats and four for larger ones. Eventually a large sewing machine had to be devised with the help of his daughter, Ethel.

It seems, however, that Sam put this idea on the back burner for 14 years, pursuing his main interest in steam-powered fast launches such as 'Dunlin' (42ft x 7ft) 1895, and 'Thistle' (42ft x 7ft) 1896. It must have been the success of these that led to his first big 'break', for in 1897 the Umpire Committee of the Royal Henley Regatta agreed with Mr H S Clutton, a Leander member and owner of the mill at Cleeve, Goring, to commission Sam's company to build a fast launch capable of 25mph while creating a minimum of wash.

This prompted Sam to revive his concept of a laminated hull, and the outcome was a 50ft long by 7ft wide launch named 'Consuta' (Latin for 'sewn together') after her method of construction. An article in The



Carriage trade for the launch Arethusa at the new Goring boat house 1899



'Consuta', of 1898. She gave her name to a revolutionary method of construction.

Motor Boat six years later noted; "Of course, the critics shook their heads and asserted that the boat would follow their example and shake to bits in the course of the regatta."

How wrong they were proved! At the 1898 Regatta, powered by a DesVignes steam engine 'Consuta' was timed at 27.5 mph and thanks to a tunnel stern caused negligible wash. The whole stern was curved down slightly, which in addition to reducing the following wave, also caused the after part of the boat to lift, levelling the trim.

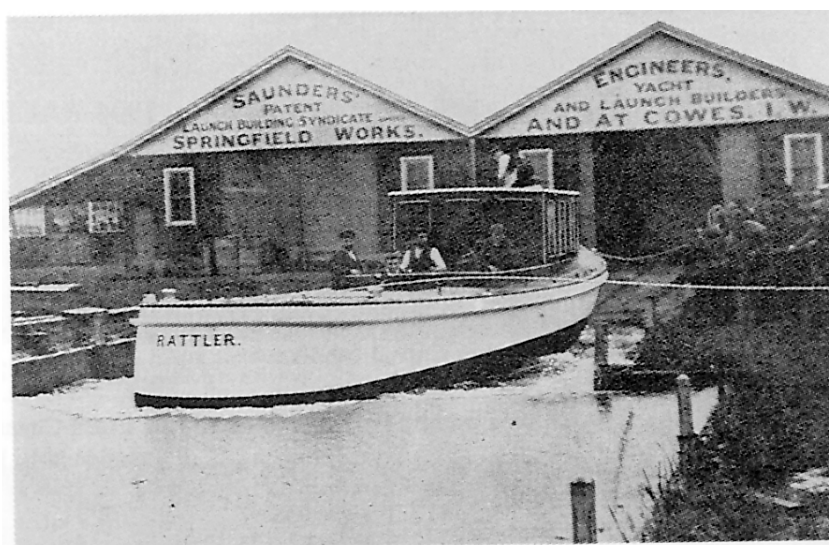
'Consuta' survived to be used by the BBC for its first outside television broadcast from a boat for the 1949 Boat Race. She was fully restored at the yard of Colin Henwood in 2001 under the auspices of the Consuta Trust. The success of the Consuta hull brought a jump in Sam's order book and he set up the Patent Launch Building Syndicate in 1899 to exploit his patent for this method of construction. In this he was joined by 'Joe' Porter (designer), Fred Goatley (boatbuilder) Bill Attry (engineer) and Ted Smith (engineer and propeller expert). At this point Sam sold his Goring boat house.

Two years later, when the accession of Edward VII had caused an expansion of interest in yachting and motor boats,

the syndicate moved to Cowes. The Thames was becoming too constraining for their fast boats and the GWR had refused to build a siding to the South Stoke works, essential for the transport of completed boats. The Springfield premises continued to be used until 1913, when they were sold to the Hobbs family, of Henley.

One of the most notable occasions at South Stoke was in 1905 when what was described as the largest British motor boat was rolled out. She was 'The Rattler' a 75ft long, 12ft beam shallow draft launch built to carry up to four tons of gold on the Ganges.

