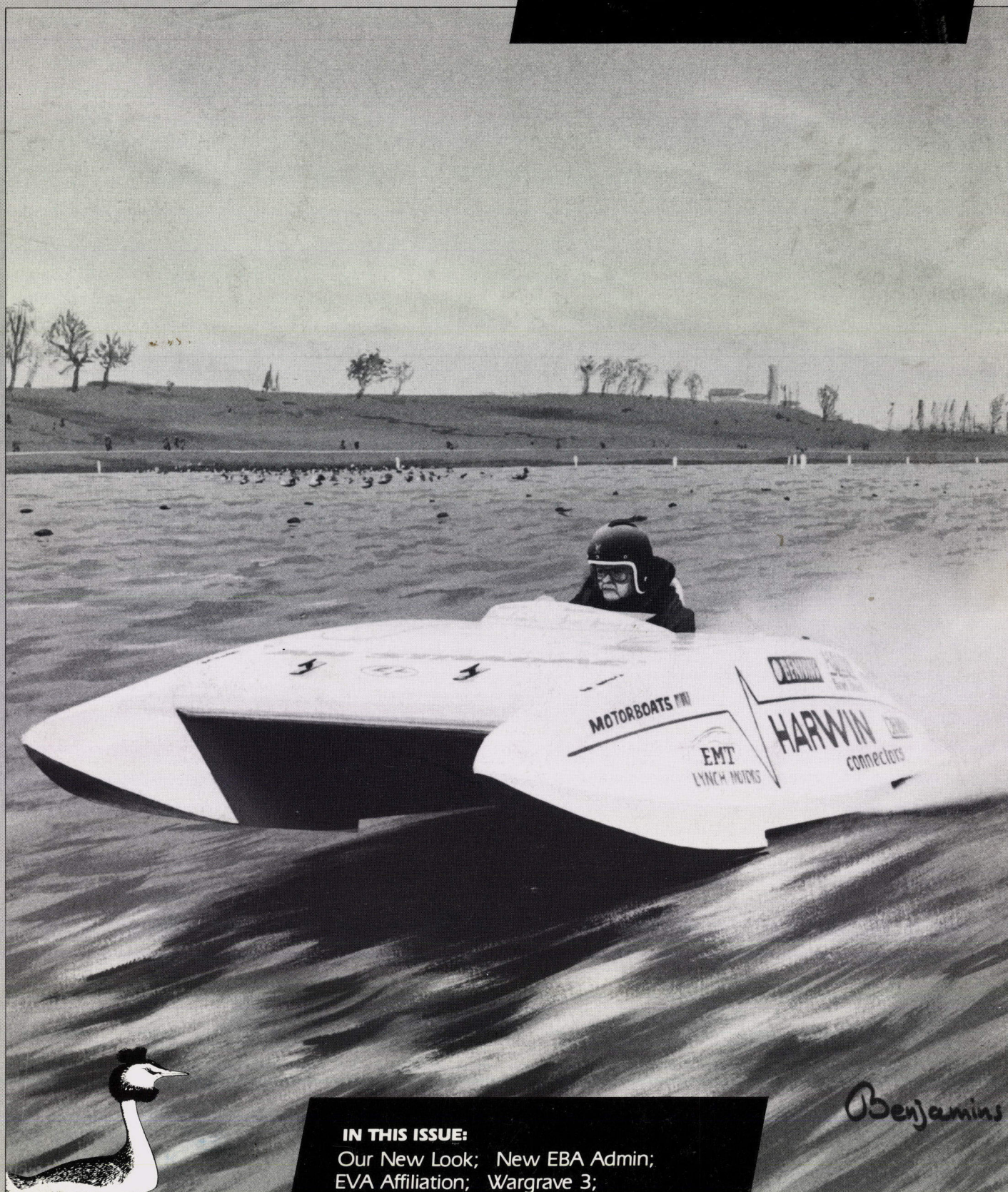


Electric Boat

The Journal of the Electric Boat Association

News

Volume 3. Number 3. June 1990.



