The Boat Builders of Ontario

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Chapter 1 --- First Nations, First Boatbuilders: Clovis to Mississauga, Dugout to Birchbark

Boat from "Learning Stones" near Peterborough Ca. 800 A.D. Triangular object under hull is anyone's guess, some form of rudder? Centre mast is a flagpole, identification friend, foe or trading partner. Canadian Canoe Museum

They came first, but how. Did they walk, or row? The accepted theory is that during the last Ice Age, there was a land bridge from the western tip of Siberia to Alaska and they simply followed the shoreline until they reached North America and continued until they reached the very bottom of South America. There is a very recent theory, apparently very upsetting to the archeologists and cultural anthropologists who are very fond of the Bering Sea bridge, is that there was a second and much earlier such ice bridge connecting Europe across the Atlantic to what are now the Maritimes and New England states. The theory is that peoples in Western Europe built boats and simply followed the abundant wildlife that gathered at the edges of the ice until they once again hit dry land. This latter theory is still very much under construction and evidence is still pretty speculative at this point, only a few artifacts have been found that seem to be European in origin. The academics supporting the Bering bridge scoff at the lack of evidentiary findings, but this is what archaeology is for, to do field digs, not just to plant a flag and say case closed and *point-finale*; I wish the challengers the best of luck.

It's worth taking a moment to explain the cultural structure of Ontario First Nations as many of the terms tend to be used vaguely and too often interchangeably. Anishinaabe is subcontinental group of peoples stretching from eastern Quebec, Ontario and the Great Lakes border areas of Michigan, Illinois, Minnesota, Ohio, and New York, based on a common culture and language roots. This group is further split into tribal groups, the Algonquin, Chippewa, Ojibwa, Potawatomi, Oji-Cree, Nipissing, Salteaux, and Mississauga. These are further broken down into nations, which are self-governing settlements, roughly similar in size to the colonizers municipality. Generally, the Mississauga cover the area of interest for this book, but there was no such thing as hard borders as you might find in Europe today, the peoples were always on the move. The name Mississauga means at the mouth of a great river or many rivers, so water played an important part in how they defined themselves, although it is not clear what river, other than the St. Lawrence or Kitchikanii sipi, as referred to by Algonquins. However, the principal settlements were of the Iroquois, or Haudenosaunee, or "people who build long houses". This may be important later in the story.

Generally when the history refers to First Nations boatbuilding, there are dugouts and then magically we jump to birchbark canoes as if some native craftsman just one day had a really big think and came up with the idea, it would be as if the Wright brother's second aircraft was an F-86 Sabre, it just doesn't work that way, technological advancement is a painfully slow and incremental process; jumps do happen, but they are rare. In spite of the renewal of interest in Indigenous culture, there is a surprising dearth of information on how the canoe came to be, we

do know how it started as we have found dugout canoes buried in preservative mud flats and we do know where it ended up as birchbark construction persisted well into the postwar era, the problem is understanding the steps in between.

Generally, rivers and lakes in Southern Ontario are frozen in mid to late November to early December and by late December are more or less safe to walk on (at least that was the rule until the last few years, when safe-freeze is becoming more of an issue, as the time of writing this, in early January 2024, there are still visible open-water patches on Rideau Lake, so what the future holds, I don't know). Back in the days of more traditional winters, the ice fisherman usually would set up their huts by the first week of January and stay until early March, when the ice began to get too squishy for comfort. The edible fish of choice, just to use my lake for reference, were Smallmouth Bass, Northern Pike, Walleye, and Trout. Less popular were catfish, sunfish (pumpkinseed, rock bass) and whitefish. Sunfish tended to gather close to shore and were easy to see and catch, although they were a hassle to eat, each fish would provide less than half a mouthful at best. Trout and Bass and Walleye were the best tasting, pike less so and you had to be careful to chew each piece and reach into your mouth to pull out the needle like ribs. Competent cooks knew better how to fillet the pike and avoid the ribcage, but that was not my grandmother's style, she just chopped it into chunks and fried it in what seemed to be a half pound of butter. The problem was that the desired fish did not swim close to shore, they were ambush predators and liked to find places to hide. Pike liked to disappear into weed beds, where they natural scale colouring would blend in with the vegetation, bass preferred what a local fisherman referred to as holes, or a small bay like indentation in a wall of cattails, or under a stump in the "drowned lands", the remains of cedar trees swamped by rising lake levels from the construction of the Rideau Canal. You couldn't reach these desirable fish from the shoreline; you had to go out on the water. Swimming or wading wasn't an option, there were only three relatively warm water months, June, July, and August, and maybe a little of September, at any rate you were a lumbering beast in the fish's natural environment, they could dart quickly away at any sudden movement. Some sort of floating device was necessary. A log floated, but more had to be done, so the plan was to hollow out part of the trunk. The big maples and pines, the really big ones could be as much as 3 feet in diameter, which made for a viable craft, the rest was to use a copper axe to cut a softwood, assuming such a large tree could be found, or at least a relatively soft hardwood like basswood. Copper was a trade item, there was little in the way of copper ore in Southern Ontario, most of it came from what is now Michigan and around Lake Superior, of course near the big deposits in the Sudbury area. Little is known about the mining process; the archaeologist's best guess is that a fire was built on high-grade ore outcrops and then water was splashed on the crack the rock and then use hammer stones to further break the

pieces down. The bits were heated again to melt and dispose of the lead impurities and separate them from the pure copper. Then you had metal you could use or trade for something.

Fig. 126.—The earliest Navigators. (Page 174.

How dugout canoes were really made, some chopping, mostly burning.

Whether making the tool to make the dugout or actually making the dugout is very labour intensive. The exterior already has the desired rounded shape, but you have to excavate the interior. Obviously this is a lot of work probably ten days or a few weeks of endless hacking and constantly having to use a hammerstone to beat the soft copper axe blade flat and then grind the edge on a stone to sharpen it, watching as the metal shrink steadily as you worked; it must have seemed sometimes like a circular effort, using a copper axe to build a boat to travel to meet another tribe and trade for more copper and so on. Granted some dugouts were probably pretty crude, particularly if you just needed transport out onto the lake, but if you had any plans to travel a long distance, as noted to engage in a trade you needed something lighter and somewhat portable. The plan would be to thin the hull down to about ¾ of an inch, more likely the width of a forefinger. You would have to be careful to always keep to the required thickness, too thick and it is too heavy, too thin and you go right through and that is the end of the whole project, you now have firewood. One builder on YouTube estimated that the hollowing out work took 50,000-80,000 axe strikes and that is with a modern tool-steel adze, so you can imagine

what it would take with a copper one. The more common and less onerous method would be burning. Once the outer shape of boat is complete you would turn it over and build a series of small fires on the top, along the length of what you intend to be the boat interior. You would keep adding fuel to the little fire as it slowly burned into the interior, stopping occasionally to scoop out the accumulating charcoal. Once you are far down enough, you would use the axe/adze to finish the job. The real trick was when you started to get close to the outside edge. How would you know how thin the wall is, as at a certain point you can't assess the thickness visually. Tapping the wood with your knuckle might give some idea, thinner wood has a higher pitch sound and thinner a much lower pitch.

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At some point the need for a much lighter watercraft must have become obvious. One of the figures at the petroglyphs or “learning stones” near Woodview, Ontario, shows a boat with a central mast and seven figures. The carvings, actually etchings made in pink granite, were made around 500-1000 A.D., and are meant to express cultural ideas rather than detailed technical drafting. The boat has a half-moon shaped hull and seems to have more in common with the sort of boats used in Pharaoh-era Egypt, than what we generally understand as a canoe shape which has a flat bottom, although it does have the curving wave-breaker bow and stern of a canoe. The mast appears to be a flagpole, with a sort of hoop at the top, possibly adorned with some sort of identification that could be easily seen from a distance, so you would know who was coming across the lake. One thing we can be sure of is that this boat is not a dugout, there are no trees that big in Southern Ontario, even then. The Haida (the people, Haida Gwaii refers to the island nation) did have truly big trees, the giant redwoods of the Pacific Northwest rainforest that were 5-6 feet in width and could be shaped into the robust craft needed to go over ocean waves and survive a thrashing whale. The petroglyph boat is most likely a lightweight skin and structure canoe, assuming at least 3 feet for each of the seven, possibly eight persons aboard, about 22-25 feet long. If you’ve never seen such a boat, how do you start to imagine what one should even look like?

Kayak, 1910's

For the Inuit, the answer was local. The animals they hunted, seals, walrus and small whales were already large, and boat shaped, so it wasn't much of a leap to simply recreate a hollow version of the animal using the skin and bones to provide the necessary structure. The guts were dried in the sun and used to make string and rope and the bones, mostly the ribs, were lashed together to build the framework and the skin stretched over the frame and the seams sewn and then painted with animal oil to further preserve and keep the water out. The animal skins are not very water repellent, and as anyone who has ever stepped in water wearing a leather boot will attest, the leather soaks through quickly and dries very slowly, sometimes taking days to do so. Eventually the boats developed into the kayak and umiak, divided along gender lines. The kayak was strictly for the boys, a one person craft designed specifically to the user's dimensions, rather like a custom sports car, while the larger craft, the umiak was 15-20 feet long

and covered with multiple skins, and was used to transport the women, children, and the family possessions. This certainly shows how certain aspects of Inuk culture were superior to our own, in this case the man got to keep his sports car, while the wife and kids had the SUV. The kayak and umiak are extremely light boats, and both can easily be transported, the kayak can be easily carried on the user's shoulders, particularly when needed to portage between ice then water and then ice surface of the artic sea edge.

Similarly in the southern temperate regions, you needed to have a boat that could easily be carried from one lake to another, all lakes are connected by rivers to other rivers and eventually the ocean, but not all these rivers are easily navigable and in many cases only a few inches deep. A dugout, even with a relatively thin hull wall would still tip the scales at a few hundred pounds, way over the capacity of even two men to carry, even for short periods, to say nothing of several hours walking over usually very uneven ground. A light portable boat was needed. This is the missing link in First Nations boat development; what came next? As all their boats were made of organic materials, all these boats degrade over time, and we have no relics or even fragments. In the absence of evidence, we can only guess. However the birchbark canoe is not related to the dugout; the dugout is akin to the solid hull boats made of fiberglass and stamped aluminum. The birchbark canoe, as noted is too complex to have been thought up straight from the dugout, the notion of a skin and structure canoe such as the birchbark had to be a later and considerably more complex development of an earlier but conceptually similar, but simpler craft. Therefore this would most likely been a temperate region version of the kayak, a skeleton structure boat covered by animal skin. The challenge was to find animal skins that were large enough, most of the edible animals in Ontario were relatively small creatures, groundhogs, rabbits, beavers, and squirrels, when there was nothing else. The largest hunted animal would be moose and deer, even the useable portion of a deer skin is not that big, and any canoe thusly covered would likely require a few skins to do the job. One also has to build a boat that that it can traverse waves without swamping, in the far north, the kayak fore and aft deck was fully enclosed except for the paddler's cockpit at the center, and even then there was another skin that acted as sort of coat/wet suit, which attached directly to the edges of the cockpit and kept all the water out in the even the kayak went over. (the occupant, as part of their boating skill, was supposed to be able to use the paddle underwater to right the boat). In the south, the bow was extended to ¾ or 270-degree curve which would push oncoming water aside, and in the stern to keep the water from coming in when mounting a wave.

CHIPPEWA INDIANS, OF WISCONSIN, BUILDING A BIRCH-BARK CANOE.

From the outside in, birch bark skin has been harvested from a single large tree.

The problem was that large animal skins were very dear, pardon the pun, not that easy to come by and needed for all other kinds of clothing, boots, tenting material, and various tools. Plus, as a soft organic material subject to hard usage, it wore out quickly. The early animal skin boats were likely constructed around a frame of green branches, bent into a U-shape by being heated in boiling water and attached to a keel, also made of lashed branches, and to more branches lashed together to form the port and starboard gunwale.

Coming along.

