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From the unlikely home port of Hamilton, Ontario, a Canadian sportsman, inventor, and gentleman carried the Canadian flag to an unprecedented series of wins and world records, beating the best in the world, introducing amazing innovations in power boating, and gaining international honours, esteem, and respect.

In typical Canadian fashion, these momentous achievements by Harry Greening brought little recognition at the time, except in hometown Hamilton, and are now all but forgotten to later generations. In Canada's Sports Hall of Fame, an impressive wall adorned with a powerboat-racing mural carries photographs of the only four members elected for boating achievements—three men and the unlimited class hydroplane, *Supertest III*.

The three persons elected to membership are James Thompson of London, Ontario, for speedboat design; Bob Hayward, driver of *Miss Supertest III*, which won the Harmsworth Trophy for Canada; and Harold Wilson, whose many racing achievements included the World 225-Cubic-Inch Hydroplane Championship,

the Silver Cup at Detroit, the President's Cup at Washington, and the World 12-Litre Championship. These memberships are well deserved: these competitors earned their way to this recognition.

But not included is the pioneer credited as "the father of motorized boating" in this country, the first to bring world attention to Canada, and the man whose *Rainbow* series of racers established Ditchburn boats as world leaders.

Harry Benjamin Greening's contribution to power boating, his dozens of world-class achievements, his speed and endurance records, his engineering innovations, and his pioneering inspiration made him the first internationally famous Canadian in his sport. This outstanding racer richly deserves to be recognized in Canada's Sports Hall of Fame.

Born in Hamilton in 1880, Harry Greening was educated at Ridley College, in nearby St. Catharines. Music was the only special aptitude he displayed, and he even considered a career as an organist before entering the family business. The B. Greening Wire Co. Ltd. had many years of experience in metalworking and wire production, both in Canada and in England, and in this atmosphere Harry Greening was to prove perhaps the greatest mechanical genius yet developed in his remarkable family. His inventiveness and innate understanding of machinery were the keys to his many accomplishments.

Just as important were the human qualities that earned him an international coterie of friends, always willing to help or exchange ideas. Quiet, unassuming, and unfailingly a gentleman, Greening was always impeccably dressed, bringing real meaning to the term "gentleman racer."

Harry Greening was a lifelong lover of the outdoors, a boater, and a Muskoka cottager, but he was not a swimmer. He hated being cold and wore long underwear year-round. His employees represented an extended family, and their ideas, abilities, and help were cheerfully accepted in the quest for ever-greater racing success. The plant workers were given a holiday on race days, and paid double if he won.

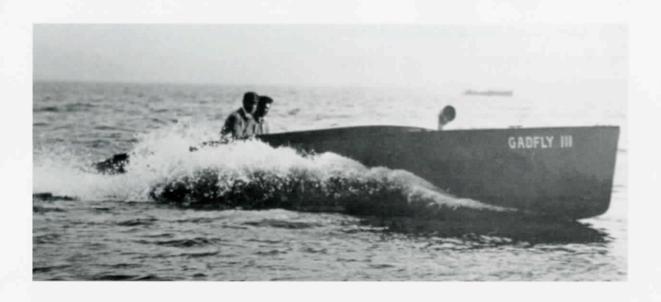
And win he did, setting world speed and endurance marks on the water, winning gold cups and receiving rare honours beyond his own country. Imagine the odds of a young Canadian, an inventor and a sportsman, being elected to head up the racing committee of the American Power Boat Association. It had never happened before, and hasn't since, but Harry Greening's talents were appreciated by the APBA. He was also selected by the Royal Motor Yacht Club, donor of the Harmsworth Trophy, as their North American representative.

Greening began his racing career in 1904, and that career was to have a dramatic effect on the development of powerboat racing throughout the world. It also eventually resulted in Greening being honoured by the American Power Boat Association in 1953 as one of the ten pioneers who had contributed most to powerboat racing over the past fifty years.

In his first effort towards powered boating in 1904, Greening used a foot-powered lathe to build a 3-horsepower engine in his attic.



Harry Greening of Hamilton, Ontario, was Canada's first international success in motorboat racing.



Gadfly III thunders across Hamilton Harbour at 29 mph in 1917.

This engine drove his canoe at 9 mph and was a model of efficiency, so much so that it attracted the attention of aircraft pioneer and motorcycle racer Glenn Curtiss, who purchased the design from Greening after sending his fellow worker, Casey Baldwin, to Hamilton to inspect the engine.