IN THIS ISSUE:

Our New Look; New EBA Admin;
EVA Affiliation; Wargrave 3;
Letter from America; A Dutch Chapter?
Solar Power Sport; SEMP Latest;
Fistral; For the Pleasure of a Duke.

SILENT RUNNING



Speed Controllers from Curtis

*YOUR CAPTAIN'S CHOICE
FOR ELECTRIC LAUNCHES AND NARROW BOATS*

**From 125 Amps to 600 Amps
From 24V to 120V**

*ON THE GRAND UNION CANAL
OR THE NORFOLK BROADS*



- *Competitively priced**
- *Silent in operation**
- *Environmentally sealed**
- *Simple installation**
- *Single sourcing**
- *Lasting reliability**

CURTIS

**WORLD LEADERS IN DC MOTOR
SPEED CONTROLLERS**

Curtis Instruments (U.K.) Ltd., 51 Grafton Street, Northampton
NN1 2NT. Tel: (0604) 29755. Telefax: (0604) 29876





Specialists in MARINE ELECTRIC POWER

With a variety of monoblocs and traction cells we can provide you with whatever electric power you need to drive your boat majestically through the water. We can also provide you with a charger as a package deal.

For further details:

Oldham Crompton Batteries Ltd.
Edward Street, Denton, Manchester M34 3AT.
Tel: 061-335 0999. Fax: 061-335 0020.

Discover the gentle art of boating ~



in a Frolic 21 classic electric launch

'FROLICS' FROM 18 TO 30 FT ~ 'MYSTIC' DAY CABIN
LAUNCHES ~ STEAM & ELECTRIC PROPULSION
UNITS ~ KIT BOATS ~ WINTERISATION ~ FINE
WOODEN RESTORATIONS



The Old Foundry, Ludham, Norfolk NR29 5QD
Telephone : 069 262 745 Telefax : 069 262 312
Thames Office : 0932 858730

TRY A BOAT EVENTS 1990

This year the British Marine Industries are offering you the opportunity to try boating.

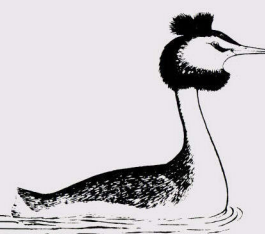
We are organising a series of events all over the country at which you can try a boat **FREE**.

8th, 9th, 10th June	Hampshire Try A Boat Event — Ocean Village, Southampton
15th, 16th, 17th June	Brighton Boat Fair Inc. Try A Boat — Brighton Marina
23rd and 24th June	Poole Try A Boat — Poole Park, Poole
29th, 30th June, 1st July	Try a Multihull — Ocean Village, Southampton
25th, 26th, 27th August	I.W.A. Nat. Rally Inc. Try A Boat — Gloucester Dock
14th to 22nd September	Southampton Boat Show Inc. Try A Boat — Southampton Boat Show, Mayflower Park, Southampton

**FOR FURTHER DETAILS
RING BOATLINE 0932 845890**



British Marine Industries Federation
Boating Industry House
Vale Road, Oatlands
Weybridge, Surrey KT13 9NS.



This Magazine has been published thanks to sponsorship from the following:

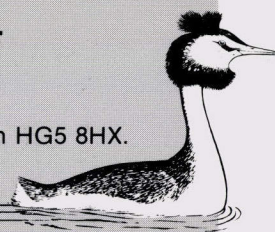
Rear-Admiral P. D. Gick
Oldham Crompton Batteries
Steam & Electric Launch Company
Harwin Electronics
B.M.I.F.
"Motorboats Monthly"
L.D.A.
Curtis Instruments

NB. We are looking for further sponsors. Why not contact the Editor for our most reasonable rates?*

081-450 2219.

Chairman/Editor: Kevin Desmond, "Fairfield", 122 Olive Road, London NW2 6UU.

Membership Secretary/Treasurer: Fraser Brown, c/o The Mouse Hole, Abbey Road, Knaresborough HG5 8HX.