For the Mississauga's and the other Peoples, what was needed was a light, portable, but sturdy craft that could be made entirely from local, easily obtainable materials, rather than depending on the supply of precious hides. What was the aha moment? They likely already had the concept of the skin and skeleton boat, so what was the next logical step? At some point, some craftsman and engineer was sitting outside, pondering naval architecture when he happened to look at a longhouse and the inspiration came. The longhouse was the main dwelling of many of the First Peoples, at least those who lived in wooded areas. It was a 70 or so foot long building, rectangular and with straight walls and bent branches forming a semi-circular roof. The roof itself was shingled with sheets of tree bark, lashed to the beams, or in this case, what were essentially ribs and that was the kicker. Could this be the basis for a new type of boat? The

longhouse kept out the rain, why couldn't it, in a slightly altered form, also keep out lake water? Flip the building upside down, shrink it to canoe size, add on the conical-horn bow and stern pieces and you would have the perfect boat, relatively light and portable even for one man to carry on his shoulders, but also viable for at least two men to sit in and paddle. This is all pure theory, on my part, and I don't deny it, but absent a time machine, we will never know the facts, sometimes you have to assess the most likely route such ideas could take.

It's starting to look like a canoe, at this point.

The construction of these crafts is pretty well known, and I won't go into it too deeply. Stakes are pounded into the ground outlining the boat shape, a gunwale is tied to the top of the stakes and then strips of wood are boiled to make them pliable and then are bent into a U-shape and lashed to the gunwale girder. A keel is added, and the ribs are tied to the keel. The ribs are very close together, perhaps no more than 2-3 inches (a hand's width) apart, thwarts are installed for seating and the basic hull frame is complete. My mystery moment is the birch bark used to apply to the skin. The birch sheets must stretch all the way from one gunwale to the other. An average two-person canoe would be about maybe 16 inches on the side with a beam at the widest point of 2 and a half feet, so we would need a strip of bark at least five feet in length, which if he works backward with Pi, would require an 18–19-inch diameter trunk, or one and

half feet wide. That's a big birch tree, most, at least where I live are pretty scrawny, it's rare to find one much of 10 inches in diameter, and even then the lower trunk is not covered in nice white shiny bark but large patches of dark grey nubble.

Almost ready for launch, only four holding and shaping stakes are still fore and aft. I would guess the birchbark seams still need to be sealed. I'm not sure what Dad is holding, is it some sort of rudder or paddle?

I have to assume that before the clear cutting during the European colonization process, that such ideally large, wide, and fine skinned birch trees were the norm, they would have to be to make the canoe manufacturing process possible at all. The birch sheets would be tied to the gunwale and pine sap used to glue the birch sheets together. How they were able to find the birch trees to build the long canoes I do not know, again such large trees must have existed.

Birchbark canoes are made of organic materials, and in a short time they return to the earth, therefore we do not have surviving pre-colonial craft, so we cannot be completely certain what they looked like or how they were built. The only part of the story I have issue with is that most of the canoes built in the later colonial era (up to today) use flat wood strips for ribbing. I would have thought, and this is the caveat, that the only way to make flat lumber is with a saw, and

Indigenous peoples did not have any such equipment prior to the arrival of the white man and even then, not until the 1830's and only finished wood being available with the coming of the saw or planing mill. Having said that, a birchbark canoe was recently donated to a museum in Winnipeg, built in the 1790's by native hands and shipped to England by a British officer as a souvenir. It had the flat strip ribbing, so there obviously was some way to make the required shape. You would cut down a mid-sized cedar tree, remove the bark and then take an axe and then set it lengthwise with the grain and set the hatchet blade into the wood, and then tap and pound it with a hammering tool so as to carefully extract a 3/16 inch deep, 2 inch wide and at least 4 feet long strip. I tried this with a cedar tree trunk I had to take down after an ice storm, and after several tries and a couple of hours, I was able to get a so-so piece about 2 ½ feet long. You have to be careful to keep the axe blade (this one sharp tool steel, not copper) from sliding to the surface and breaking loose or heading into the interior of the trunk and getting stuck. There is a how-to drawing in Eric Sloane's classic text "A Reverence for Wood" and I assume he did learn to do it properly, as he not only talked the talk, but walked it as well.

Thus was born the final technological advance of Indigenous boat building, it literally laid the technological foundation of all that came after. The small canoe was mated with the English wherry rowboat, which became the rowing skiff, which had the end squared off and became the Peterborough outboard runabout. The long canoe with its thin wood skin and light ribbing became the speed launch of Gilbert and Minett and Ditchburn. No Indigenous persons ever owned a Gilbert or a Ditchburn launch that I am aware of, none had that kind of money and at any rate, they already knew how to get around on the water, they had solved that problem long ago.

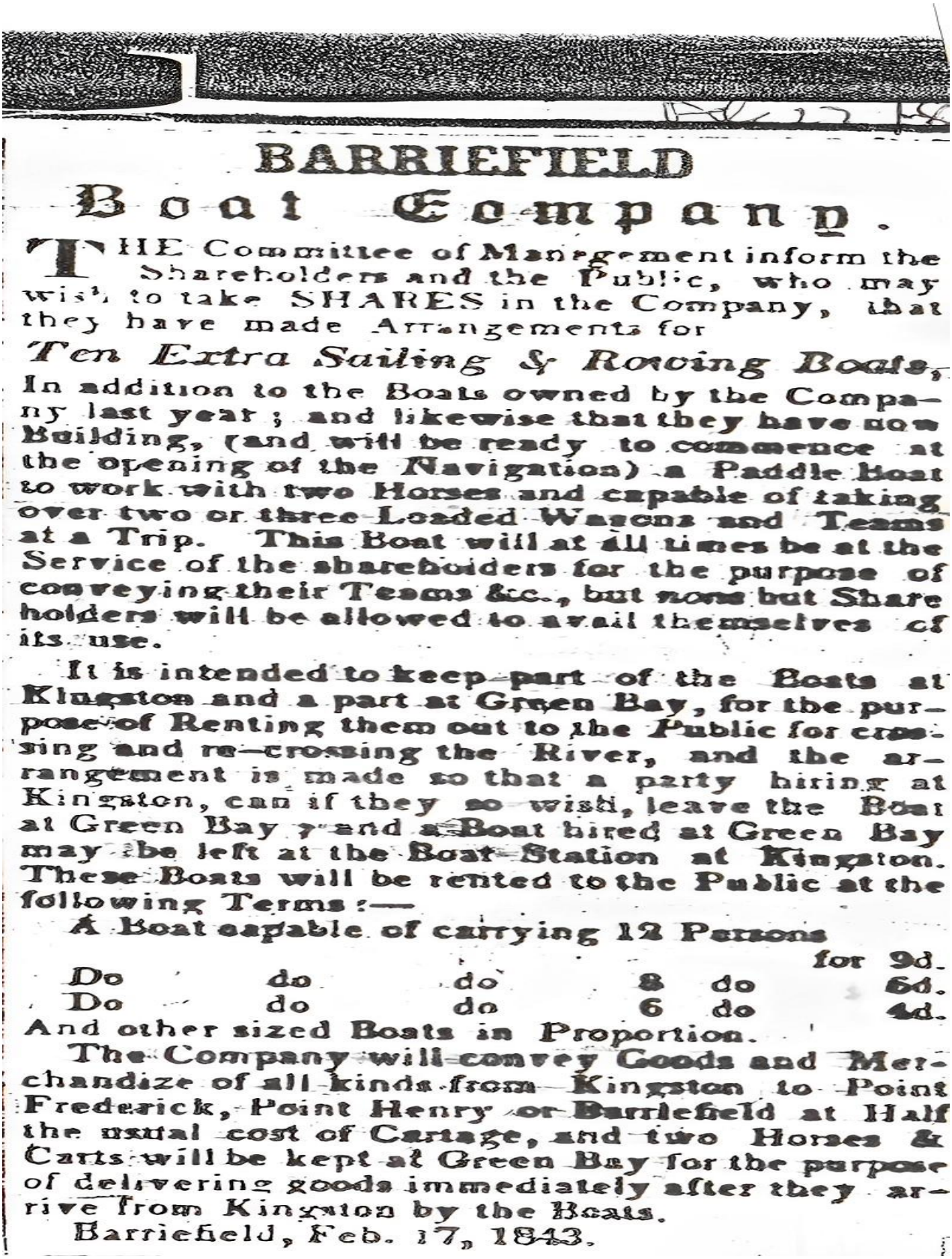
Chapter 2 --- "A Slight Thing, Knocked Together in a Hurry": Knapp, Sharman, O'Gorman, Tisdale

The shop, circa 1885, owner is Henry Knapp, grandson of founder James; son and a workman freeze poses for the long camera exposure time.

James Knapp was born in the town of Newburgh, New York on May 21, 1781. Like so many Great Lakes boatmen, he apprenticed on a trading ship and slowly worked his way up. He received his master's license and became captain of the trading sloop Arcadia in 1819. In the 1820's Knapp decided to emigrate to Upper Canada.

He packed up his belongings and converted his savings into gold coins which he hid at the bottom of a keg of nails and fasteners he brought along with him and put into storage on the ferry boat. There were bank cheques available, but no tradesman would exchange real coins for a piece of paper. When he arrived he went to pick up his belongings and found that the nail keg was gone. Searching was fruitless. It was symbolic perhaps. There was little gold to be had in the carpentry trades and even less in building boats. He continued to make enquiries for years after, apparently continuing to check various nail kegs he came across to see if it was the one he had lost. Still, lost gold or not, there was work to be had; Kingston was in the middle of a building boom. Money from England was flowing in for the new fortress project at Point Henry, soldier's barracks and housing for the civilians that were needed to support an army installation. There was a job captaining a ship in the open-water seasons, but you needed a second job for

the winter, and in Knapp's case, that was building boats. This was a relatively new occupation, or at least a specialized trade. Prior to that, all watercraft building was a branch of carpentry, the practitioner was known as a shipwright. Shipbuilding was already an established trade on Lake Ontario. Hundreds of ships, from small trading sloops up to a 100-gun Ship of the Line (battleship) known as the H.M.S. St. Lawrence had been turned out from yards in Kingston, Brockville, and Toronto. There were already several steam ships on the water, all using the poky but dependable low pressure steam engine. Small boats for personal use were less common. Shipwrights worked on ship, barges, rowing boats, it wasn't until the 1820's that small boat building became a separate trade with specific products. The products were roughly half-pleasure boats, half commercial.



BARRIEFIELD

Boat Company.

THE Committee of Management inform the Shareholders and the Public, who may wish to take SHARES in the Company, that they have made Arrangements for

Ten Extra Sailing & Rowing Boats,

In addition to the Boats owned by the Company last year; and likewise that they have now Building, (and will be ready to commence at the opening of the Navigation) a Paddle Boat to work with two Horses and capable of taking over two or three Loaded Wagons and Teams at a Trip. This Boat will at all times be at the Service of the shareholders for the purpose of conveying their Teams &c., but none but Share holders will be allowed to avail themselves of its use.

It is intended to keep part of the Boats at Kingston and a part at Green Bay, for the purpose of Renting them out to the Public for crossing and re-crossing the River, and the arrangement is made so that a party hiring at Kingston, can if they so wish, leave the Boat at Green Bay; and a Boat hired at Green Bay may be left at the Boat Station at Kingston. These Boats will be rented to the Public at the following Terms:—

A Boat capable of carrying 12 Persons for 9d.

Do do do 8 do 6d.

Do do do 6 do 4d.

And other sized Boats in Proportion.

The Company will convey Goods and Merchandize of all kinds from Kingston to Point Frederick, Point Henry or Barriefield at Half the usual cost of Cartage, and two Horses & Carts will be kept at Green Bay for the purpose of delivering goods immediately after they arrive from Kingston by the Boats.

Barriefield, Feb. 17, 1843.

Barriefield Boat Co. was primarily commercial, but pleasure boat building and rentals would grow out of this business.

Knapp built a small house in the new settlement of Green Bay, which is at the southern tip of the village of Barriefield. In order to make some extra money they took in other workmen who were working on the Fort Henry project. His house was perched up on the hillside of Green Bay, about two hundred yards from the water. He built his workshop down in the flat shore area. In 1832 he put an advertisement in the Kingston Whig newspaper and began to offer his services as a boat builder.

There was no strict division of pleasure boat or a workboat. Fishing was both pleasurable and practical, you could put a fresh fish on the table at the end of the day. Already there are a number of fishing boats on the river and out on the big lake. Shipwrights who worked on the big yards could easily build a scaled down craft for themselves, but with 60-hour work weeks, spare time for such a project was limited.

The type of boats built initially were all designs from England. English boating was done either on narrow, calm, and sluggish canal and river waters, or on huge sea swells and the boats reflected this. The racing sculls and wherries, slim low profile and lightly built were river boats and Jolly boats and sailing boats, were heavily built and high profile to handle the rough conditions of the open sea. At the time settlements in Upper Canada hugged the Lake Ontario shoreline which fit the English seagoing small boats. However as the settlers began to push inland, these big boats were less practical. North America was a continent of wide rivers and lakes, where 2–4-foot waves were the norm and ultimately the boat had to conform with this environment.

