



Four Seasons **Electric** Boat Company

Electric Boats – A New Concept?

By Al Hartley

Then and Now

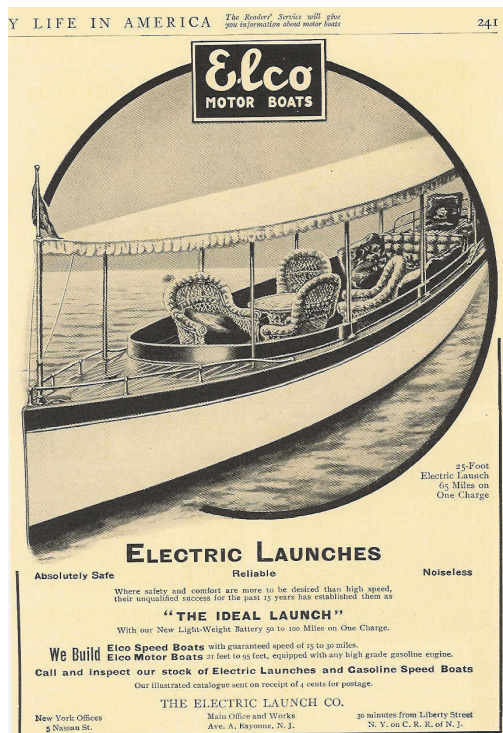
New concept? Not really. What is believed to be the very first marine outboard motor was invented in 1880 by a French inventor, Gustave Trouve, and it was electric. In the early 1890's electric boats were first introduced in the United State with the formation of the Electric Launch Company (Elco) in Bayonne, New Jersey. It was the Chicago Exposition in 1893 that put them on the map. Elco was requested to build fifty-five (55) 36-foot electric launches for this event. Ticket sales to transport people around the Chicago area lakes and rivers exceeded 1,000,000.

Launch” as shown in this 1907 ad from *Country Life in America* became the essence of a perfect lake cruise. Elco’s company records reveal that Thomas Edison, John Jacob Astor, Admiral Dewey, George Westinghouse, and the Grand Duke Alexander of Russia were all owners of Elco electric launches.

There were, of course, steam engines that were very powerful, yet heavy, a lot of work and not conducive to a pleasant cruising experience – especially when their boilers would explode. In the late 1800s, there were also gasoline engines. These engines at that time were called “Explosion Engines”. The names were later changed to “Gasoline Engines” to make them sound safer, and more appealing to the consumer.

After about 1920, gasoline and diesel engines became the primary propulsion units for boats – but they could never offer the quality of the electric cruising experience. As a result, electric boats lost their following, because the batteries could not carry enough energy to match the horsepower of the internal combustion engine – as folks became more intrigue with speed at the expense of comfort and quality of the boating experience. However the Navy’s submarines continued to rely heavily on electric propulsion – because it is fundamentally reliable, efficient, and quiet. Later on, Navy ships and commercial vessels returned to electric propulsion systems for the same reasons – but using generators to create the electricity.

Today, the Queen Mary II is powered exclusively with electric motors that generate 157,000 horsepower. So electric propulsion is not a “new concept” and is considered by far the most reliable form of propulsion.



That was over 120 years ago and at that time electric motors were the preferred form of propulsion. The electric “Picnic

Not only is electric propulsion reliable and efficient, it offers the ultimate pleasure boating experience: relaxing, quiet, and NO smelly fumes. For these reasons combined with the advances in battery technology, electric pleasure boating has enjoyed a revival over the passed few decades. Several companies have resurrected the electric launch and other more contemporary designs. It has become the boating lifestyle of choice for many thousands around the world in many different venues for the mainstream population.

Common Misconceptions

The most common misconception that I hear is that people are afraid that they will run out of electricity. To that, I always answer with a question, "Do you frequently run out of gas in your car?" Most people respond, "Never." It is the same in a quality electric boat. Duffy boats, for example, have an electronic hour meter that tells you how many hours and minutes you have left on a digital readout on the console. Plus these boats are designed to run all day on a charge and recharge overnight – for \$1 or less!

Another common concern that I hear is that people aren't sure whether or not electric boats will be able to stand up to a tidal shift or a strong current. The simple answer is, yes. I can qualify that by comparing the Duffy Drive System, which turns a 15-inch by 15-inch propeller at 1100 RPM's. That is more like a tugboat and definitely not talking about trolling motors. I have personally towed at least 2 dozen broken down power boats on Lake Gaston with my Duffy 21 Cruiser – including the rescue of an overturned catamaran sail boat in 40 mph winds and very turbulent water.