BITTEN BY THE SPEED BUG

A series of four small boats named *Gadfly* followed this first effort, with Greening beginning a racing career in Hamilton and Toronto. American A. E. Luders, famous in later years as a designer and builder, designed *Gadfly I*. Her engine, a Model 10 Buick of about 10 horsepower, pushed her across Hamilton Bay at 15 mph—a remarkable speed for 1908. It was perhaps the first automobile engine converted to marine use. Her unjacketed exhausts burned the hatch covers and hull sides on numerous occasions. In pleasure use at Rainbow Island in Muskoka, her speed thrilled area natives, but the noisy, open exhaust caused indignant meetings among the cottagers.

Gadfly II pushed the speed record to 22 mph, with a 2-cycle, 4-cylinder, 24-horsepower engine built by Smart Turner of Hamilton. In these early days, ignition gave much trouble, but Greening solved his problems by using the new Bosch-Honald system. Actuating the spark plugs by a magnetic make-and-break system, this invention eliminated the high-tension leads that often failed because of the spray.

T. H. B. "Bing" Benson of Oakville, famous for his sailing designs, designed *Gadfly III*. The builder was Johnny Morris of Hamilton. Equipped with a 135-horsepower Niagara 6-cylinder engine, and the Bosch-Honald ignition system, she topped out at 29 mph. Only Bill Gooderham's Fauber-designed hydroplane, *Heloise*, could keep up with this speedster, and then only in sheltered waters.

In 1918, Gadfly IV, designed by Al Crouch, made her appearance. Equipped with a V-bottom and a 165-horsepower Sterling engine, she raised top speeds over 30 mph. Her racing career was undistinguished, but used on a "pleasure" cruise through the Long Sault Rapids on the St. Lawrence River, she ably demonstrated two of Greening's most important beliefs—that all his boats should have leather seats and carry passengers.

BEATING THE WORLD'S BEST

For 1920, Greening placed an order with Herb Ditchburn for *Rainbow I*, the forerunner of eleven *Rainbows*, seven of which raced for Canada. Designed by George Crouch and built by Ditchburn at Gravenhurst, *Rainbow I* captured top honours in the first major powerboat race ever held in North America.





Above: Rainbow I, designed by George Crouch, was the winner of the Fisher Gold Cup in Miami, winning all three 50-mile heats.

Left: Designer Crouch and owner-driver Greening exchange some performance opinions.



Rainbow maintains her lead over Snapshot, driven by Jack Stroh.

Thus began a decade of cooperation between Greening, the gentleman sportsman, and Ditchburn, the master builder, which was to produce fame for Canada and an international reputation for Ditchburn reliability.

Carl G. Fisher of Miami had donated a gold cup valued at \$5,000, carrying with it a cash prize of \$2,000, to be competed for in a race of three 50-mile heats. The heats were to be run on separate days, but teams would not be allowed to make any adjustment or repairs between heats. Fisher, a powerful American industrialist and part owner, with Jim Allison, of the Indianapolis Speedway, was tired of watching speedboats break down during races and had decided to put a premium on endurance and dependability.

Realizing that his competitors would all have about the same horsepower, Harry Greening and his long-time mechanic, Dave Reid, decided to have their crankshaft dynamically balanced. An old story now, it was almost unheard of in 1920 when Greening sought out a quirky Russian émigré to the United States who

had pioneered the technique. This technician, Akimoff, added an almost 10-percent boost to the Sterling's 300 horsepower.

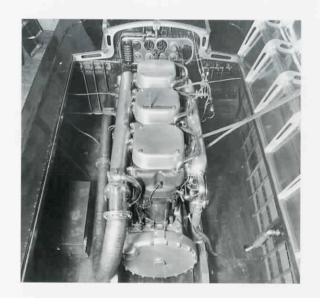
Similarly, Greening wrote to Harry Ricardo in England, who was experimenting with aluminum pistons. Less than one third the weight of the originals in cast iron, these Ricardodesigned replacements were the largest built to date, and the first used for a marine engine.

Rainbow I obliterated the field by placing first in all three heats and was acclaimed by U.S. experts as the "best powerboat ever built." At the New York Boat Show of January 1920, Rainbow I occupied the place of honour on the Sterling engine stand, and Greening received world recognition as a racing genius.

By now, Greening was dedicated to the quest for ever-higher speeds, and he saw design change and mechanical improvement as his path to success. He reasoned that only by constant experiment and refinement could he hope to compete successfully with the much-wealthier Americans, backed by the resources of their leading industrial companies.