KINGSTON ADERTISEMENT. 5

JAS. KNAPP,

PRACTICAL BOAT BUILDER,

BARRIFIELD, KINGSTON, ONT.

Boats Built any Style to Order, from the Varnished and Ornamented Cedar to the Cheapest Row Boat.

A large Stock of Pleasure Boats and Shooting Skiffs, newly made, on hand and for sale. Also Row-looks, pins, &c., at very low prices. J. K. obtained first prizes at the Union Exhibition for Pleasure Boats, Shooting Skiffs, Oars, Sculls and Haddles.

Boat House and Shop, Barriefield, Kingston, Ont.

I'm not exactly sure what the ad is getting at, noting a "practical boat builder" and showing the most impractical watercraft imaginable. Ad circa 1850's.

Knapp's 1832 advertisement stated that he would build any kind of small boat on order. With the exception of the canoe all of the boats were traditional English small craft. It would be twenty years before the development of the standardized North country rowing skiff.

1) Canoe: This was already described in depth in the preceding chapter, the main construction change is that the work was done indoors, in a wooden shop, usually in winter. The colonial boat builder would make a boat model, rather like a dressmaker's dummy, lay the planks on the model and add the ribs after and then pull the boat hull away from the model and finish it. All this work would be done inside the workshop, during the winter, ready for the spring customer rush. Two person canoes were offered for sale, as well as multi-person long canoes.

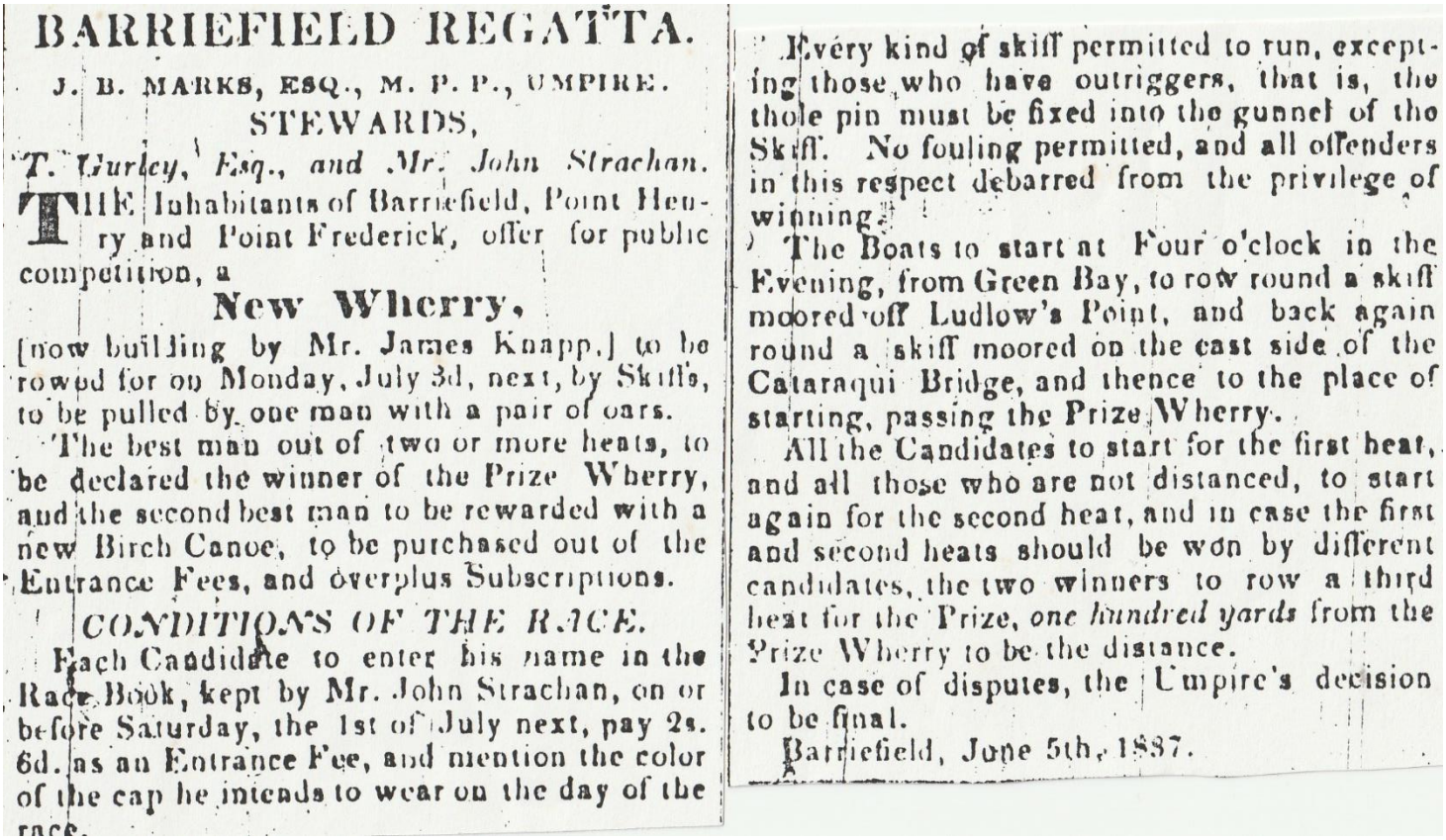
2) Jolly Boat: Simply put this is the wide beamed, high freeboard heavy, stable lifeboat still in use on most ships; the orange rescue boat generally used on modern ships is a Jolly Boat with

an enclosed watertight compartment and seats with seat belts. The older type was built with one-inch planks and oak ribs and was close to being indestructible and was so called for its tendency to push and shove "jolly" its way through the water. It was usually twenty feet long and designed for multiple rowers.

3) Wherry: A very lightly built craft made with sawn frames, a shallow draught and little freeboard. This was the sports car of rowing and sailing boats, fast and fun but not very practical. It was easy to attach a mast so it could be sailed.

The measure of any boat is how well it performs in rough water. Jolly boats were too heavy and slow and were falling out of favour as pleasure boats by the 1850's (although they retained their commercial and military application as lifeboats). Knapp still advertised them in 1857 but no longer by the 1870's. The open wherry was evolving into the decked racing canoe. Regular canoes were light and easy to carry but couldn't really be rowed. The skiff took shape as an amalgam of canoe and wherry, with solid gunwales, the ribs of a canoe although using a square hardwood, rather than a strip of cedar) over longitudinal planks fastened in the old Viking longboat lapstrake style. There was more freeboard, which made it safer in the water. It would move quickly when rowed but it was heavier than a canoe. It could be carried, but not comfortably and tended to have an outer keel and outside stringers to protect the planks when it would invariably be dragged up on a beach, more often than not on rocks. Once the basic skiff had been designed, it was copied endlessly. Once you knew how it was cheap to make, cheap to buy (in the 1880's it could be had for as little as $16, affordable for a workingman making $300 a year). Tens of thousands were built. Many hundreds still survive to this day. You can still have one made from scratch, although these days that will cost you about $10,000.

In the 1830's Kingston was developing a strong interest in leisure and sporting activities. Boating was central to this, and rowing was considered the perfect competitive activity. The old class structures of England, while still extant in Upper Canada were moderating. Unlike many sports, rowing was open to everybody, regardless of class, position, or wealth. The champion was the rower who was the best athlete, not the rower who had the best connections. This took time to change. Up until the 1830's the Long Island Rowing club, comprised primarily of local businessmen and gentlemen had dominated the local rowing regattas. Knapp had been building boats for five years when he was contacted by sponsors of a rowing regatta to build a wherry for the regatta race winner.



BARRIEFIELD REGATTA.

J. B. MARKS, ESQ., M. P. P., UMPIRE.

STEWARDS,

T. Hurley, Esq., and Mr. John Strachan.

THE Inhabitants of Barriefield, Point Henry and Point Frederick, offer for public competition, a

New Wherry,

[now building by Mr. James Knapp,] to be rowed for on Monday, July 3d, next, by Skiffs, to be pulled by one man with a pair of oars.

The best man out of two or more heats, to be declared the winner of the Prize Wherry, and the second best man to be rewarded with a new Birch Canoe, to be purchased out of the Entrance Fees, and overplus Subscriptions.

CONDITIONS OF THE RACE.

Each Candidate to enter his name in the Race Book, kept by Mr. John Strachan, on or before Saturday, the 1st of July next, pay 2s. 6d. as an Entrance Fee, and mention the color of the cap he intends to wear on the day of the race.

Every kind of skiff permitted to run, excepting those who have outriggers, that is, the thole pin must be fixed into the gunnel of the Skiff. No fouling permitted, and all offenders in this respect debarred from the privilege of winning.

The Boats to start at Four o'clock in the Evening, from Green Bay, to row round a skiff moored off Ludlow's Point, and back again round a skiff moored on the east side of the Cataraqui Bridge, and thence to the place of starting, passing the Prize Wherry.

All the Candidates to start for the first heat, and all those who are not distanced, to start again for the second heat, and in case the first and second heats should be won by different candidates, the two winners to row a third heat for the Prize, *one hundred yards* from the Prize Wherry to be the distance.

In case of disputes, the Umpire's decision to be final.

Barriefield, June 5th, 1837.

The regatta was to be held at 4 pm on Monday July 3, 1837. There were some exclusion issues- entrants had to pay an entrance fee of 2 shillings 7 pence, have a boat, and be there by the early afternoon, not an easy thing to do for workman whose day usually finished at 6 or 7pm. The entrance fee wasn't peanuts either, for a workingman. You had to have a boat, a fast enough boat to compete, which meant a light skiff, or you had to rent one; again more business for Mr. Knapp. There would be at least two heats, and a tie breaking third heat if necessary. The regatta was not new and had been going on for the last 15 years, and each year had been won by Mr. James Eccles. Eccles was a prominent figure in the community but due to health problems had bowed out. The dark horse in the race was a 22-year-old tailor from Barriefield named James Medley. Medley had Mr. Knapp slap a rowing shell together for him ("a slight thing, knocked together in a hurry") probably little more than a few thin boards and frames and a crossbar seat (thwart). The thwart cracked when Medley sat on it at the beginning of the race, but he still won sitting on the remaining splinters, breaking the dominance of the establishment rowers. "Will you stay beaten in this way," prodded the Kingston Whig reporter "and by a tailor too!" Indeed, in the future, successful athletes will more often be from working class and trade backgrounds, rather than the gentry. Medley had never rowed before the race. Perhaps inspired, he pursued a second trade as a fisherman. In 1859 he was still out on the lake when he was caught in a squall.

Three weeks later the wreckage of his fishing boat washed ashore on Prince Edward County Island, fifty miles away. His body was never found.

There was a boating boom in Kingston in the 1840's. Boats provided a means of sport and relaxation for both the soldiers at Fort Henry and the civilians in Kingston. Green Bay and Green Point became the axis of the mini-industry and the Knapps found themselves facing competition. The founder James Knapp Sr. died in 1850 and James Jr. took over the Green Bay yard and brother William bought an old house (Kingston's oldest house, which had been a trading post in 1787) on the west (Kingston) side of the river and set up his own boatbuilding and boat rental business, hoping to catch city customers that would otherwise pay the penny to take the ferry (actually a fleet of rowboats owned by a publicly traded venture known as the Barriefield Boat Company, you paid, you rowed) over to Barriefield and deal with James. It worked. By 1871, William built 6 boats worth $500 and repaired 10 more for a total of $260. In addition he also had the lucrative boat livery. James Jr. also built 6 boats, but smaller for a total of $300 and did repairs on 10 for $200.