Many of Sam's workers were persuaded to move

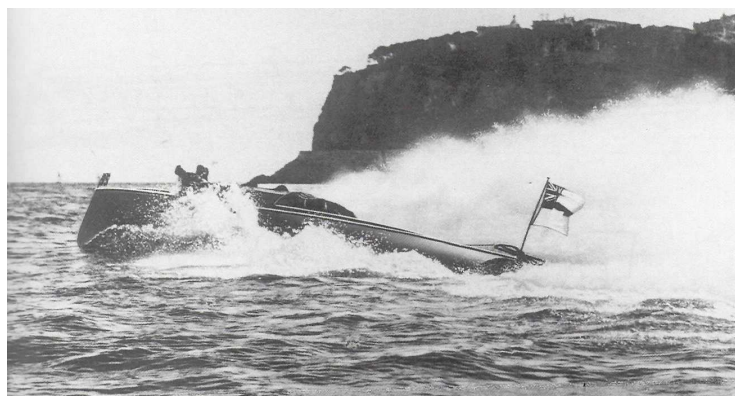


The largest British motor boat called 'Rattler'. 75 ft long also capable of 20 mph. 1905.

to the Isle of Wight, where new workshops were opened in an old chapel with direct access to the river Medina. Organised power boat racing had commenced in 1903 when most fast, seagoing boats were built of riveted thin steel. These tended to buckle and leak on wave impact, which gave Sam a golden opportunity to prove the worth of 'Consuta' hulls.

In 1904 he built 'Napier Minor' for S F Edge. She proved very successful, travelling 5,000 miles in her first year without leaks. Although finishing first in the Harmsworth Cup of 1904, she was disqualified on a technicality. By 1906 the syndicate had built 150 boats up to 75ft in length, almost all of them copper sewn at Springfield, Cowes and abroad, but for some unspecified reason, Sam decided to leave the group in September. He leased new premises known as the Columbine yard, which continued in use as part of Westland Aerospace.

In 1908 he set up S E Saunders Ltd with his son Hubert, and a large stake was taken in this company by Wolsey Motors, who provided engines for many of the launches.



'Ursula' of 1910 breaking the 100km record at Monte Carlo

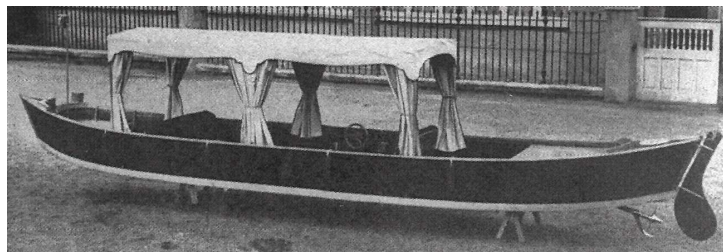
In the period before the First World War two of his most famous boats were the 50ft 'Ursula' for the Duke of Westminster, which for four years in succession won almost every notable event at Monte Carlo, and 'Mapleleaf IV', built for Sir E M Edgar, which in 1912 won the Harmsworth International Trophy back from America and successfully defended it in the Solent the following year.

'Consuta' construction proved eminently suitable for flying boat fuselages and shortly before the War Sam moved into aviation, although his syndicate had already taken a step in this direction by building an airship car at Goring in 1903.

In 1912, together with Tommy Sopwith, he designed and built what was stated to be the first amphibious flying boat in Europe. It carried off a prize of £500 for seven consecutive landings on land and sea. Although having achieved outstanding success with fast boats by the start of the First World War, the Government decided that the company should concentrate its war effort on aircraft. Sam was not pleased with this, guessing that it would put his competitors at an advantage when he returned to maritime work after the conflict.

At the end of the War the company was taken over by Vickers, but Sam managed to regain control in 1921. Although aircraft were now a major part of his work, his early interest in river boats was not forgotten. He designed a standardized canoe punt capable of being sailed, rowed, paddled or punted. It could be also be folded in the centre. His own patented 2.5hp or 5hp inboard motor could be supplied with the boat, which cost £56, plus £32 for the engine. A deluxe version offered a 10ft detachable awning and patented folding tables. More conventional 25ft luxury Thames launches were built with the 5hp engine.

In the 'twenties the use of 'Consuta' plywood was extended to car bodies and even



The deluxe 22ft version of the canoe punt for use on the Thames, 1922, and the engine designed for it.