Holding the place of honour in the Sterling engine display at the 1920 New York Boat Show, Rainbow I was acclaimed "best runabout ever built."



Above: Rainbow I's engine room shows meticulous engineering.

Below: Rainbow II was not a regular winner, but important knowledge was gained from its design modifications and performance.

CONFOUNDING THE COMPETITION

Greening's next design, *Rainbow II*, was an outstanding example of his willingness to gamble—to experiment with new theories and technology. Albert Hickman, inventor of the Sea Sled, had convinced Greening of the remarkable efficiency of surface-piercing propellers, which were still very much in the experimental stage. At the same time, an American designer, Bill Tripp, had caught his attention with experiments measuring the inefficiency of propellers placed just forward of the transom.

Combining these two theories, Greening and Ditchburn designed Rainbow II with

planking at the stern to eliminate the vacuum caused by water rebound from her propellers. Their calculations, later proven to be almost exactly correct, estimated that if the bottom planking were carried out to the transom, the hull would carry an unseen weight of about 1,500 pounds through atmospheric pressure. This problem has since been overcome in modern hydroplanes, but at the time this thinking was revolutionary.

Greening and Ditchburn were aghast when, in her first test, *Rainbow II* would hardly move. No one had any idea of the tremendous amount of air these surface wheels would require, but recognizing the problem, they began by boring 1-inch holes just above the propellers to admit air. Eventually, they wound up with a deck opening 2 feet long by 4.5 feet wide. Every time the hole was enlarged, the boat went faster, until a speed of 60 mph was achieved. At rest she drew about 14 inches, but at speed she appeared to ride on about one inch of water.



At her debut in Buffalo, New York, *Rainbow II* was undoubtedly the fastest boat, but smashed out her bottom on a wave, sinking in a matter of minutes. She was recovered the next day by divers and her Sterling engine rebuilt in 48 hours, while the Elliot Boat Company replanked her hull in the same time. Her contribution was in knowledge gained, not racing success. Ironically, all three heats of this race were won by *Rainbow I*, which had been sold to Sylvester Egan of Buffalo.

In 1922, Greening visited Detroit to take in the Gold Cup Races, won that year by Colonel Jesse Vincent, chief engineer of the Packard Motor Car Co. Greening, realizing the advantages of the Packard aircraft-derived engine over existing marine engines, secured an engine from Packard and had it shipped to Gravenhurst, where it was installed in the John Hacker-designed *Rainbow III* being readied for the 1923 Gold Cup.

The boat proved very fast, and news of her speed in trials promptly reached Colonel Vincent. His new boat, an almost identical Hacker design, was no better than Greening's. Seeking a win-

ning margin, Vincent abandoned his present hull, building a similar hull of much lighter weight, making extensive use of aluminum.

Greening learned of this startling development in a telegram from Hacker, just fifteen days before the race. Not willing to accept the inevitable defeat, Greening embarked on another engineering introduction—the first outboard rudder and propeller ever used on a V-bottom boat of non-hydroplane design. Ditchburn, Hawker, and Greening sprang into action, implementing an idea they had only talked about.

Placing the propeller outboard of the hull eliminated the after strut, as the tail shaft was now carried in a trunnion bearing on the leading edge of the rudder. This also eliminated the air pressure under the hull, the negative effect of which they now understood from *Rainbow II*.

Greening's own words tell the story at Detroit: "On a trial run with Colonel Vincent, he was surprised to find that while we carried four in our boat and he carried two, we were



Rainbow III surprised all competitors at Detroit's 1923 Gold Cup races, easily winning the first two heats.



Above and right: Beautifully restored by Tony Brown at Lake Tahoe, Rainbow III returned to Muskoka in the millenial year 2000. Owners Doug and Pam Elmore were showered with attention and praise for saving this famous competitor. Her original Packard Gold Cup engine still supplies plenty of horsepower.



about 4 mph faster in spite of his very much lighter hull and similar engine. In practicing around turns we had found that the engine would slow down from 2400 to 1500 revolutions requiring about half a minute to pick up to full speed. So we installed in the bottom of the boat a small air vent four feet forward of the wheel and 14 inches off to the starboard side. When the boat was running on a straight course, the air that went through this vent did not run into the wheel, but it did when the boat was turning, causing cavitation and consequently allowing the engine to race even over its maximum power speed. When we came out of a turn and the air was allowed to follow its original course, we came out with a racing motor, and the gains made were remarkable. Everyone had told us that cavitation would not work but we used it with very fine results as we

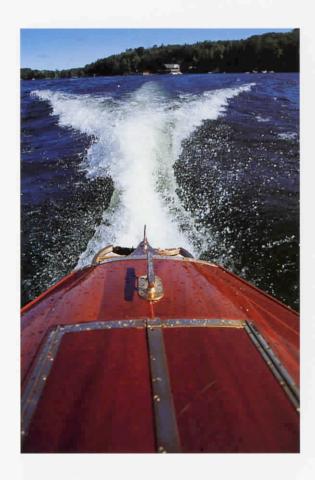
led in all heats, except the last, by over threequarters of a mile."