Here is a report for the boat building industry for the Town of Barriefield in 1871:

1871 RETURN OF INDUSTRIAL ESTABLISHMENTS

BOAT BUILDING ESTABLISHMENT WILLIAM KNAPP
OPERATES ALL YEAR

MEN EMPLOYED	2	WAGES $600
BOATS BUILT	6	VALUE $600
BOATS REPAIRED	10	VALUE $250

JOINER AND BOAT BUILDING SHOP - JACOB SHARMAN
OPERATES ALL YEAR

MEN EMPLOYED	ONE MAN ONE BOY	WAGES $320
BOATS BUILT	3	VALUE $260
REPAIR BOATS		VALUE $250

BOAT BUILDING SHOP JAMES KNAPP
OPERATES ALL YEAR

MEN EMPLOYED	ONE MAN	WAGES $300
BOATS BUILT	6	VALUE $260
REPAIR BOATS	10	VALUE $250

BOAT BUILDING ESTABLISHMENT ALEX TISDALE
OPERATES ALL YEAR

MEN EMPLOYED ONE MAN WAGES $400

BOATS BUILT 6 VALUE $600
BOATS REPAIRED 10 VALUE $250

ANNUAL TOTAL PRODUCTION
23 BOATS BUILT VALUE $1,340
37 BOATS REPAIRED VALUE $850

AVERAGE VALUE PER BOAT

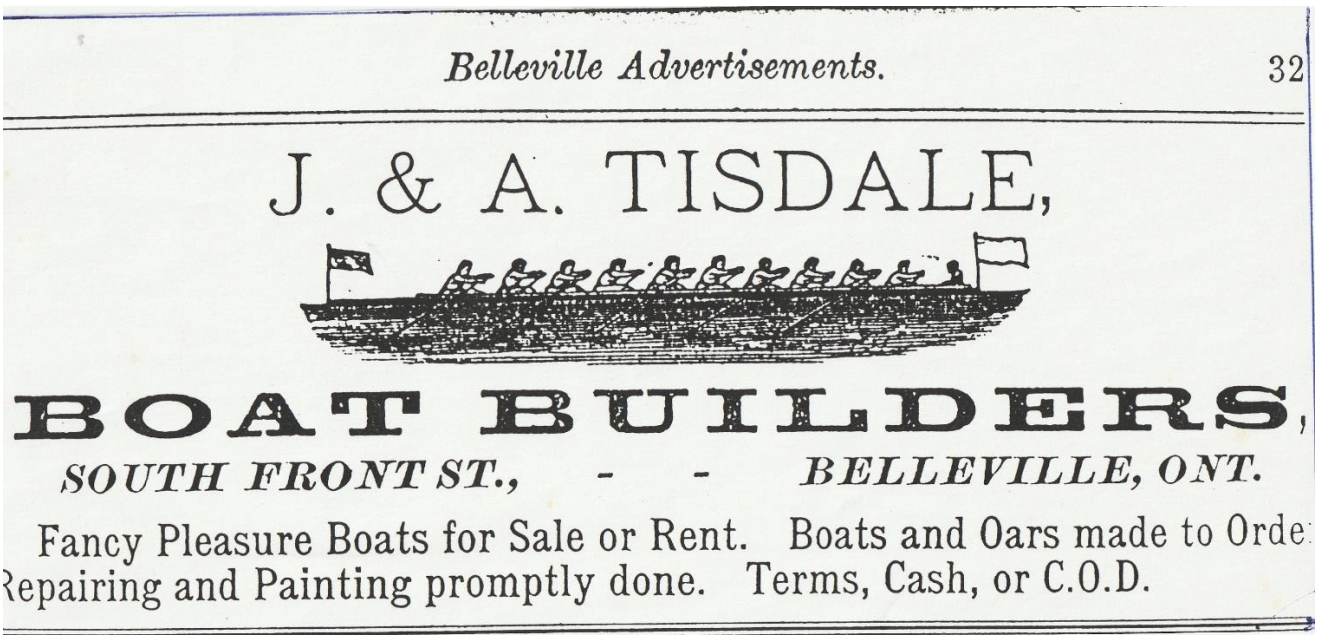
WILLIAM KNAPP	$83
JACOB SHARMAN	$87
JAMES KNAPP	$50
ALEX TISDALE	$35

NUMBER OF MEN EMPLOYED 9 MEN 1 BOY

And this was where most of the boat building activity was. It just goes to show how very small the industry was in the post Confederation years, still only a few craft for personal use. The boy (most likely a son of the owner) was an apprentice or simply to do fetch and clean-up work or basic labour, probably for only a few pennies an hour.

O'Gorman started in Kingston, eventually moving to Ottawa.

Other boat builders began to show up in Green Bay. The LaChapelle's, Abraham, Louis, William, and John arrived in the 1840's as did Jacob Sharman and Alex Tisdale. Only four builders made the 1871 list, the Knapp brothers, Sharman, and Tisdale. The LaChapelle's did not stay long. They had started building boats in 1861 but apparently not prospering and after five years they left Green Bay. John set up in the town of Brockville, where he was much more successful. Tisdale tired of the competition too and moved to Belleville shortly after and did well- at least boat, shown in his Belleville advertisements were much larger than the boats shown in the Barriefield era ads. David O'Gorman and his son Michael set up in Barriefield during the boom years of the 1850's. After his father's death in 1861 Michael, like William Knapp, decided to relocate across the river in the city. So did the younger Sharman who quit Barriefield in the 1860's and moved to Simcoe Street. Simcoe Street in Kingston became a kind of rowboat row, with several builders almost elbow to elbow operating the building and rental facilities. Micheal O'Gorman ultimately had enough of the Kingston scene and quit the town permanently in the 1870's and moved to the next rowboat boom town, Ottawa. Henry Aykroyd and his son, Frank, started building boats in Barriefield in 1866 and left later that year for Toronto, although they found Toronto was already pretty competitive as well, still, they stuck it out. Aykroyd's lasted until 1943.



Some moved away to other port towns.

Some of the more prominent steam and sailing ship builders such as William Robinson advertised pleasure steam yachts and skiffs. The really big-time ship builders, such as Henry Roney, George Ault and the biggest and richest of them all, Dexter Calvin, didn't advertise small boat work, perhaps this was too penny ante for them.

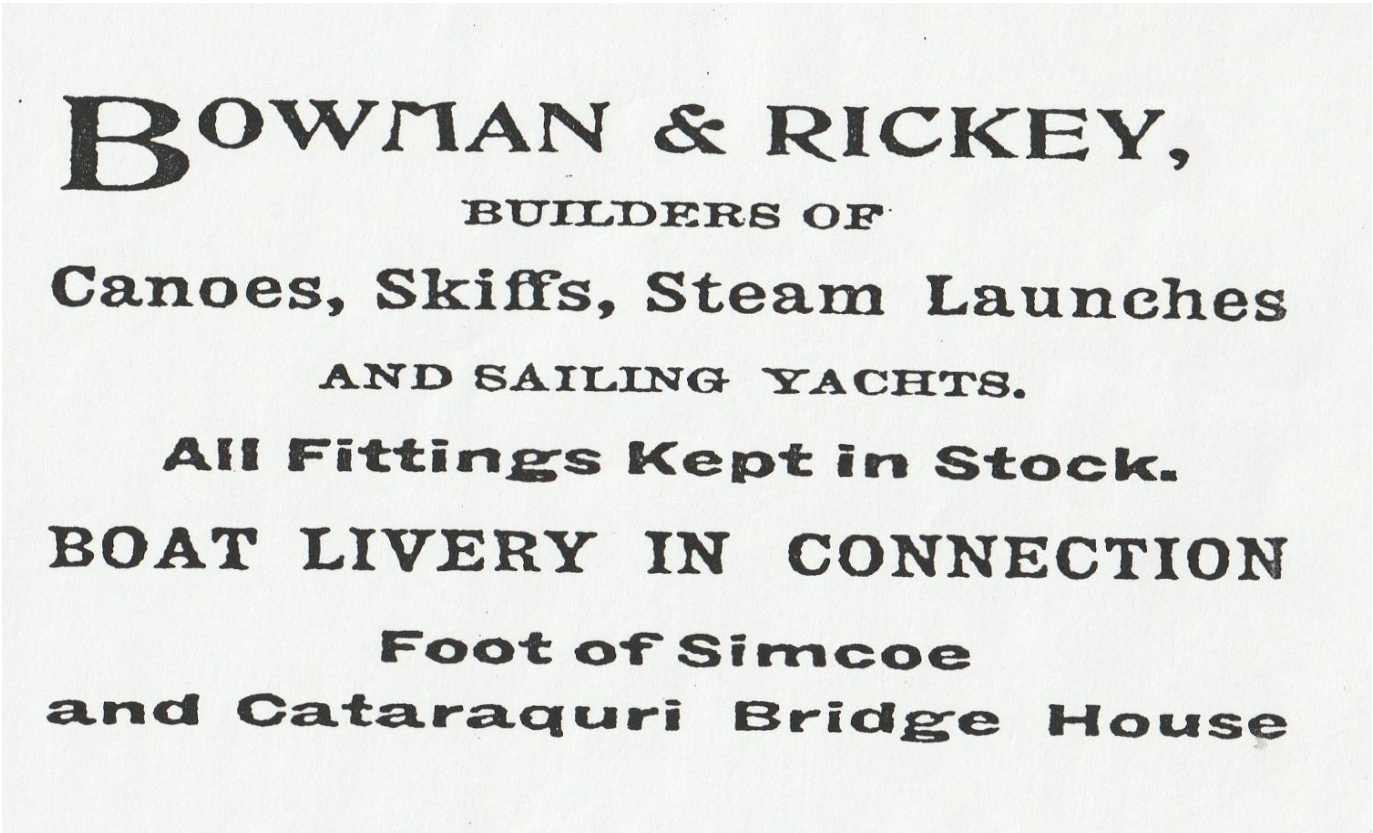
Boat building at the time was basic. Metal fittings were rare. Chocks, cleats, and other fittings which would have been later made of bronze or cast iron were frequently made of local hardwoods.

* ********** *

Bowman's marine yard, Barriefield.

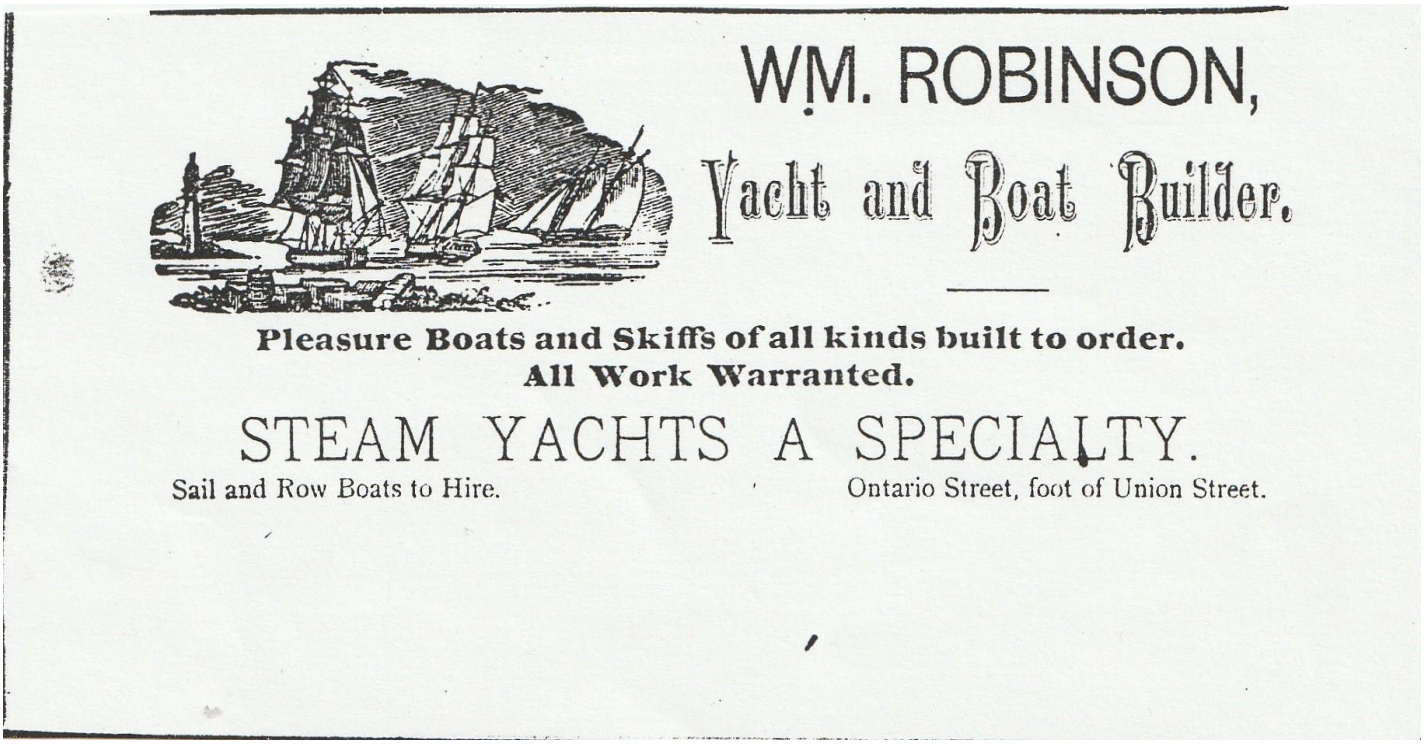
Boat builders had to make a living. Just what kind of business was this? It was typical of small businesses, then and now. Sometimes the senior employees made more than the owner. They were usually three-man operations, including the owner-manager and two hired men or one hired man and a son. James Knapp Jr. was, like most small businessmen, was cagey about giving away precise details of his business. In 1871, he sold 6 boats for a total of $500 and

performed repairs, mostly bottom work, on ten more for an additional $260. He had two men working for him, both making $300 a year. These were craftsmen but their pay was at the low end of the skilled labor scale which averaged between 12.5 cents to 17.5 cents per hour. A workday was ten hours a day Monday to Friday and only nine hours on Saturday. The reasons for the hour off is still not known. Assuming 59 hours work week with no summer vacation and only Sundays and Holidays off this would suggest weekly earnings of $5.75 or 9.75 cents an hour. Alex Tisdale had one man working for him who was making $400 a year or 13 cents an hour. It wasn't much but at least you kept what you were paid, and there wasn't the endless chipping of deductions so common to modern pay slips. There wasn't much overhead. Waste wood heated the stove, and any water needed came from the well or the river. The wood was mostly cedar and cheaper basswood for planking and white oak for ribs and girders. In many cases boats of this era used cedar in the ribs work as well. All the woods were found and cut locally and were run through the planing mill out on Green Point. The boats still needed clench nails, cotton duck for sails, various metal fittings for the tiller, chocks, and cleats. There was no insurance, except for the really large operations. If your business burned you were out of business until you rebuilt. If you became sick or broke your arm, you stayed home and did not earn a salary until you were able to return to work.