Front Cover Picture: A painting of Fiona, Countess of Arran driving her hydroplane "An Stradag" to get the World Water Speed Record for electrically-propelled powerboats of 50.825 mph. at Holme Pierrepont on 22nd November, 1989.

The New EBA Admin . . .

In our last issue, we appealed for the voluntary aid of someone prepared to act as a focal point for the Users' Group as opposed to Trade Members. Most encouragingly, we soon received three offers of help - from Cookham, Bristol, and Knaresborough, and are now most pleased to announce that as of June 12th, the Electric Boat Association's new Membership Secretary/Treasurer will be Mr **Fraser Brown, C/o THE MOUSE HOLE, ABBEY ROAD, KNARESBOROUGH HG5 8HX.**

This means that any existing members wishing to renew their annual subscription (£14.38 pa.) or any new members should make their cheques payable to "The Electric Boat Association" and send them off to the new Knaresborough address.

As for any other enquiries or articles for "The News", these should from now on be sent to **The Chairman, "Fairfield", 122 OLIVE ROAD, LONDON NW2 6UU, ENGLAND.**

Whilst our old sponsors, the Lead Development Association have kindly agreed to our having one Management Group Meeting per year at their Weymouth Street offices, future meetings will also take place at the offices of the EVA, the BWB, the BMIF and other organisations already helping to promote our cause.

Our New Look

From a page in "Canal & Riverboat", to an LDA word-processed duplicate, Electric Boat News" now enters into its third phase, designed, printed and distributed by Anthony and Caroline Shankland Grace of Caversham Lithographic Studios (not far from Caversham Bridge). From small acorns.....

We are Affiliated!

On Wednesday 4th April 1990, a meeting took place at Leicester House, Leicester Street, LONDON, which may well have far-reaching positive spin-offs. The Chairman of the EBA placed the following proposal in front of the Committee members of the EVA:

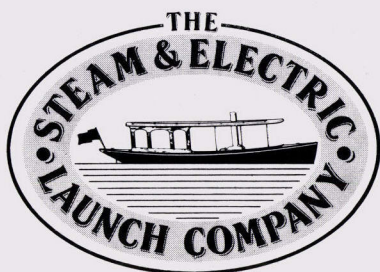
"1) Whereas electric propulsion on land and water share a considerable overlap in existing and potential technology, that the Electric Vehicle Association and the Electric Boat Association should work more closely together. That this should take the form of mutually exchanged membership whereby either association may invite members of the other association to Management Group meetings. That this mutual affiliation should be communicated to members as soon as possible and that its existence should also be indicated in small print on the future letter-headed paper of both associations."

This proposal was not only unanimously accepted by the EVA Executive, but formally tabled at their Council meeting, held at Solihull on the 18th May. EBA official acceptance came at the Management Group meeting on June 12th. Letterheads are now being re-designed.

One outcome of this affiliation is the initiation of an exhibition and conference in May 1991, provisionally entitled "The All Electric Transport Show"...**watch this space!**



Produced by Caversham Lithographic Studios,
16a Bridge Street, Caversham, Reading, Berkshire RG4 8AA.
Tel: 0734 481086 & 470415. Fax: 0734 484775.



STELCO NEWS

Continuing the success story of Rupert Latham's Norfolk enterprise, we publish plans of the Frolic 30, (31' 6" X 8' beam) complete with galley and loo, currently under construction at the Ludham yard, to be delivered to the Regent's Park Canal for a well-known theatre impresario.