In the disastrous third heat, *Rainbow III* broke a cotter pin on her propeller and her elapsed time on the three heats placed her dead last. Subsequently, the scoring points system was changed, making it impossible for a vessel winning two of the three heats to be defeated for the Gold Cup, but that change came too late for *Rainbow III*.

Over the next few months, Greening received over one hundred cotter pins by mail from racing fans throughout America and England, together with instructions on how to install them properly. Sheldon Clark of the Sinclair Oil Co. in Chicago marked the occasion with a gold cotter pin set with diamonds, fashioned as a tiepin, which Greening wore proudly for the rest of his life.



Sharing the cockpit of Rainbow III at Gravenhurst with California owner Doug Elmore, Vicki Innes, granddaughter of Harry Greening, was thrilled to welcome the famous raceboat to home waters after a seventy-five-year absence.



An angel of spray forms behind the speeding Rainbow III.

A WORLD RECORD FOR CANADA

After the crushing disappointment of the Gold Cup Races, *Rainbow III* was sent to Muskoka, where Greening had a much different project in mind. On Lake Rosseau, a 19-mile course had been laid out on government charts, checked by the Muskoka Lakes Navigation Company, and here Harry Greening proceeded to establish a new 24-hour endurance record. On September 18 and 19, 1923, *Rainbow III* ran 1,064 miles to shatter the existing record set by the liner *Mauretania* when she logged 760 miles at sea from noon to noon.

Charles Chapman, famous editor of *Motor Boating* magazine, came from New York not only to write the remarkable story, but to participate as a part-time helmsman. His words put the achievement into perspective. "*Rainbow III* is the first boat—power or steam—to make a thousand miles within twenty-four hours. She may have lost an A.P.B.A. Gold Cup in September by the loss of a cotter pin, but this performance has

overshadowed any victory or achievement by any type of floating craft, present or past."

Despite their initial misgivings concerning such a severe test, Packard sent mechanics from Detroit to assist, but the 200-horsepower stock engine performed flawlessly. Dave Reid, Bert Hawker, and Charles Chapman shared the driving chores with Greening, with the run getting underway at six o'clock on a cold Muskoka morning.

To achieve 1,000 miles in 24 hours it was necessary to average 41.7 mph, provided no time was allowed for pit stops. Even if no trouble developed, it was felt that the 50-gallon fuel tank would necessitate stops about every 80 miles. Fuel consumption turned out to be less than anticipated, however, and refuelling stops were stretched to 95 miles. Still, this meant that no lap could take more than 26 minutes, 17 seconds, if the refuelling times of 5 minutes each were allowed.

Herb Ditchburn and Bert Hawker designed an elaborate refuelling system to get the gasoline from barrels on the timer's barge into Rainbow's twin tanks. A large air pump charged the fuel drums, providing a sizable stream, and the system worked to perfection.

The first four laps with Harry Greening at the helm were made in 25:55, 25:25, 26:05, and 24:25. Refuelling was accomplished in 2 minutes and 40 seconds, and then *Rainbow III* was again on her way, with Dave Reid at the helm.

It was astonishing how uniformly round after round was made in the cold, windy, conditions. Despite rain on the second 12-hour stretch, this consistency was maintained, and with improving weather the test took on the atmosphere of a pleasure cruise.

Breaking all water speed records for distance between 150 and 1,000 miles, *Rainbow III* averaged 44.3 mph for the 1,064 miles, completed in 24 hours. Deducting the 32 minutes and 53 seconds consumed in fuelling stops, the average speed attained was 45.3 mph.

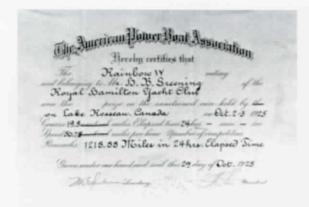
During the entire test, the 625-cubicinch Packard engine ran without attention of any kind except the replacement of one spark plug. Two gallons of oil were added,



Cockpit details show the straightforward racing approach of Greening and Ditchburn.

but the engine never faltered, maintaining a steady 2,100 rpm with an occasional lap or two at 2,150. As a precaution, a propeller of smaller diameter was used to reduce engine strain.