The Rickey brothers eventually left for Toronto, even though it was just as competitive as Kingston

There were other costs. Sales taxes had been introduced in Ontario and applied a 6% levy on everything that was sold. There were property taxes to consider, as the Knapps owned the property that both the shop and their house were situated on. This may have been minimal. Unlike today, waterfront property in 1871 had little value outside of commercial purposes. No one wanted to live near water at that time as it served basically as a sewer system and garbage collector-anything dumped in it would eventually be flushed into Lake Ontario. It was too close to bugs, pond scum and bad "vapours" that most non-medical people still believed to cause disease.



By the 1880's, the builders were starting to add steam boats.

So with total sales and service revenue of $760 in 1871, and salaries of $600, and probably other expenses of what $50-possibly more left a scant net profit of $110 for Mr. Knapp or 1/3 of his workman's salary. They had other revenues, however, from the livery or boat rental business and Knapp also sold oars, oarlocks, paddles, sculls, I expect he continued to captain commercial vessels as well. In addition to their boatbuilding ventures, Jacob Sharman ran a small general store and did general carpentry work and Alex Tisdale was a fisherman. Still, it was a step up for Tisdale and Sharman, both who were listed as labourers in the 1857 census, the bottom of the employment ladder.

A Green Bay Barriefield built skiff

20 pioneer boatbuilders had started in Green Bay. The boom in recreational rowing and sailing tailed off by the 1870's. By 1881, five builders were left, the durable Knapps, Jacob Sharman (Thomas was listed as a Barriefield builder, but he was working in Kingston) Alex's son Louis Tisdale and two new ones, John Johnston, and Charles Bowman. Andrew McCorkill appeared in the 1880's specializing in building competitive rowing shells.

By 1897, Louis Sharman went to work for Davis Dry Dock. By 1907, only the Knapps were still building boats in Green Bay. The 1907 photograph tells us a great deal about the Knapp operation. Not much had changed since 1871 and probably not much more than 1832. James Knapp and Son was Ontario's first commercial pleasure boat builder, but seventy years they had been surpassed by aggressive and successful operations such the rising Gilbert boats in Brockville, Dey Brothers in Ottawa, Ditchburn in Gravenhurst, Gidley's in Orillia and the booming aggregate of Bastien, Jutten and many others in Hamilton Bay. The Peterborough builders, which had begun their operations shortly after Green Bay were now substantial operations, turning out hundreds of boats a year. Why was this?

The Green Bay builders were all tradesmen, labourers, or mariners. They were working men in a class-conscious town, dominated by the military and business leaders. The Peterborough builders were all entrepreneurs and had made their money in other ventures and had access to capital and experience in dealing with banks and financiers. The Green Bay builders were satisfied simply to put food on the table, a demanding task for Jacob Sharman, his son and the seven grandchildren all living in his house. Only the Knapps made any attempt to broaden their reputation, both James and son William set up displays at the Union Exhibition (precursor to the CNE).

The building shown in the photo is not the original 1832 workshop, which had been torn down and replaced. There were still two employees and the owner. Henry is standing in his vest between a sailboat (probably a sloop) and the shop, which maintains the same business trade name of James Knapp and Son. The actual 1880-1907 shop is still around. It was eventually moved off the site and set up out on the water as the boathouse and boat storage shop is larger than it looks in the picture. The shop was about 30 X 30 feet, with a storage shed for canoes at the back. There was also storage for smaller boats in the second story, where they could be raised and lowered on a rail, which was apparently added later. His son Henry Jr, as well as the hired man are posing awkwardly with their block planes ready to shape the sailboat’s mast. Everyone had to freeze during the camera’s several second exposure time. There’s no sign of a propellor shaft for the boat, although it would be relatively easy to add one later. The boom or possibly the spar lies on the ground next to the base of the boat cradle.

Knapp motor launches about 1905, (and a sail dinghy). Launches are awaiting an engine installation. Overexposed boat at bottom looks tubby, but I'll bet it was pretty stable out on rough Lake Ontario, where it would most likely be used.

Knapp was already building motor launches as well and he had three completed ones in the yard, as well the small sailboat. All of them were built with lapstrake construction. Shapes and sizes varied from the sleek and handsome Quo Vadis in the centre to the deep and heavily built craft overexposed in the foreground of the picture. The white boat is probably a commercial boat designed for use in the rough waters of Lake Ontario. Although they appear almost finished none of them have hardware, steering equipment, engines, shafts, or seats installed yet.

1910 ad in Rod and Gun in Canada. The typical Knapp launch now was updated and looked pretty much like everyone else's.

By 1910, Knapp had abandoned the double ended style of boats in favour of the more modern pencil boat style offering a standard 25 foot by 4-foot 6-inch fast family launch with a 12 hp gas engine (probably a St. Lawrence). The ad, taken from the 1912 copy of Rod and Gun in Canada also referred the Jas. Knapp and Sons as the "Leading Launch and Boat Establishment in the Dominion, established 1850." This was certainly true in 1850, by 1912, it was well far behind Gidley, Gilbert, Jutten and Bastien in Hamilton and Ditchburn up on Lake Muskoka. But it stayed in business all through the 1920's.

With William's passing in 1885 his 20-year-old son, Adelbert Cecil Knapp took over the west side boat livery and boat building and repair shop. He seemed to be a solid enough character and ran the business well enough for the next 44 years. His personality was another matter. Few locals who knew the man when he was alive had anything good to say about him. By their accounts he was an abrasive, pompous and rather combative man with my way or the highway attitude to life. He wouldn't touch any of the building repair work or help with the livery boats. All that was left to his workmen, in contrast to his cousin on the east side, who was proud of his hands-on reputation. A. C. busied himself with get-rich quick plans, none of which panned out. In spite of his ambitions he didn't succeed or fail in any notable way and left his wife a respectable estate of $9,800 on his passing in 1929.

Chapter 3 --- The Peterborough Gang 1849-1910 Herald, Stephenson, Gordon, Strickland, Rogers

A section of plant workers and managers pose in front of a canoe, mid 1920's.

Taking a trip around Rideau Lake in the late 1960's you were likely to see a Peterborough or Lakefield boat at almost every cottage, either in a boathouse, tied up to the dock or up on the shore. Over 100,000 canoes, outboard boats, some inboards and even a few steam cruisers came out of the Peterborough workshops. Thousands survive to this day. Many have been restored and are still in use.

There were several boat builders in Peterborough operating continuously from the 1850's to the 1960's. They competed against each other (Wm. English and Ontario Canoe), sued each other

(Peterborough v. Chestnut), bought each other out, and occasionally went bankrupt together (Peterborough and Canadian Canoe). The best known of the builders were the Canadian Canoe Co. , Lakefield, and Peterborough Canoe Co. If the tradition of the Green Bay builders was straight from the British Isles, the Peterborough gang were the great adaptors of the native canoe. It was the canoe they adapted, an Anglicized strip plank version of the birchbark canoe that put Canadians and Americans on the water.

Unlike Kingston, which had been founded with military money and came with a ready-made gentry, officer and business class, Peterborough was founded by settlers and entrepreneurs. They began arriving in the 1820's and some did well in the lumber business, funneling logs out of the boreal forest in what is now Algonquin Park and down to sawmills in Peterborough. In the pioneer years up to the 1850's, most settlers were simply happy to survive and build up their farms and families. By the mid 1850's, one the villages and settlements had become established, and there was more free time, some people began to take vacations to fish and hunt. As the local lakes became crowded they began to push into the lakes in the northwest shield areas of Ontario. A few adventurers began to set up camps in the remote lakes north of Peterborough and Orillia. The only way to get to these lakes was by canoe and the demand for canoes begat a canoe building business. The canoe was the best way to get around. It was light, solid, and easy to carry since portaging was a necessity. The rowing skiffs and the lake boats built in Kingston and Green Bay were too heavy to be much use in the bush. White settlers had been copying the birchbark canoe for years. There is a surviving canoe from the loyalist era around 1790 and it is probably the oldest surviving boat built in Ontario, sadly there is no builder's mark.

In 1846 the first organized canoe race (in this case true canoes- the regattas in Kingston had been going since 1822 but featured British pulling boats only) in Upper Canada was held on Rice Lake. There were two classes of canoes, naturally birchbark and dugout. The battle was between the Rice Lake locals and the Lakefield boys. A Lakefield boy named George Strickland had come down to watch and was inspired, not by the birchbark but by the possibilities of the dugouts. He went home and began work on a new kind of dugout. Strickland was a master craftsman already and he cut out the hull to an amazing thickness (thinness would more apt!) of 1/2 inch. The way to do this would have been to carve the outside of the hull, rough cut out the inside and then using a pair of calipers set to 1/2" methodically scrape down the interior checking the thickness as you work your way to the ends. He christened this unique boat the "Shooting Star". Strickland's Shooting Star dominated the Rice Lake Regatta dugout class for the next ten years. I suspect Shooting Star was a beloved racing toy, not a practical boat for fishing or hunting. Strickland probably had a much tougher dugout boat he could bang around

on rough waters and shoreline rocks.

In 1857 two young carpenters named John Stephenson and Tom Gordon were hit by a different inspiration. Why bother with the fiddly birchbark canoes or the sleek but still too heavy dugouts. Why not apply the British carvel planking method to building canoes? One writer (Ted Moores) suggested they started by bending the ribs over a dugout canoe. It's possible but they would have had to find a way of getting the dugout away from the new hull once the planks were nailed on. More likely they simply took the lines off of the fastest canoes and set to work building six or seven hull molds, brackets which served as rib forms that planks could be bent over, install the ribs, and then finally remove the forms once the hull is intact. The planks were made of the same material preferred for the dugouts: basswood. Basswood is a broadleaf tree, but like birch it's one of the softer of the deciduous or hardwoods. Thus the basswood board canoe was born. There were three wide 1/4 planks running the length of the hull on the sides and four more on the bottom. The bottom and side planks had to be fitted to a curve, but they were relatively straight. The real challenge was the chine plank, which is the plank that has to curve where the sides curve into the bottom. Even with a relatively gentle curve this plank still bends, not only from end to end but from side to side. However, cutting basswood out of a freshly fallen and wet tree, planing down on the spot to 1/4 " thickness and then chucking it into the steam box for maybe 5 minutes at the most, the resulting board would have the consistency of wet cardboard and could be easily pulled over the demanding frame curves.

Thomas Gordon Canoes strange ad, 1887, no canoes pictured but a sidewheeler on the ole Mississippi. I meant the American river, but at this point there were already steamboats on the Madawaska area and the Upper Ottawa, built by Gillies Bros. of Arnprior.