But then again, we are not talking about speed here. Electric boating is about

the journey — not the destination — a rather amazing journey, at that. This is not your ski boat – it's your slow pleasure cruising boat at its finest. Optimal cruising speed is about 5 mph – in comfort and style.

Another question we hear, "If I'm out in one of these boats, how will I out run a lightning storm?" The answer to that is, "You don't need to." Duffy electric boats are fully enclosed, all-weather boats equipped with heaters, windows and a Sunbrella roof. So you are protected from rain, wind, sleet, snow - you name it. Lightning really isn't an issue either. Even though they say not to be on a body of water during a lightning storm, the lightning is more likely to hit something high up, like a tree or power lines. Just like everything else, apply common sense to weather conditions, find a protected location and stay put until the storm passes. In over 2000 hours of electric boating in the last year and a half, I've only been unable to return to my dock once before a storm hit. I simply pulled into a cove, shut the windows, listened to a nice CD, and let the storm blow over.

Price Comparisons

Total cost of ownership is significantly less for electric boats than traditional gas-powered boats.

Let's compare a Duffy 16 Catamaran (similar to a deck or pontoon layout and seats 10 adults comfortably) to a 20-foot pontoon boat with a 50 horsepower engine. This comparison will be for an 8 year period with a 16-week boating season at 12 hours a week. The pontoon boat has a base price of \$18,000 average and will burn about 5500 gallons of gasoline and use about 76 gallons of oil. That is about \$12,500 of operating expense. Small outboards typically last about 1500 hours with

proper maintenance. The engine will need replacing at a cost of about \$4,500. This is a total of \$35,000.

A Duffy 16 Catamaran has a base price of \$19,995, will consume about \$65 worth of electricity during this time period, and the batteries will be replaced once at a cost of around \$500. All Duffy boats have a lifetime warranty on the power system, so if a component fails — it gets replaced free of charge. The total price would be \$20,560. This does not take into account winterizing of the pontoon boat. The Duffy boat can remain ready to use year-round.

What's So Special About Electric Boats?

Imagine a boat that starts every time — with no mechanical headaches — as easy as a golf cart to operate. You just unplug, untie, turn the key, and go. Duffy electric boats are so reliable that they come with a lifetime warranty of the electric propulsion system. And did I mention NO GAS? Have you checked those prices lately?

Imagine a sunset cruise with NO NOISE, listening to music, conversation, and laughter of your family and friends — instead of the hum of a motor. Imagine a scenic cruise after a fresh snow in a cozy heated cabin.

The elegance and design of the Duffy boats are what really got my attention - they are beautiful replicas of the electric launch — 19th century luxury with 21st century technology.

Conclusion

Maybe new to Lake Gaston but definitely not a new concept — instead a proven, mainstream reality. But perhaps it is a new mindset - more akin to sailing without the work. When you go sailing -

it's not about the destination - it's about the sailing experience.

Duffy Electric Boat Company has been manufacturing their boats since 1970 and is considered the leader in the electric boating revival that has been in progress for a few decades. There are thousands of Duffy boat owners worldwide. Several other manufacturers have also followed suit.

Two electric boat manufacturers are right here in North Carolina: Budsin Woodcraft and Blackriver Boats who make custom-designed crafts that are truly works of art. If you want an outboard, there's also Ray Electric Outboard Motors based in Florida — perfect for converting pontoon boats to an electric system.

So spend your money on gas for your fast boat for water sports and then enjoy the wonders of electric cruising for your slow boat. And at the same time make a real difference in keeping our lake water clean — there are no pollutants released into the water. In comparison, 2-stroke engines release up to 30% of their fuel/oil mixture into the water; 4-strokes are better at a 15% maximum rate.

Obviously I'm sold on electric boating — the simplicity, comfort, atmosphere, tranquility, reliability — the whole experience with NO hassles.

If I've peaked your interest and you have additional questions or would like to experience what it's like first hand, please give me a call or stop by my showroom. It would be my pleasure.

Al Hartley is the owner of Four Seasons Electric Boat Company which is located on Lake Gaston NC/VA at Dockside on the north shore of Eaton's Ferry Bridge and on the web at www.FourSeasonsBoats.com. You can reach Al at 252-578-2628 or the showroom at 252-586-2200.