To successfully stage such an unprecedented test of machinery and systems meant that every mechanical component had to be the finest available, designed and built to serve beyond ordinary limits. But it also required extraordinary men, dedicated to achieving the goal. Herb Ditchburn and Harry Greening were the perfect pair to pursue such an accomplishment—even if their achievements brought far more recognition in the United States than at home in Canada.





Above: The American Power Boat Association recognized Rainbow IV's new record of 1218.9 miles run in 24 hours with an official certificate.

Below: Hacker and Ditchburn designed a fuelling barge with pressurized gasoline drums. Refuelling took only moments.

Opposite: Rainbow IV is paced by a Curtiss Seagull powered by a Curtiss C-6 engine. Both are cruising at 60 mph.

WORLD BEATER OR RULE BEATER?

In 1924, Greening returned to Detroit with Rainbow IV, creating one of the biggest controversies in powerboat history. Once again he had introduced a revolutionary idea in his quest for greater speed. By running bottom planking diagonally from her keel across her bottom, Greening planned a series of 1-inch steps along the length of the hull, reducing her wetted surface to about one ninth of her total length. Another first of its kind, Rainbow IV became, in essence, a multi-stepped hydroplane. She also featured a pointed stern, since experiments with surface-piercing propellers had led him to conclude that a lift equal to 18 percent of their thrust would support the narrow stern.

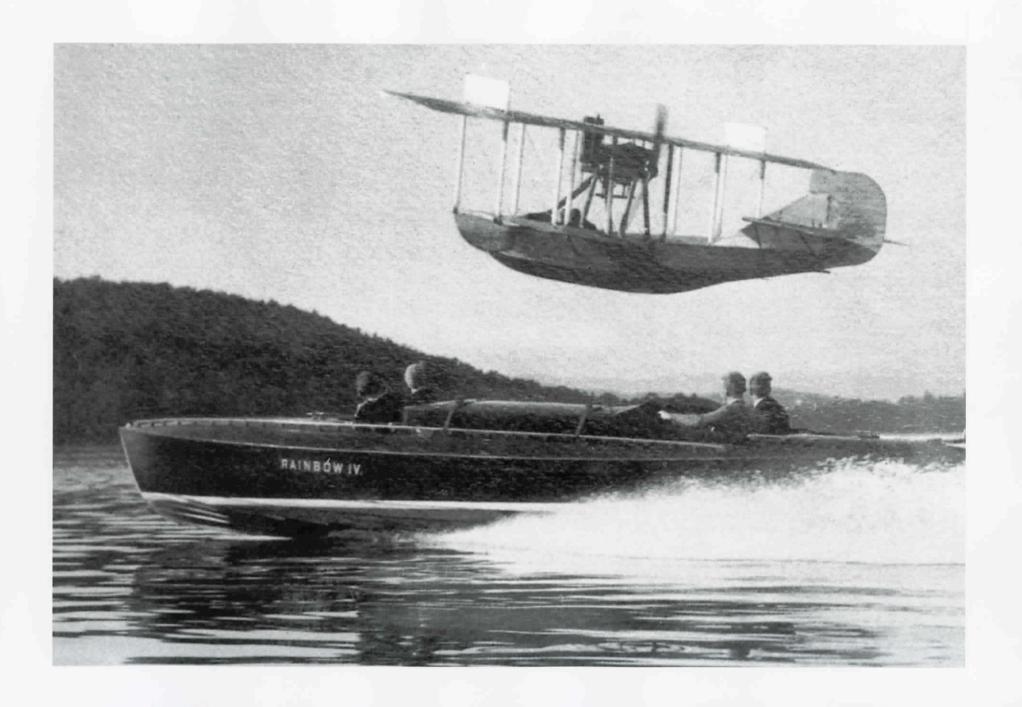
Finalizing his concept with Herb Ditchburn, Greening had George Crouch draw the plans for the new vessel. Using the same engine as *Rainbow II*, it was 1.5 feet longer, 1 foot beamier, 33 inches deeper and a 1,000 pounds heavier. In addition, the new boat provided bunks for three under her long deck. Contrary to the opinions of the experts, *Rainbow IV*

proved faster than *III* by at least 3 mph. Score one more engineering victory for Greening the amateur, while the experts were still batting zero!