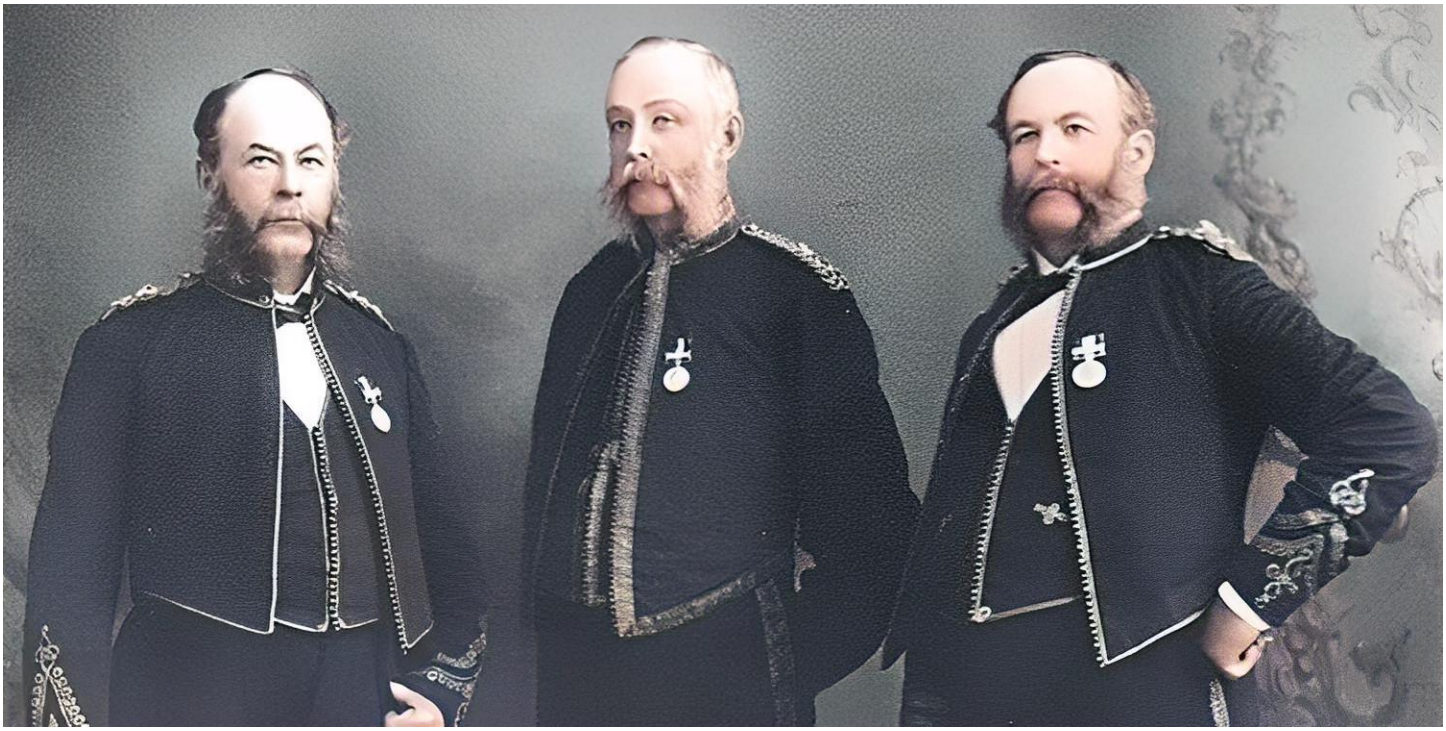
The first white man's canoe builder was Stephenson, so he technically held the trademark and the rights in the colonial world of patents and intellectual property law. Handily, his actual money-making business was wood planing, and he was a partner in the Stephenson and Craigie Planing Mill, so he had a means to supply planed planks and also to do the fine bead and cove work needed to allow the planks to lock together. It's possible he inserted a cotton string between the bead-and-cove of the fitted planks to help lock out the water and cut down on the leaks- a time-honored method of sealing small boat hulls. He already had the saws, planers, woodworking tools and certainly the lumber already on hand and it provided a higher-level use for the planing mill products, and they could plane down a basswood log and then use it to plank a canoe. The first plant was a relatively small affair in the village of Little Lake but in the 1860's Stephenson built a much larger three-story factory in the town of Ashburnham. This now incorporated both the planing operation and the boat works. The boat division never accounted for much of the enterprise. Only Stephenson and his son worked on the canoes. In actuality it was Tom Gordon who was the more aggressive in developing the canoe business. Gordon built up a dedicated canoe factory and invested in expensive trips overseas to the British Empire Exhibition in London where he was awarded the Prince of Wales Medal for Craftsmanship. Recognition like this from the Mother Country meant a lot and Gordon was soon an established name in the canoe business.

Other builders were now entering the game. The original dugout expert, George Strickland had set up his own business in 1862 as Strickland Canoe Co. It appears he went over to the Stephenson method as well, perhaps he realized the relative ease of the basswood board method. The Lakefield gang had prospered in building the basswood board style canoe, much the same as their Peterborough rivals.

One of the most unique designs came from the Herald & McBride Canoe Co. The design, patented by Daniel Herald in 1871, consisted of a primitive form of plywood. There was an outer layer of planking, running lengthwise over an inner layer running from side to side. In between the planks were bedded with a sheet of cotton covered with white lead putty in between. This style of design became the standard bottom design for the planing hull runabouts developed in the 1920's by John Hacker and Chris Smith, although by that time Herald's patent

had long since expired. No ribs or stringers were needed, and the inside was completely smooth, and the canoe hull was remarkably strong. Some of the larger canoes could carry 2-3 tons of cargo, i.e. two paddlers, camping equipment, provisions, beer, guns and one dead moose. The problem was the double plank design, which was a harbor for dry rot. As long as the Canoe was properly stored after use, i.e. under cover and away from the elements, it would last, otherwise once the rot got in, the construction made repairs almost impossible, and it was short journey to the fireplace. After Daniel Herald's death in 1890, his younger brothers continued the operation as the Herald Brothers- Builders of Rice Lake Boats. Eventually the company became best known as the Rice Lake Canoe Co. A Herald Canoe from the 1850's is on display at the Museum of Science and Technology in Ottawa.

As Gordon, Strickland, and Herald all prospered and became powers in this industry Stephenson had not grown much by comparison. In 1880 he sold his designs to another Peterborough businessman, J.Z. Rogers who wanted to add another business to his planing mill, which became the Ontario Canoe Co. Ltd.



Three Colonels, J. Z. Rogers left, father Richard, and brother George, right.

Peterborough Boats, as we know it, was the creation of James Zacheus (J.Z.) Rogers, with the backing of William H. Hill and Elihu Edwards. Hill was a general (all lines) insurance agent and Edwards was a barrister, both were looking for an investment, none had any background in

the boat business. The Rogers family had immigrated to Canada from England, and they went into the lumber business. J. Z., his brother George and their father were all active militia officers; all three rose to the rank of Colonel. Unlike many business "colonels" Rogers was the real article and eventually reached the rank of Regimental Commanding Officer of his unit, known as the Peterborough Rangers. The Rangers were an amalgamation of several local militia companies and in 1900 was given the formal registration as the 57th Infantry Regiment. J. Z.'s first brush with combat was at the age of 24 in 1866, coming up against the unexpected incursion of the Fenian society onto Canadian soil. The Fenian raids are mostly treated lightly by historians, but they were no joke; most were Irish immigrants with combat experience in the Union Army during the Civil War; the plan was to collapse the very weak Canadian militia and put pressure on England to leave Ireland. Poorly trained and with little ammunition and no supply infrastructure, several hundred Canadian militia soldiers faced off against the somewhat disorganized but battle experienced Fenians at Lime Ridge near Port Colborne. After a short firefight the Canadians retreated, but the Fenians did not press their advantage (they had not planned that far ahead) and the whole plan eventually fizzled, although Rogers was called back from time to time when they returned to make trouble. Rogers found more success as a businessman, opening a planing mill and then venturing into the small boat business.

In the 1880's Peterborough was a town with 4500 residents by the 1886 census but growing rapidly. Generally the town of Peterborough at the time was divided from the town of Ashburnham, across the Otonabee River. The two towns were incorporated into the larger city in 1905. It aggressively pursued manufacturing industries and became a successful mid-sized industrial hub, RCA, General Electric, Johnson Motors, and then OMC, Canadian Watercraft among others, at least until the 1970's, when the various plants began to shut down, culminating in the widespread contraction in the 1990's after the introduction of free trade, and the resulting closure of the Canadian tariff-based manufacturing subsidiaries. Production went back to the U. S. for a few years, then even these operations were closed, and the assembly work sent overseas. Television Road is still there, the only TV sets are in people's houses.

In 1880, having acquired the rights to the canoe and skiff designs of John Stephenson and took over the operations of the Ashburnham plant. Rogers had big plans for the Stephenson canoe line. By 1883, he and his business partner John Burnham formed the Ontario Canoe Co. Along with the basic basswood board style , the next and more expensive model was the strip hull, a new technique where thin interlocking strips of either cedar or basswood were used for the boat skin. Two styles were offered, one where the strips were bent perpendicular to the hull, running from gunwale to gunwale and the more recognizable stern to bow method. There were now six sizes offered, from small 10-foot hunting canoes to full 30-foot war canoes, which were the mainstay of the rowing clubs popping up in almost every lakeside town in Ontario. The war canoes, which the author became familiar with at summer camp in early 1970‘s were big and heavy beasts that could seat sixteen paddlers and a steersman (one of the camp counselors). The steersman sat at the stern, where he could call out the pace and watch for “lily dippers”. The two person (or in our case one counsellor and three campers) was 14 feet long and about 120 pounds, but they could be portaged with two of us, or in one case, the most buff of the counsellors carried one solo, bug eyed and red faced after several hundred yards to the next water launch point.

The 30-foot war canoe. Circa 1900.

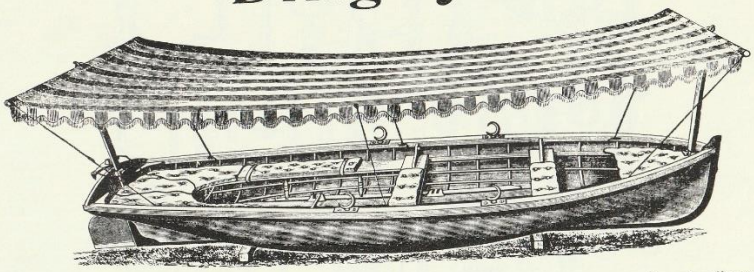
The success of the Peterborough builders in the 1870's and 1880's was also benefiting from the fact that Indians were "in". Now that the Indigenous peoples had been pushed onto reservations, (white) people could afford to romanticize them. Indian (I'm using the term of the period) lore and culture, or at least a sort of mushed-together version of it came to symbolize the outdoors, and all that was not urban and civilized. This image, accurate or not began showing up on every product imaginable, from board games to cigar boxes to match packs to boats. The Lakefield Boats insignia shows a Cherokee style headdress for a region that had been dominated by the Mississauga's. It's worth noting that the First Nations were still building canoes for their own use and did so up until the 1950's once outboards and second-hand outboard boats became widely available. A few, such as Johnny Bay went off reserve and became a well-known canoe builder, selling his products, and also an extensive line of furniture to the local white cottagers.

Our Different Styles of "Nassau" Canoes.

THE above cut represents one style of our "Nassau" or "Open Canoes," and you will observe that they have the shortest decking at the ends, and consequently the largest open space of any of our build of canoes. For this reason they are in more demand than either of the other styles, as they can be used for almost any kind of sport or work for which canoes are intended, and for Camping, Fishing, Hunting, Shooting, or Surveying, where large loads have frequently to be packed away, and as much room as can be had is required, these canoes have no equal.

They are fitted with mast ring and step at the Bow, and are frequently used with a Sail, but when persons can do with a little less open space, we recommend some of our other make, if it is intended to do much sailing.

Dinghys.

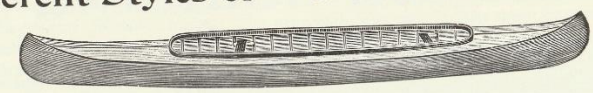


AS we have had several inquiries from owners of yachts for something to use as a "tender," we are now building Dinghys in two qualities, as follows: The varnished quality is built of select Cedar, nailed with Copper Nails and Brass Screws. Those painted are built of the same quality of Cedar, but are nailed with Tinned or Galvanized Iron Nails and Iron Screws Both qualities can be built either "carvel" or "clinker" style and fitted with standing keel, or if preferred, with plate or folding centreboard. The prices quoted for the two smaller sizes include one pair of oars and rowlocks, also rudder; while the price for the larger size includes two pair of oars and rowlocks, also rudder.