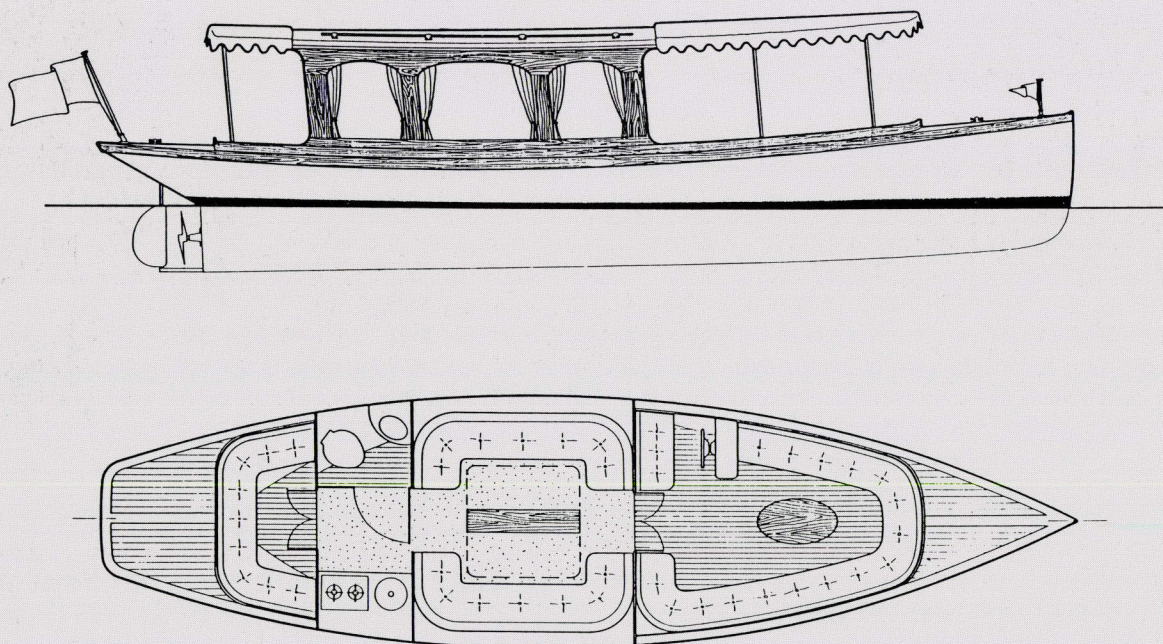
Elsewhere, The Waterside Inn at Bray, one of the finest restaurants on the Thames (** Michelin) has just taken delivery of a Classic 21, which will be used for aperitifs a bord and other gastronomical delights.

John Hancock recently handed

over the helm of Swancraft to Adrian Tilbury, previously of Benson Cruisers, a conventional hire-fleet. With this changeover, the Thames agency for STELCO has now been taken up by Hambledon Mill Marina, (Tel: 0491 571316) run by Peter Jones, who has recently installed more power points to meet the demand. 4 electric boats are now permanently moored there.

Also at Hambledon may be found a Veteran electric "phoenix" in the elegant shape of Humble. Originally built as an electric at Teddington in 1901, when she was known as Abel, in the middle of her life, this 55-footer was for a long and sad period driven by a 90hp diesel engine, until that is, her new owners - Patrick Kelly and John Morrell recently had STELCO refit her with a 3 kW Nelco and a bank of batteries. Thus re-fitted, Humble has already delighted all concerned by resuming her more silent cruise-life at an easy 6 mph.

Further north, Lake Windermere



Frolic 31 for THE STEAM & ELECTRIC LAUNCH CO.

ANDREW N. WOLSTENHOLME
Yacht & Powerboat Design
Forth House, 50, South Street, London W1
NINE BLUE ENGINEERING, 0800 33 4115
Sailed 1989

now boasts two Frolic 21's, both privately owned. Whilst Humming Bird may be seen quietly cruising up at the Storrs Hall end, Mr David Sidi's Frolic 21, La Perle du Lac (Pearl of the Lake) has started its tranquil life on the River Brathay, near Ambleside. According to Gillian Nahum, "During acceptance trials, we proved its seaworthiness as ski boats, large cruisers sped past at 30 knots, creating an enormous wake. Those in the bows

found it quite thrilling but the champagne glass didn't budge!"

At the end of May, the redoubtable Ms Nahum addressed the International Lead Conference in Nice PB 90, on the subject of "The Green Alternative: Electric Boats Worldwide - Past, Present and Future." Let us hope that by now the battery manufacturers and other delegates present will have taken her enthusiastic message home with them! **Keep up the good work!** ●

Wargrave 3 — on course



Photograph taken at Wargrave 2. The event was a great success and saw 23 e-boats taking part.