A Removable Punt Engine

Displayed during the Goring Blue plaque award, the engine was designed using a baseplate that could be placed over an aperture in the punt floor and had a reversible propeller. The aperture could be closed with a hatch when sailing, punting or rowing. It was very heavy and took two men to carry it. Unsurprisingly it never caught on.



wastepaper baskets, shopping baskets and dog kennels. In 1929 a majority interest in the company was acquired by A V Roe and it became known as Saunders-Roe. Now at the age of 73 Sam was to get his last chance to build a world-beating speedboat. This was Miss England II, designed by Fred Cooper. Not only did she obtain the world water speed record three times (finally in 1931 at 110 mph) so meticulous was Sam, that all screw head slots were carefully aligned in exactly the same direction.

On Sam's death in 1933 he was interred in a casket constructed on 'Consuta' principles. An obituary in The Times noted that he had been described as a genius in the design and construction of high-speed motor boats. But perhaps the best tribute to him had been penned earlier, in 1910. "Samuel Saunders, the Thameside boat-builder visualised a national industry — and his country's need — thirty-five years beforehand. He wrought.... and the dream came true."



Consuta hulled flying boat A3 "Valkyrie" 1927 – 1929

Sources: 'From River to Sea, the maritime heritage of Sam Saunders, by Raymond L Wheeler, 1993, published by Cross Publishing, Newport, Isle of Wight; "The Motor Boat ' July 1904; Mr Tony Hobbs; The Times archives.

An Illicit Speed Trial

The following story, extracted from a pamphlet by an unknown author, appeared in Goring Gap Newsletter in 1997.

The Saunders Patent Launch Building Syndicate exhibited a 10ft model of a twin-screw sports boat at Crystal Palace in 1908. It had flared bows, planed surfaces with a stepped hull, and was powered by a clockwork motor. The model had been thoroughly tested by being towed behind a full-sized craft and different screw systems had been tried. It excited a great deal of attention and won a prize.

The Duke of Westminster came down to Goring and told Sam that Prince Wilhelm of Germany, later the Kaiser, had challenged him to produce a British boat that could win a regatta at Kiel. The Duke gave the syndicate £1,000 and Sam ordered a 40hp petrol engine from a company in Birmingham. The boat was constructed on 'Consuta' principles in the yard beside the Swan Inn.

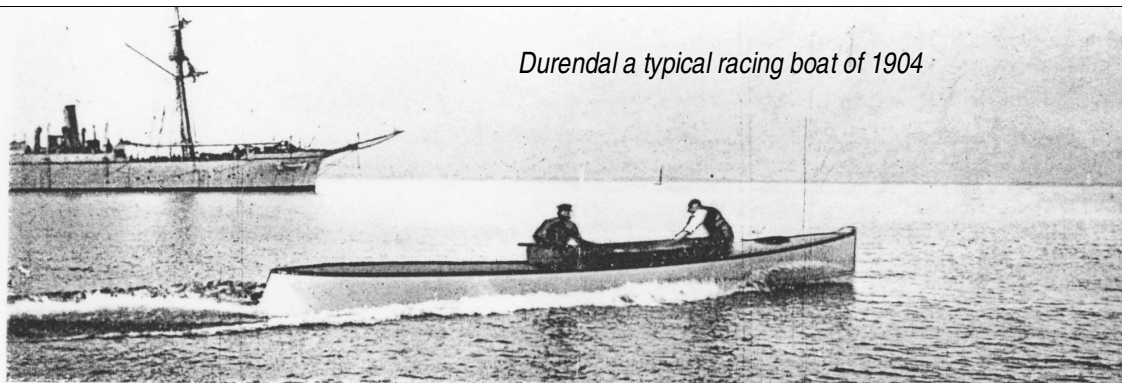
In those days it was necessary to give one month's notice for a licence to use a sports boat on the river. The team had forgotten to apply for a licence in time, so Sam and two companions took her surreptitiously through

Cleeve Lock at 4am on a Sunday morning. They opened up the throttle and roared up the river creating a heavy wash. Several camping punts and skiffs moored by the Leathern Bottel were flung on to the bank by the wash and overturned. The occupants were either left rolling on the bank or floundering in the water in a state of dishabille. Several boats were smashed, but the engine noise prevented those on the boat from hearing the hubbub so they ploughed on.

A houseboat moored in the inlet just before the Springfield Works was swamped completely by the wash and its occupants were left struggling in the water in their night clothes. This time, however, their cries were heard and the boat was turned back.