No.	Length.	Beam.	Depth.	Painted.	Varnished.
250	9½ ft.	4 ft. 2 in.	14 inches.	$55 00	$65 00
251	10½ ft.	4 ft. 2 in.	14 "	60 00	70 00
252	12 ft.	4 ft. 2 in.	14 "	70 00	80 00

The following are extras, namely:—Awnings, $10.00; Cushions, $5.00 and over, according to material and finish; Centreboards, $5.00 and over.

Our Different Styles of "Otonabee" Canoes.



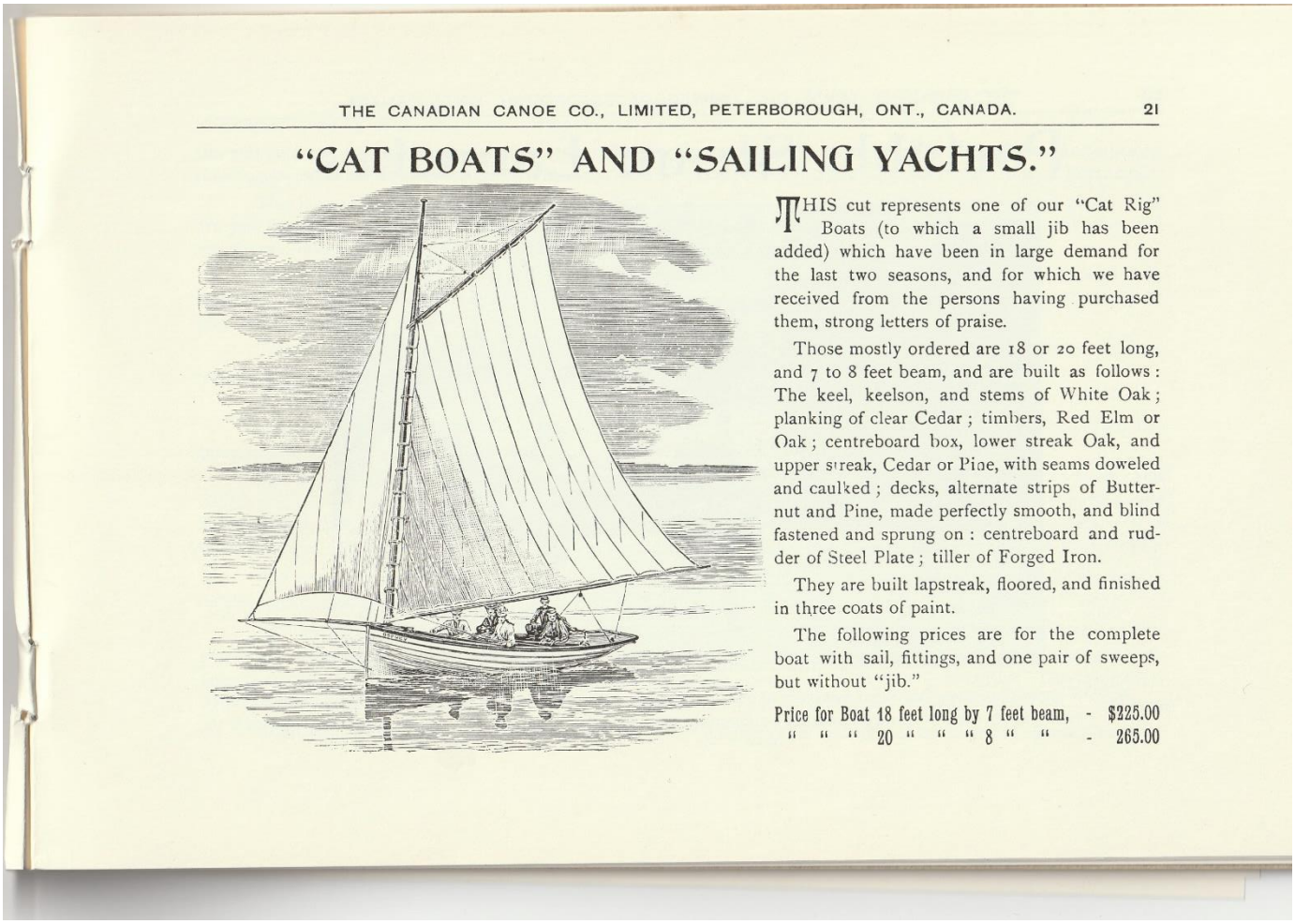
THIS Canoe is decked 3 feet at each end and 3 inches along the sides, thus leaving a long and wide cock-pit. A combing stands up from the decking all around the cock-pit about 1¼ inches high, and is finished rounding at each end. These Canoes can be built with standing keel, or for folding or plate centreboard. Movable air tanks, and also rudder with deck or foot steering gear, can be added when required. Our prices are without keel, centreboard or rudder, and decked 3 feet at each end, and 3 inches along each side.

THE PLANKING, and all the material used in their construction, as also the finish inside and out, is exactly similar for any of the following qualities to that described for the same quality of our "Nassau" make. The only difference between any size and quality of this make, and the same size and quality of our "Nassau" make, is as regards the decking at the ends and sides.

PRICE LIST OF "OTONABEE" CANOES.

EACH PRICE INCLUDES TWO PADDLES.

No.	Length.	Breadth.	Depth.	A Varnished Cedar and Butternut Strips.	B Varnished Cedar Rib.	C Varnished Cedar Strips	D Varnished Basswood Strips.	E Painted Basswood Strips.	F Varnished Basswood Boards	G Painted Basswood Boards.
41	14 ft.	26 ins.	9 ins.	$53 00	$50 00	$49 00	$47 00	$44 00	$40 00	$34 00
42	14½ "	27 "	9½ "	55 00	52 00	50 00	48 00	45 00	41 00	35 00
43	15 "	28 "	10 "	57 00	56 00	51 00	49 00	46 00	42 00	36 00
44	15½ "	29½ "	10½ "	59 00	60 00	52 00	50 00	47 00	43 00	37 00
45	16 "	31 "	11 "	61 00	64 00	54 00	52 00	49 00	45 00	38 00
46	16½ "	33 "	11½ "	63 00	68 00	56 00	54 00	51 00	47 00	40 00



THE CANADIAN CANOE CO., LIMITED, PETERBOROUGH, ONT., CANADA. 21

"CAT BOATS" AND "SAILING YACHTS."

THIS cut represents one of our "Cat Rig" Boats (to which a small jib has been added) which have been in large demand for the last two seasons, and for which we have received from the persons having purchased them, strong letters of praise.

Those mostly ordered are 18 or 20 feet long, and 7 to 8 feet beam, and are built as follows: The keel, keelson, and stems of White Oak; planking of clear Cedar; timbers, Red Elm or Oak; centreboard box, lower streak Oak, and upper streak, Cedar or Pine, with seams doweled and caulked; decks, alternate strips of Butternut and Pine, made perfectly smooth, and blind fastened and sprung on: centreboard and rudder of Steel Plate; tiller of Forged Iron.

They are built lapstreak, floored, and finished in three coats of paint.

The following prices are for the complete boat with sail, fittings, and one pair of sweeps, but without "jib."

Price for Boat 18 feet long by 7 feet beam, - $225.00
" " " 20 " " " 8 " " - 265.00

The Canadian Canoe Co. brochure from 1895; A little bit of everything.

Up until 1892, there were two canoe builders in Peterborough, William English, now owned by his son James with another son Samuel as works foreman, and Rogers' Ontario Canoe.

AUBURN.

Arseno Jas., works Auburn Woolen Mill, h Brown.
Billings Geo., laborer, Auburn Woolen Mill, h Brown.
Bowen Morris, pattern weaver, Auburn Woolen Mill, h Brown.
Carter Elijah, hames maker, h River Road.
Carter Alexander, fuller, Auburn Woolen Mill, bds E. Carter.
Cooper Wm., dyer, Auburn Woolen Mill, h Brown.
Coveney Stephen, brickmaker, M. Curtis & Sons, h Brown.
Coveney Stephen Jr., carder, J. M. Masson, boards Stephen Coveney, sr.
Coveney George, works M. Curtis & Sons, boards Stephen Coveney, sr.
Downing Joseph, works Brodie's Woolen Mill, h Lisborn.
Fischer Fred, laborer, h Brown
Fowlis Samuel, gentleman, h River Road.
Gaskins Stephen, stonemason, h Brown.
Gaskins Wm., stonemason, h Lisborn.
Godfrey John, gentleman h Lisborn.
Goule Alvin, laborer, h Lisborn.
Guerin Jos., laborer, h Brown.
Guerin Louis, works P. Hamilton, h Brown.
Hartley Wm., dresser, Auburn Woolen Mill, h Brown.
Hamilton Hon. Robt., gentleman, h River Road.
Hervie Daniel, dyer, Auburn Woollen Mill, h Brown
Johnston James, gentleman, h Lisborn.
Kemp Thos., miller, h Brown.
Kemp Henry, carder, J. M. Masson, h River Road
McIntyre Jas., works Auburn Woolen Mill, h River Road.
McQuade Thos., laborer, h Brown.
Meade Richard, gentleman, h Dunlop.
O'Donnell Michael, teamster, h River Road.
Phelan Peter, laborer, h Lisborn.
Pratley George, watchman, Auburn Woolen Mill, h River Road.
Ray Thos., dyer, J. M. Masson, h Brown.
Renton Ellen, (wid. James,) h Brown.
Scriber Robt., laborer, h Brown.
Stewart Jas., bookkeeper, Porter Bros., h Smith.
Turner Adam, dyer, Auburn Woolen Mill, h Brown
Vinnette Edward, sawyer, Geo. Hilliard, h Lisborn

The Ontario Canoe Co. prospered until a fire in 1892. The company or mostly the staff, split more or less in two. A new startup took over what was left of the business, which was little more than the knowledge and skill of the workmen, the physical assets had been incinerated. The Company was to be known as the Canadian Canoe Co. Limited. and set up at 439 Water Street, with A. R. Tebb, a partner in steam laundry Tebb and Sharpe, as president and Felix Brownscombe as secretary-treasurer. Hill and Edwards made an offer to Rogers; come over to manage the new Peterborough Canoe startup, bring your boys from the old factory. Rogers ended up with a tiny 4% interest in the new company, but an executive salary and likely stock options. Per the directory, Hill was president, George A. Schofield secretary treasurer and Rogers as managing director. Hill was also now managing director of Central Ontario operations of Sun Life Assurance Co. at 400 Water, just up the street from Peterborough Canoe at 290 Water. By 1903 Hill was still two-timing as executive for both Sun Life and the boat plant, with Schofield gone Rogers took his place and was now both managing director and secretary treasurer. Edwards was a passive investor. Peterborough listed canoes and boats, but also furniture and lumber planing services, Rogers' old business.

Inside the Canadian Canoe factory, 1900's.

Perry Robert F, clk Lock Works h 451 Water

Pese John, mach Wm Hamilton h 15 Cedar

Peterborough Business College, Alex Blanchard C A Principal 368 & 370 Water (see adv)

Peterborough Canoe Co Ld, W H Hill Pres, Geo A Schofield Secy-Treas, J Z Rogers Mang Dir 290 Water (see adv)

Peterborough Carbon & Porcelean Co Ld, J W Taylor mngr 270 Townsend

Peterborough Hardware Co (Ld), R B McKee Pres, H Phelan V Pres, R H Fortye Secy, R S Davidson Treas 368 George & 140 Simcoe

Peterborough House, John Clancy Prop 189 Hunter

Peterborough Light & Power Co, T G Hazlett pres, T E Bradburn V Pres A Stephenson Secy, office 417 Water

Peterboro' Lock Mnfg Co, Jas Stevenson Pres, Jno Carnegie V Pres, Thos Brooks Mng Dir, F Adams Secy-Treas 198 Simcoe

Peterborough Music Co, Turner & Cunningham Props, Pianos, Sewing Machines, Music etc 404 George (see adv)

Peterborough Review (The), The Peterborough Review Printing & Publishing Co Ld pubs 164-166 Hunter (see adv)

Peterborough Review Printing & Publishing Co Ld The, F H Dobbin Mng Dir, J Carnegie Pres 164 & 166 Hunter (see adv)

Peterborough Steam Laundry, A Parker Mngr 179 Charlotte (see adv)

Peterborough Water Works Co, Jno Burnham pres, G W Hatton secy 253 Hunter

Peterborough Canoe's first ad in 1893, in the city directory at 290 Water Street,

Best of all, canoes, unlike skiffs, were relatively easy to stack and ship by rail. So it was easy to set up distributors. In the city the department stores such as Eaton's had an outdoor leisure section that sold various camping items such as canoes, fishing poles, tents, and the new Coleman portable stove. Under Rogers, Peterborough had branched out into other boat and cottage related items. There were now over 120 different canoe styles to choose from, and now they were building duck monitors and carvel and lapstrake skiffs as well. They also built office furniture, as well as cottage and verandah furniture and even window shades, spun off as the Ventilating Shade Company. They also offered steamboats between 20 and 50 feet. How successful this was is open to debate, as this type of building was all custom driven and at odds with the company's specialty in high production small boat products. Luxury steamboats were a business that worked best with connections, reputations, mechanical expertise, (and a lot of money) all things that the Davis and Polson Works had in abundance.