Knowing the racing rules, Greening realized he was in controversial territory, as the APBA had ruled hydroplanes ineligible for Gold Cup competition. He invited the APBA rules committee to Hamilton to view the new boat and to rule on its eligibility, offering to pay their expenses. This committee inspected *Rainbow IV* and presented their findings to the rules committee. They in turn declared the vessel eligible for competition as a clinker-built boat.

On August 30, 1924, *Rainbow IV*, driven by Greening, easily won the Gold Cup, blasting down the straightaway at more than 60 mph, leaving her nearest rivals, *Baby Bootlegger* and *Miss Columbia*, well behind.

Greening left Detroit a winner, with the applause of all. All except Howard Ross, owner and driver of *Lady Shores*, which had burned and sunk during the race. Ross protested that the clinker-built *Rainbow IV* was a violation of the design rules. After much deliberation,





October 17th 1924:

Mr. H.B.Greening, Hamilton, Ont.

Dear Harry:

Yours with copy of letter to Columbia Y.C. received and noted. It is just the sort of letter I would expect you to write: Some day, when you get good and sick of fooling around with a crowd of sea lawyers come over into a real game, hydroplane racing, where we have no rules and no protests and no bum sports. We go out and race and the first man over the line gets the prize.

Hope to see you at the A.P.B.A. meeting:

Suced s. white

Dozens of letters were received by Greening, all protesting APBA's action in stripping the Gold Cup from Rainbow IV.

APBA upheld this protest, stripping the cup from Rainbow and awarding it to the secondplace Baby Bootlegger.

Letters of support for Greening poured in from every boating journal in America, and editorials in the Detroit News howled in indignation at the unfairness of the APBA's action, but to no avail. Greening was again robbed of a hard-earned victory.

Discouraged, but not beaten, Greening accepted the APBA's position reversal and relinquished the trophy with characteristic politeness. He was never heard to express criticism of their decision, only disappointment.

A NEW WORLD MARK

In the fall of 1925, Rainbow IV, sporting a new 400-horsepower Gar Wood-Liberty engine, arrived in Muskoka to improve on the 1923 endurance record. Once again, supporters and observers came from all over North America to witness the attempt.

The 1,650-cubic-inch engine was turning a propeller measuring 20 inches by 28 inches, pushing *Rainbow IV* to an average lap speed of 50 mph. Although this was somewhat slower than her top racing performance of 63 mph, it was felt to be a more desirable pace for a 24-hour test.

By the end of the two 12-hour periods on October 2 and 3, 1925, Rainbow had covered a total of 1218.9 miles at an average speed of 50.8 mph. Assisting at this new world's record were Herb Ditchburn, builder of the boat; James Galloway, engineer for Gar Wood; Charles F. Chapman, editor of *Motor Boating* magazine; A. G. "Bert" Hawker, who had supervised her construction; and Dave Reid, Greening's long-time friend and mechanic.

Rainbow IV was sold in 1926 to Samuel S. Dunsford of Concord, New Hampshire, who continued to race her until 1929. In 1932, her engine was removed to be used in *El Lagarto*, and the hull disappeared. Recently, John C. Binley had an exact replica built by Bill Morgan for pleasure use on Lake George, New York. Powered by a modern V-8 engine, she performed very much like the original.

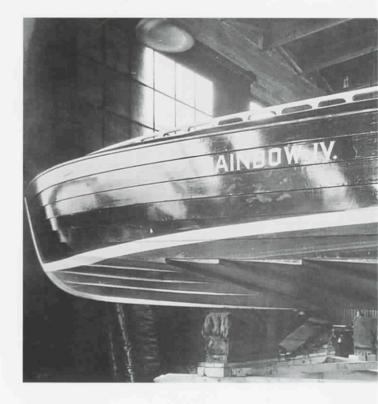




Above: Rainbow IV easily won the 1924 Gold Cup, defeating Baby Bootlegger and Miss Columbia.

Left: An exact replica of Rainbow IV was built for Jack Binley from original plans. Photo by Harold Shield.

Right: First approved, then disallowed, the series of 1-inch steps of her clinker-built bottom created an illegal multistepped hull.



OFF TO ENGLAND

Dave Reid and Harry Greening co-operated to design *Rainbow V*, a much smaller boat at 22 feet overall, using much of the knowledge gained from the larger *Rainbow IV*. She was built especially for the Duke of York Trophy Races, to be run in England on the Thames River, from Putney Bridge to Mort Lake, and her engine displacement was limited by the rules to 91.5 cubic inches, about half the swept volume of a Model T Ford.