The Third Wargrave Electric Boat Rally will be held on Saturday 16th June, from a new venue - Don and Rene Hookins's Ferry Cottage, Hambledon. As in previous years there will be a competition for the best-dressed boat, using flowers and bunting. The unique crystal decanter will be presented to the winner to keep for one year. There will also be a champagne raffle with the entire proceeds donated to the British Heart Foundation which

is a charity particularly favoured by this year's Host and Hostess. In 1988, seventeen electrics were on parade, in '89 that number increased to 23. If you would like to enter your electric boat, inboard or outboard, why not contact **Ken Barge on 0734 402587**. If you merely want to see just how quiet such a fleet of motorboats can be, we'll be cruising from Hambledon Lock to Henley between 2.45 and 3.30 pm. ●

The Sun has got his hat on

Swiss member, Theo Schmidt is currently working on an add-on unit for the largest Minn-Kota electric outboard. A reduction gear and large propeller will increase thrust and efficiency. This idea was conceived by ATEC Engineering in Kusnacht, Switzerland. Theo has also shared the exciting news that during this summer, **there are to be no less than ten solar powered boat races in Europe.** Starting on 1st June, there will be a series in Italy - Milan, Turin, Venice, Como, San Remo, Lugano, Garda, and Constance. There will be another solar boat race on the Wannsee in

Berlin on 10th June, whilst in Switzerland there will be contests on Lakes Murten, Neuchatel and Biel - between 25th/26th August.

Add to this that for solar-powered vehicles, road races have again been organised in Switzerland, America (x2) and Australia, and you may gain some idea of the increasing interest in these renewable energy vehicles.

We in the UK can only hope that the BWB's Electric Boat Challenge at Milton Keynes, now postponed until next Spring, will inspire the solar-powered motorsport movement to cross our narrow Channel. ●

SEMP LATEST

Japan's Superconductive Electromagnetic Propulsion - otherwise known as SEMP - is making steady progress. The 100ft hull of the prototype ship, Yamato I, was recently moved from Shimonoseki, western Japan, to Kobe, where engineers are now fitting the magnetic propulsion equipment now under construction. "Our goal is to test the propulsion system on the high seas next year," said a spokesman for the Japan Foundation for Shipbuilding Advancement, which includes top shipbuilders such as Mitsui, Mitsubishi and Hitachi Zosen.

We now learn that the Japanese have been working on the system for 15 years, with the foundation putting about £19 million into research since 1987 alone. The difference between SEMP and conventional propulsion is that the

latter relies on propeller thrust derived from fuel conversion into mechanical energy, whereas SEMP involves **a change of electric energy generated by an alternator into electro-magnetic force to displace water.** An electric current goes through a powerful magnetic field created by a battery of superconductive magnets on the bottom of the ship. This creates a reaction that thrusts a jet of water towards the stern, propelling the ship forwards to speeds of 300 mph and more.

Elsewhere in Japan, a battery has been launched, **said to give 20 times more power than existing batteries, and which could be recharged in minutes.** Isuzu Motors and Fuji Electro-Chemical Company claim the 1.2-volt coin-sized battery recharged in 10 seconds!

Seeing is believing..... ●

On the Road

Whatever next? The French Government has announced that Peugeot and Renault will be sharing in a FFfr 1.2 billion research programme into pollution-free cars. Peugeot have announced that they will make 300 Peugeot J-5 and Citroen C-25 vans powered by Sonnenschein sealed lead-acid

batteries. These will have a range of 60-70 km with a maximum speed of 80-90 km/h. An unconfirmed report states that the Italian Government is providing the equivalent of 10 million US Dollars to help FIAT build three-hundred battery-powered Panda cars. And there will be marine spin-offs...! ●



Elco's Fantail Launch.