Despite all this, the trial was considered a success and the Duke came hot foot to The Swan to pour oil on troubled waters. He managed to replace the damaged boats and a houseboat was obtained from Oxford for the ladies and gentlemen so drastically disturbed at Springfield.

Fitted
with a
50-h.p.
M. M. C.
Motor.



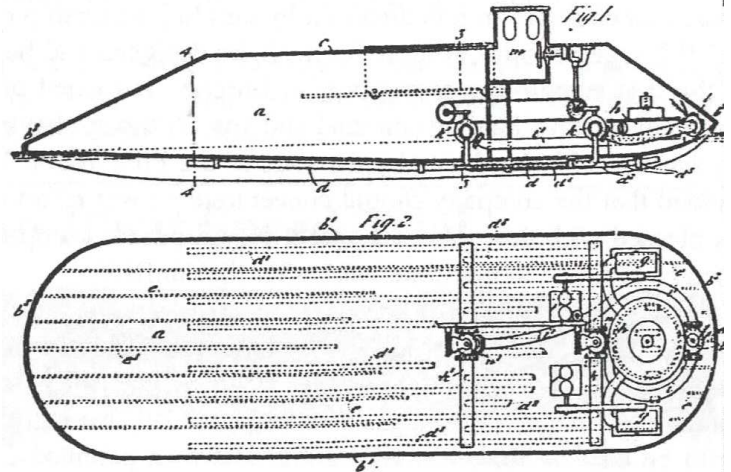
Durendal a typical racing boat of 1904

Some Saunders Boats currently on the Thames

CONSUTA	Steam-powered umpire boat, built Goring, 1898
EASY VIRTUE	double skiff built Goring 1898
EVANNE	motor cruiser, 33ft 6in beam 9ft 3in, 1934
ILDICO	open launch, Consuta construction, Goring 1905 (under restoration)
MAJESTIC	40ft umpire launch, built for Jesse Boot, the chemist, 1902, Goring
MANANA	double skiff, Streatley, 1890
VAGABOND	cruiser, Saunders Roe Cowes 45ft x 11ft, 1937
VICTORIA	30ft stitched hull built in 1906 (currently electric)
MYTHICAL MAID	28ft stitched hull built in 1904 (currently electric)

The Remarkable Bubble Boat

In 1906 the Saunders syndicate built what can only be described as an early air cushion vehicle. Not only was the proposed hull substantially supported on an air cushion, but air pumped under the hull was intended to provide propulsion. No record can be found of the inventor, but it is believed to be F W Schroeder, who took out a patent in that year. The boat was a box shape, 33ft long with 8ft beam. The bottom sloped up at the forward end and there were three stout 8in keels, one at either side to retain the bubble and one in the centre. Air from a compressor driven by an engine was fed through aft-sloping holes in the bottom of the hull.



Uffa Fox has provided the only report on the development of this craft: It failed to lift out of the water, and was left forlornly on the banks of the Thames. Because all that seemed to happen was that she would blow bubbles, passers-by were told that it was the 'Bubble Boat'. By an irony of history, the company Sam founded eventually became the British Hovercraft Corporation.

The Consuta Method of Construction

From The Motor Boat, July 1904: Hulls built on the Saunders principle consist of a number of skins of thin wood solutioned and sewn together with waterproof canvas separating the layers. The hulls are fashioned bottom upwards on a mould, the keelson and stringers are fixed on temporarily, and then the first skin is tightly tacked on diagonally. A layer of waterproof canvas is followed by another layer of wood, this time with the grain running at an angle to that of the first layer. Two more layers of canvas and two of wood follow, the first of the latter going completely round the boat and the second longitudinally. The waterproof solution takes about six weeks to set, and by the end of that time the sewing is complete. This is done by a flexible drill, somewhat similar to that used by a dentist, which carries a little

cutter for making the groove on the outside skin for the copper wire to lie snugly in.

Boats built on this principle have no ribs, longitudinal stringers being employed instead. The advantages claimed for his system by Mr Saunders are: First, a saving of nearly 40 per cent in weight; second, greater stiffness in the hull and third, more graceful lines with less labour.

Sectional view and surface showing wire sewing the skins together. Only three veneers are shown on this sample, Consuta has four.