Greening turned to Harry Miller of Los Angeles, already famous for his Indianapolis racing cars, who produced an 8-cylinder engine, turning up 8,000 rpm and 200 horse-power. The pistons were about egg-cup size. However, no cast-bronze wheel could be found to withstand this rotational speed. In desperation, Greening telephoned Edsel Ford, who arranged to meet Reid and Greening at his Dearborn, Michigan, factory. Here, a pantograph machine turned out a beautiful wheel based on Greening's model. The pantograph machine had been working on new fender dies



Rainbow VII, a giant 38-foot runabout, won the Lipton Cup at Detroit in 1928 carrying eight crew members.

costing more than a \$100,000, but the needed propeller was given first consideration.

Dave Reid and Jack Marcer took *Rainbow V* to England, Greening and family joining them for the racing. Although they had the fastest boat, conditions were very poor—the Thames in flood, and almost all competitors striking tree trunks or other debris. No winner was declared, and one of the few competitors to actually finish was a woman, Marion Carstairs, who later became a Ditchburn client.

Harry Miller, the engine builder, purchased $Rainbow\ V$ and raced her successfully for several years in the Los Angeles area.

THE BIGGEST AND THE BEST

Rainbow VII was the result of a reassessment by Greening and Ditchburn of the successful principles discovered in numbers III and IV. At 38 feet long, with a 9-foot beam, and powered by two 600-horsepower Liberty engines, this giant runabout could carry fifteen passengers at more than 60 mph. She was an excellent rough-water performer, and Greening



used her to win the Lipton Cup in 1928, when she carried eight persons during the race. She won three heats hands down to capture the North American Championship, her only serious competition coming from the Curtiss Aeroplane Co. entry. After the race, *Rainbow VII* was shipped to Lake Rosseau, where Harry Greening planned to set another endurance record—this one for 12 hours of running time.

Rainbow IV was sold to Samuel Dunsford of Concord, where she was a regular winner in New England-area racing. Her engine was transferred to *El Legarto* in 1932.





Above: Rainbow VII was converted to Riot II for pleasure use with an added hardtop.

Below: Jack Stroh of Detroit, left, a racing friend of Greening, centre, assisted at the endurance record set by Rainbow VII.

Greening's longtime friend and racing mechanic Dave Reid is at right.

The Italians, financed by their government, had spent a lot of time and money on the 12-and 24-hour endurance records, but had gotten nowhere. Greening now showed the way again, cracking off 723.9 miles in 720 minutes, including all fuelling stops and crew changes. Her average running speed was 63.21 mph, and her fastest lap was 68.95 mph.

To accomplish the lightning-fast pit stops, there was now a redesigned system on the gasoline barge. With extra drums pumped to high pressure, the crew refuelled *Rainbow* with 180 gallons of gasoline in just 52 seconds.

Previous experience taught the crew to keep the engines running for the full 12 hours, as hot engines are very hard to restart. The run began about an hour before daylight on a foggy, chill October morning in 1928. Once again, the team set a world record.

Asked by a boating writer why he had taken on such a challenge, Greening explained, "It is very apparent that race boats such as Miss America VII and Miss England cannot go thirty miles wide open—something always

happens. So I decided to show that a 1000 h.p. runabout is the equal of anything on earth in reliability, and that a speed of a mile a minute can be maintained with the utmost ease. Here is a craft that will carry ten people comfortably at 60 mph, is well built, practically noiseless, seaworthy, and a lovely thing to look at. No wonder I am in love with her. Perhaps there is an urge behind all this—to do one thing well. That is why I don't play golf."

THE LATE YEARS

Although he retired from racing in 1929, Harry Greening continued to build new boats, including *Rainbow VIII*, a raised-deck cruiser for Great Lakes pleasure use, and *Etude* and *Largo*, slower, all-weather performers for Georgian Bay use.

In 1934, Greening launched *Rainbow IX* at the Royal Hamilton Yacht Club, where he served as commodore for many years. Powered with a 12-cylinder, 550-horsepower, Packard-Liberty racing engine, she was capable of 63 mph. Greening intended to convert this hull to a



A winning combination of talent: George Crouch, designer; Harry Greening, owner-driver; and Herb Ditchburn, master builder.

hydroplane configuration, then attack the North American speed record of 73 mph held by *Miss Chicago*, but that never happened. This vessel, which had first raced as Packard Chris Craft, is now owned by Murray Walker of Lake Muskoka, and is regularly seen at antique boat shows.

Greening's racing career may have ended, but his love of water sports, fast boats, and Muskoka never died. As an elder statesman in racing he served the APBA, the Canadian Boating Federation, the Royal Hamilton Yacht Club, and many other organizations.