LETTER FROM AMERICA

- Elco -

In a letter dated May 7th, Margaret L Fleming, Vice President of the Electric Launch Company Inc of Highland, New York states:

"I am still trying to drum up some support for a US contingent of the Electric Boat Association. As sinterested in electric boating grows, I suspect that the task will become easier. The problem that exists right now is that there are only a few electric boat builders and we are all working so hard on

getting our businesses going that it is difficult to spread ourselves around. I'm starting a newsletter for Elco owners now and in the first issue I will be mentioneing the Electric Boat Association and I hope that we will get some enthusiasm that way. The awareness of electric boating has increased to a point where people very rarely say "electric??? - what do you mean electric?" **In fact, we have customers who buy the boats specifically because they are electric.**"

Given that the Electric Auto Association of Belmont California has no less than seventeen chapters, we can only suggest that success is just around the corner. ●

Tulips from Amsterdam

Whilst Margeret Fleming sustains her campaign for an EBA American Chapter, we recently received a visit from Dr Hans Asyee, who has for the past seventeen years been enjoying the pleasures of cruising electric with an outboard-engined Mirror dinghy. Inspired by the news of Lady Arran's World Record as published in the journal of the Dutch Automobile Association, Dr Asyee is seriously planning to set

up an organization to promote electric boating in the Netherlands. This would include the formation of an EBA Dutch Chapter. With STELCO not only establishing a Dutch agency for their Frolics/Mystics, but also gaining the UK agency for the Dutch Combi electric outboard (700 to 2000 watts), **we welcome Dr Asyee and those he will be recruiting.** ●

FISTRAL

Not long ago a UK-based New Zealand birdwatcher and artist heard that an electric boat is a superb method of approaching your subject matter without its taking flight in fear. The technical director of Messrs T & D Murrell, boat operators based at London's Adelaide Dock (and good friends of Jestyn Viscount St Davids) was approached.

The boat chosen has a 26ft X 8ft beam aluminium hull, an ex-ship's lifeboat originally fitted out in the 1950's with an Austin 7 petrol engine.

The conventional DC series-wound motor now being installed in it down at Rickmansworth on the Grand Union Canal, came out of a 2-ton flat-bed trolley, once manufactured in Watford and probably rated at around 2½-3 hp. operating on 32 volts. The batteries came out of a Dodge delivery vehicle formerly owned by the Electricity Board. When new they were rated at 410 AH and are very compact - about 30% smaller than most other batteries for their power output - so 15 X 8" X 4½", a size that would normally only give around 320 aH. A tooth-belt drive has been chosen, with a

4:1 reduction off the motor going down to a 14" X 12" propeller.

For normal cruising speed, the plan is to be running at about 60 amps at 32 volts - 2hp. Although the original resistive speed control has been rigged up for test purposes giving three steps up to flat-out, the aim is to run the motor at 60 amps for normal cruising speed with a reserve capacity up to 90 amps for extra speed, either with a field weakening resistance or by re-propping and a thyristor control. This should give the owner a touch more speed should he require it.

There is also an option to make it into a hybrid-diesel drive which will recharge the batteries - so that in the event of his not being able to make it from one charging point to the other, he can actually charge his own batteries, or extend his battery range. Given the new owner's interest in wildlife, the boat will most probably retain its original name - Fistral, the term for a small group of swans

"EB News" will be reporting on the outcome of this experiment in a subsequent issue.



Underwater Control

In a previous issue of this journal, Sparks was heard to comment, "If we can take account of electric surface boats, and of solar-powered boats, then there must be room for pleasure submersibles."

Gordon Cross would certainly agree with this. He is marketing director of Submersible Systems Technology, builder of subs that cruise underwater as much as 120ft deep. The subs are familiar to millions who have seen them in James Bond movies. Introduced in the 1970's for oceanographic research, the subs were adapted in

1988 for a larger market - use by scuba divers as the ultimate underwater vehicle. A 15.5 ft Reef Ranger sub can carry three people. Scuba gear is worn because the sub's canopy is vented to allow water to fly in and diver's air bubbles to escape. The canopy slides open to let divers leave and re-enter at will. The common denominator lies perhaps in the fact that the SST Reef Ranger uses as a **speed controller manufactured by Curtis Instruments** to give it full forward and reverse capabilities.