In reflecting on his long and successful career, Greening stated, "Motorboat designing is a queer hobby. The APBA rules under which we have always raced apparently leave no loophole and it is up to the racing committee to see that they are enforced. But that is only one end of the stick. The other is the man who is going to build the boat. He gets the rules, works over them for weeks and then says, 'I can do this and I can do that and yet be within the rules.'

"We are proud (or ashamed) to say that from 1922 to 1927, the constant change in rules was brought about by our building *Rainbows* that seemed to work between rules without hitting an important snag. Take for instance *Rainbow II*. The rule specified that hydroplanes were barred. We applied longitudinal planking (not prohibited) and pushed in part of the transom about 12 feet (not prohibited) at the same time, producing a hydroplane which was prohibited.

"Ten years later," he noted, "Adolph Apel of Atlantic City used all these principles in modified form to produce the fastest boats in the world." Faster, more seaworthy, and acceptable to the revised APBA rules, they nevertheless were direct descendants of Greening's *Rainbows*.

Undoubtedly, the design innovation and the inspiration provided by Greening and Ditchburn set the stage for later Canadian achievement on the water. The fortunate association with Herb Ditchburn allowed Greening to collaborate with a builder who wanted to be on the leading edge of all marine

development. Together, they were able to win against the giants of motorboat racing.

Happily, two of the most important *Rainbows* have survived to be enjoyed today, at least in a manner of speaking. *Rainbow III* was sold to American owners and enjoyed a long and successful racing career as *Palm Beach Days*. Many years later, she was bought by Dick Clarke of Sierra Boat Co., at Lake Tahoe, where she

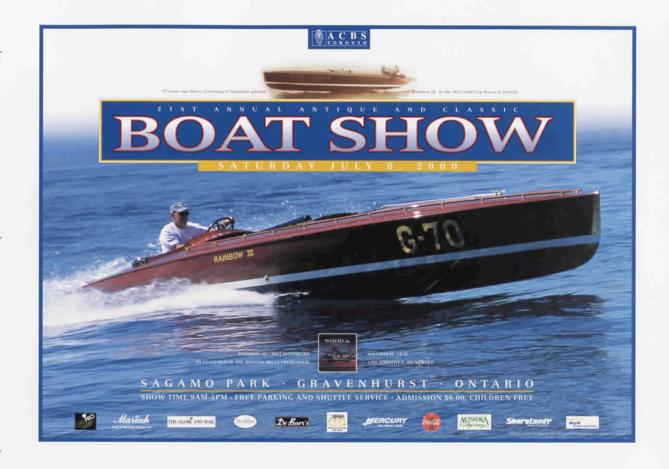
and her original Packard Gold Cup engine waited until 1997 to find a new owner who would restore her to her former glory. That finally happened when Californian Doug Elmore bought the wooded-down vessel and organized the restoration. Surprisingly, very little new wood was needed; the hatch covers, badly charred from engine heat, were the only items requiring total rebuilding.



Newspapers and boating journals all over North America announced the *Rainbow VII* achievement—a speed of over a mile a minute for 12 hours.

In the year 2000, *Rainbow III* made her first return in seventy-four years to her home waters of Lake Muskoka, featured as poster boat at the annual antique boat show in Gravenhurst, presented by the Toronto chapter of the Antique and Classic Boat Society. Owner Doug Elmore was showered with attention and praise as he proudly chauffeured descendants of the Greening family around Muskoka Bay, passing within a few feet of the ruins of the factory where she had been built.

Rainbow IV also lives on, in a sense, as Morgan Marine in Silver Bay, New York, built a faithful replica for Jack Binley to use on Lake George. Perhaps the most unusual vessel in Gold Cup history, this planing hull, double-ended, with thirteen diagonal steps beginning about 5 feet back of her bow, was the design inspiration of Harry Greening, assisted by George Crouch, Albert Hickman, and master builder Herb Ditchburn. In building a replica, Bill Morgan was able to follow Crouch's original drawings, which had appeared in Yachting magazine many years after Rainbow's frustrated "victory" in the 1924 Gold Cup at Detroit.



The year 2000 was a real cause for celebration at the Gravenhurst Antique Boat Show, marking the return to home waters of *Rainbow III* after a seventy-four year American sojourn. Owner Doug Elmore of Lake Tahoe received dozens of members of the Greening family, even motoring several of them across the bay to view the ruins of the factory where she was built. A very much appreciated visitor.