Well done the St. Davids!

As with last year and the year previous to that, despite recent illness, Jestyn and Margerie St Davids were once again present with Lynch/Seagull-engined Silver Sail during the three-day Canal Cavalcade at Little Venice. During that time, they took over one hundred people - including your

Chairman and his family - for rides, with donations going to the IWA.

"We took them from Lady Rose, round the island to have a look at the birds on their nests, and back. Everybody seemed to love the silence."

"CRUISE ELECTRIC"

EBA President, Rear-Admiral Percy Gick, has asked us to announce that he is once again offering the Emsworth Trophy for the longest voyage yet achieved on British Inland Water by an electrically powered boat. The Trophy, a beautifully carved and painted great-crested grebe, has recently been mounted on a fine walnut oval plinth, to which in turn have been fixed two silver plates with names of its two previous winners: Jestyn Viscount St Davids and Fiona, Countess Arran. If you would like to compete for this award, which in time is bound to become legendary - **coveted, even!** - why not send off now for the book of rules from John P Wilkinson, Chairman of the National Cruising Award, 39 Comboston Avenue, Kidderminster, WORCESTERSHIRE DY10 3EG.



Rear-Admiral Gick in the "Electra of Emsworth"

For the Pleasure of a Duke

Whilst researching into the eight-hour double-crossing of the English Channel made by the electric launch Volta in 1886 (still unbroken), I happened to note that among the first five electric launches commissioned since the prototype Electricity of 1882, was a tender in use by the Duke of Bedford for his steam yacht Northumbria.

When I phoned the Bedford Estates to ask them whether they had anything in their archives at Woburn Abbey, the initial response was negative. Then three weeks later, archivist Mrs Marie Draper phoned me to say that they had, completely by accident, stumbled upon a batch of dark blue envelopes tied up with pink tape - not only relating to Northumbria, but also to her yacht's tender, Electra! Would I like to inspect these?

Courtesy of the present Marquis of Tavistock, I now present, for the first time, the facts behind the 9th Duke of Bedford's truly pioneering interest in electric launches - possibly one of the most significant historical discoveries so far made concerning the beginnings of what we are today reviving.

It was in 1883 that Hastings, the sixty-two-year-old 9th Duke of Bedford, sold his yacht Claymore and purchased the Registered Steam Ship Northumbria. Robert F. Collins (paid £4 per week) was her Engineer.

His Grace the Duke (with estates in both Eaton Square London and Woburn Abbey, Bedfordshire, was a man keen on technical innovation. Northumbria was therefore well fitted out:

A steam whistle supplied by Maudslay, Sons & Field; from Sir William Thomson (later Lord Kelvin) a Compass and Improved Sounding Machine ("with 300 fathoms of wire, four sinkers and four brass tubes, a box containing 100 prepared glass tubes and other requisites - for a total £20); from F.F.Francis & Co (now part of the

Lucas Group) - Electric Ship-steering indicating lights; from Messrs R.E.Pinhey and E.S.Copeman, the Patent Seat Lifebuoy - a seat with 10 copper cylinders beneath it which opened out to form a raft 8ft long by 2ft8" wide (£10). But perhaps most innovative of all, Northumbria was equipped with electric lighting from incandescent lamps as fitted by the Anglo-American Brush Electric Light Corporation for £661.

Given this advanced attitude, it was perhaps natural that the Duke should choose a slightly different yacht's tender. On 15th December 1885, Bernard Drake, Managing Engineer of the Electric Power Storage Co of 4, Great Winchester Street, London EC sent His Grace an Invoice for an "Electric Launch fitted with bells and motor complete as arranged - £302. 10/-"

As arranged included the motor by Austrian-born Anthony

Copyright Trustees of the Bedford Estates.

7/10. 4, Great Winchester St. Buildings, London E.C. 15th Dec^r 1885
 M. His Grace the Duke of Bedford K.G.

To the Electrical Power Storage Company Limited.

TERMS: NET CASH.

Electric Launch fitted with bells and motor complete as arranged	302 10
2. 80 Amp. Plug Switches for connecting bells to present lighting leads	11
	£ 303 11

Receives cheque for £300 on account

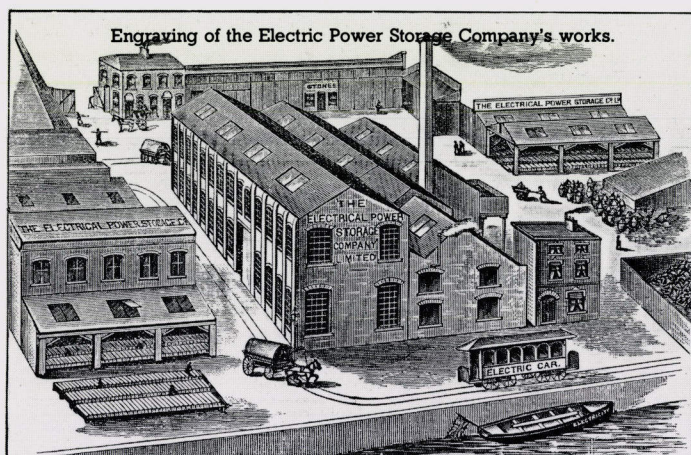
ELECTRICAL POWER STORAGE CO. LTD.
 SECRETARY
 16 Dec 85

Balance remaining to be paid £ 3 11 0

Reckenzaun, with hull dimensions of 24ft X 5ft Beam.

Perusal through the archives next reveals a letter dated March 12th 1886 from Northumbria's Captain Collins to G.H. Smith Esq.:

"Dear Sir. Will you kindly obtain, and forward to me the exact weight of the electric launch, as it is important to know the exact weight for calculating the size of the davits to carry her. The weight given to me last year was about 2 tons. But I think it possible that this weight may be exceeded. Sincerely, Robert F Collins."



Almost two months later, His Grace the Duke received an Invoice from the EPS (Electric Power Storage) Co. Ltd. dated 18th May 1886 for: "Painting launch and writing on each side of the prow the word Electra - £25."

Then for 22nd June: "Expenses in connection with three trips of launch Electra - 17th-27th ult and 5th inst - £7."

23rd August: "Voltmeter to measure up to 6 volts (£2. 2/3d); Pocket Voltmeter (12/6d); Hydrometer (1/3d); 2 gallons sulphuric acid Type 1170 (9d).

Then finally at the end of the Season: 30th August 1886: Overhauling, washing and cleaning launch, painting outside and varnishing inside; making numerous alterations and additions to fittings and gear, including mast, yard and lug sail, additional oars,

boathooks, horsehair cushions etc: £37 17. 11d.

1887 arrived and the Duke decided to have his beloved Northumbria fitted with an electric windlass, as designed by the Anglo-American Brush Electric Light Corporation of Lambeth, SE London..."arranged to raise both anchors at once, or either separately - £244."

But now observe - if you will - this letter as sent to the Duke on 20th July 1887 by none other than Thames Conservancy:

"My Lord Duke, I am directed by the Conservators of the River Thames to state that it has been reported to them that the launch Electra owned by you has been navigated on the river above Kew Bridge without your having taken out the necessary certificate or registration as required by the Thames Act 1883.

"The Conservators understand that you have some doubt on the subject of your vessel being classed as a steam launch on account of its being driven by electricity, but I am to point out to you that in the interpretation of terms in the Act referred to, the term "steam launch" is made to include any vessel propelled by steam or **other** mechanical power, and your vessel is consequently liable to the various requirements of the said Act...."

Now although the Certificate of Registration cost some 20 shillings, the Duke was a man known for his penny-pinching attitude especially when people were attempting to extract money from him which he didn't think they deserved. On 10th August 1887, Thames Conservancy received the following reply: "...I was informed that as His Grace did not intend to take the launch up the River again - there was nothing to pay..."

More than that, the launch Electra had been taken far further afield than the Upper Thames... (to be continued) ●