By 1900, there were three builders in Peterborough/Ashburnham, Peterborough Canoe, Wm English and Canadian Canoe. There was a shuffle in Canadian Canoe, Tebb was gone as president, replaced by a former Peterborough Electric Company executive named Homer O. Fisk, and a new plant manager Morley Lyle. That year an ambitious young man named William Richardson answered an ad for the position of secretary at the Peterborough Canoe Co. This was an entry level position for a man (a terminal position for a young woman, who would be expected to quit as soon as she was married and expecting, or a long career in the same job should never be married; at best over the years she might become an office staff manager, but never above that). Richardson had no such limitations, he was a sharp cookie and rose through the ranks, in 1907 he was promoted to bookkeeper, in 1910 he was now in the senior management level, as secretary treasurer.

The Peterborough Canoe plant, 1900.

J. Z. Rogers died from a heart attack in 1909 after a full day at work, passing the operational torch (William Hill was still technically president, although his day job was still his insurance business) to his son Claude and Will Richardson, the secretary treasurer. The company had dropped the furniture and planing side businesses and was strictly offering canoes, rowboats and now they were hoping to cash in on the motor launch boom. This was not going well. In spite of the company's size, it was not having an easy go in this business line. They had a contract with the St. Lawrence Engine Co. Ltd in Brockville to supply engines, which Peterborough would then install in their product. Motor boats were a very competitive market (Capital Boat and Canoe in Ottawa offered a basic 18-foot boat and 2hp engine for $100) and most likely the builds were rushed, and the engines simply bolted in without taking the time to do a proper alignment. Customer complaints began to filter back into the Peterborough Office and Claude simply blamed the problems (vibration mostly) on the quality of the St. Lawrence

engine itself, so the customers began routing their concerns to Harry Going. Going blew a fuse and wrote back to Rogers essentially terminating their relationship. In spite of Peterborough's commanding lead in small boats and canoes, it never really gained much traction on the motor boat line, although it eventually solved it's quality issues.

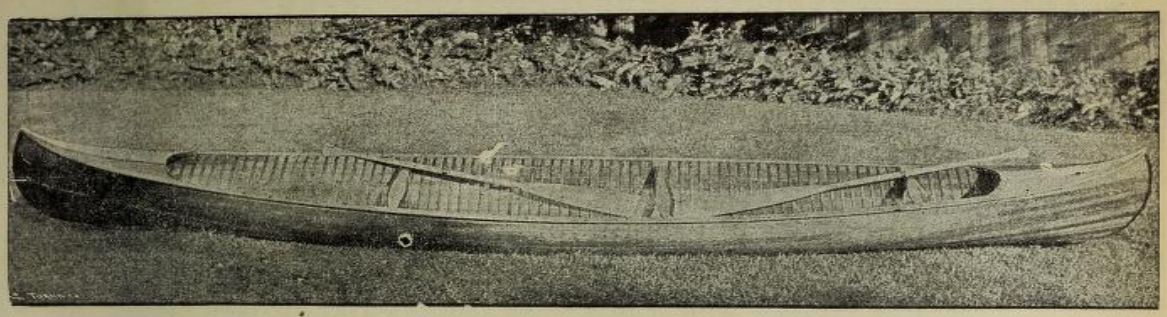
Famous, more for their quality issues with the poorly fitted engines

Lakefield Common sense and no frills

Several miles down the road in the town of Lakefield there was a new business, or rather a new name for an old business. In 1892 Strickland & Co had become the Lakefield Canoe Works. There were three builders in town. The first had been Thomas Gordon, who had set up shop about the same time Stephenson had in Peterborough. Gordon's own foreman, J.G. Brown had set up his own business across the street in 1870 known as the Brown Boat Co.

I became acquainted with two Gordon canoes while living off campus at Ottawa University. The house I was renting had a shed at the back with two antique canoes stored in it by the previous tenant John Gordon, a graduate commerce student and a descendant of Thomas Gordon. These family heirlooms were in their original condition, untouched by repairs or restoration. The woodwork was hardly scratched. There were pieces of a 1931 newspaper stuck to the pilled varnish, where it appeared that someone had made a halfhearted attempt to wrap the hull like a pike fillet. The workmanship and woodwork were impressive, very much in the fussy canoe construction style of the turn of the century, complete with the rather delicate period metal fittings. The smaller boat was a true canoe, and the larger one was a hybrid canoe and rowing skiff, without the curving stern and bow gunwale horns typical of canoes. All the pieces were perfectly shaped and fitted together, the clench nails neatly peined over and there was none of that rough and ready style of finishing more typical of the canoes and outboards built in the 1930's and 40's. This boat had two sets of oarlocks and although it had the hull of a canoe, it was intended to be rowed. In 1904 the Strickland and Gordon enterprises merged to form Lakefield Canoe Bldg. and Mfg. Co. This suited Thomas Gordon's son Gilbert until 1909, when he left to form the Gordon Canoe Co. in the town of Bobcaygeon, which was on the shore of Lake Simcoe and near to the rapidly developing cottage community on the Lake.

One of the unique items made by Lakefield was what our family called duck boards. This was a fold up series of cedar slats that one could lay out in the bilge where there was always a puddle of water. This would keep your feet dry, to a degree assuming there wasn't too much water. Once the boat was at speed of course all the water would run to the stern which would defeat the purpose.



Lakefield Canoe Ad: Rod and Gun and Motor Boat in Canada, 1908. Also canned liquid coffee for the outdoor caffeine addict. Will Richardson's brother, John, was in the management position at this rival firm.

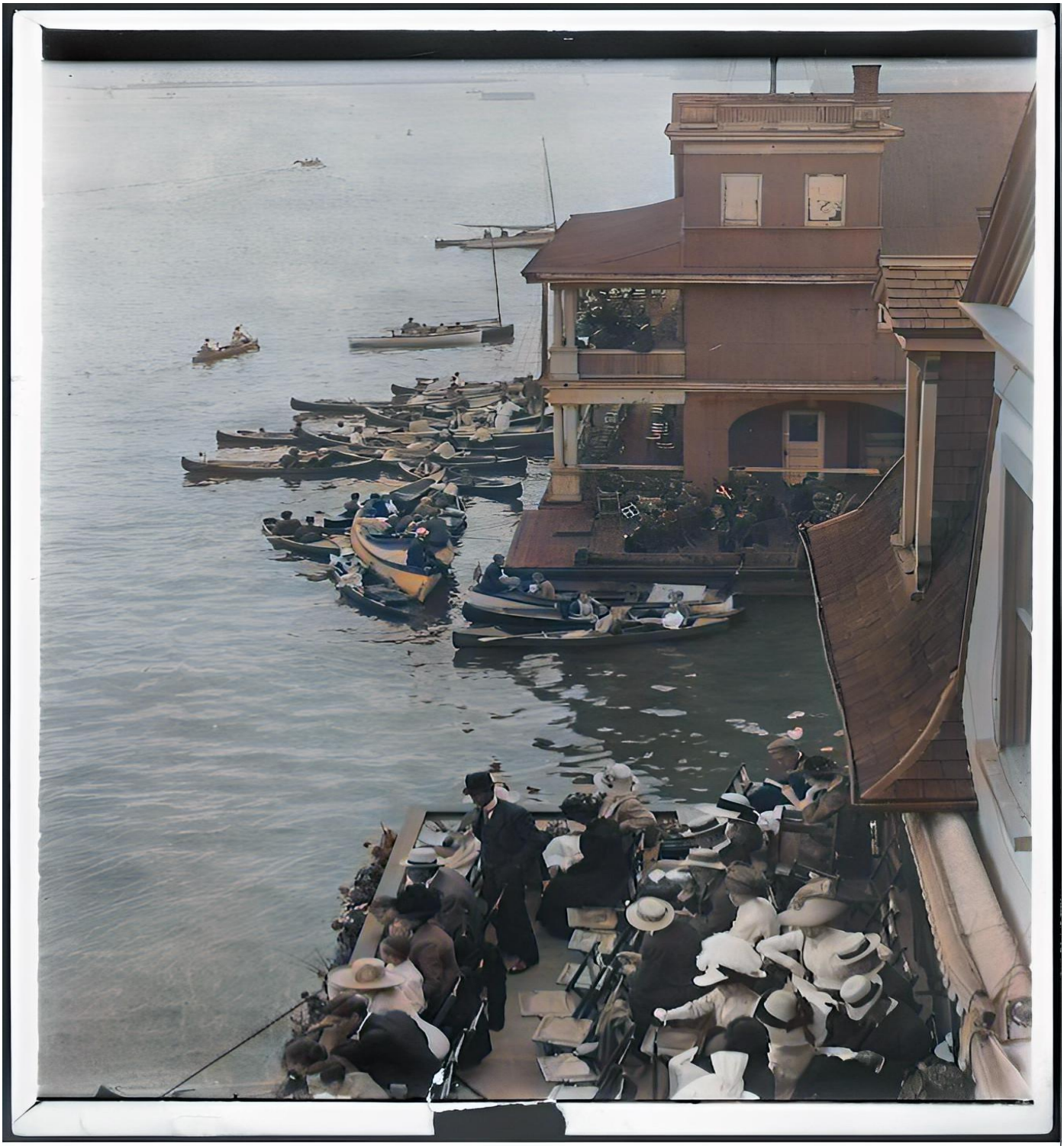
In 1909, the New Brunswick based builder, Chestnut Canoe Co. patented a canvas sheathed hull. Peterborough had been using the design since Roger's takeover in 1880 and the method had been in use for twenty years earlier than that, but no one had thought to patent it. Ironically, Peterborough found itself in legal violation of a patented process even though its use of the process likely predated Chestnut's claim but proceeded to use it anyway. Chestnut sued Peterborough in 1909 for infringement. Peterborough fired back with a blistering legal defense, justifiably arguing that the idea had been around for years and that there was no real innovation by Chestnut. Patent law is not just business gamesmanship, you have to prove to the courts that you actually invented the thing yourself before anyone else did. Chestnut never brought this lawsuit to court. In 1923, three years before the dubious patent expired anyway, the two parties shook hands and set up a joint venture to manufacture canvas canoes. The actual canoes would be built at Chestnut's Moncton plant and shipped to Ontario to be sold under the joint venture trade name.

Peterborough Canoe Ad: Rod and Gun and Motor Boat in Canada, 1908

The Polson and Davis works, with their rich customers and British boatyard way of doing business, which meant fuss and fiddle, could take its time in building its steam masterpieces. The Peterborough companies were factories, cranking out production line boats as quickly as possible. The business owners were entrepreneurs, not tradesmen, or they had started out in the shop, that was usually a long time earlier and after some years they had lost touch with the workmen's experiences.

By 1902 there were 60 employees at the three main factories. By 1908 there were 90. The workers made some halfhearted attempts to unionize but these never went anywhere. In 1919 the Canadian Canoe company employees staged a strike, possibly inspired by the violent workers rebellions in Winnipeg and across the US as well. Perhaps a lack of local communists or socialist agitators did them in (when was the last time you heard of a "small town communist"?). The big wood working union at the time, The International Brotherhood of Carpenters and Joiners was primarily American and in spite of its deep pockets, seemed to have little interest in supporting strike action north of the border, such as their disappearance during a strike at the Davis Works in Kingston. The pay increase demands as well as recognition for the union were ignored by management. Shortly after things returned to normal. Up to the Great War, Peterborough had been selling canoes and skiffs and the occasional motorboat. Now the outboard motor was coming to Canada and after the war and these engines were much lighter and were quickly developing more horsepower. They would need a boat to put them on.

Chapter 4 --- Row, Row, Row Your Boat 1880-1923: LaChapelle, Sauve, O'Gorman, Dey, Reynoldson, Noverre, Aykroyd, Dean



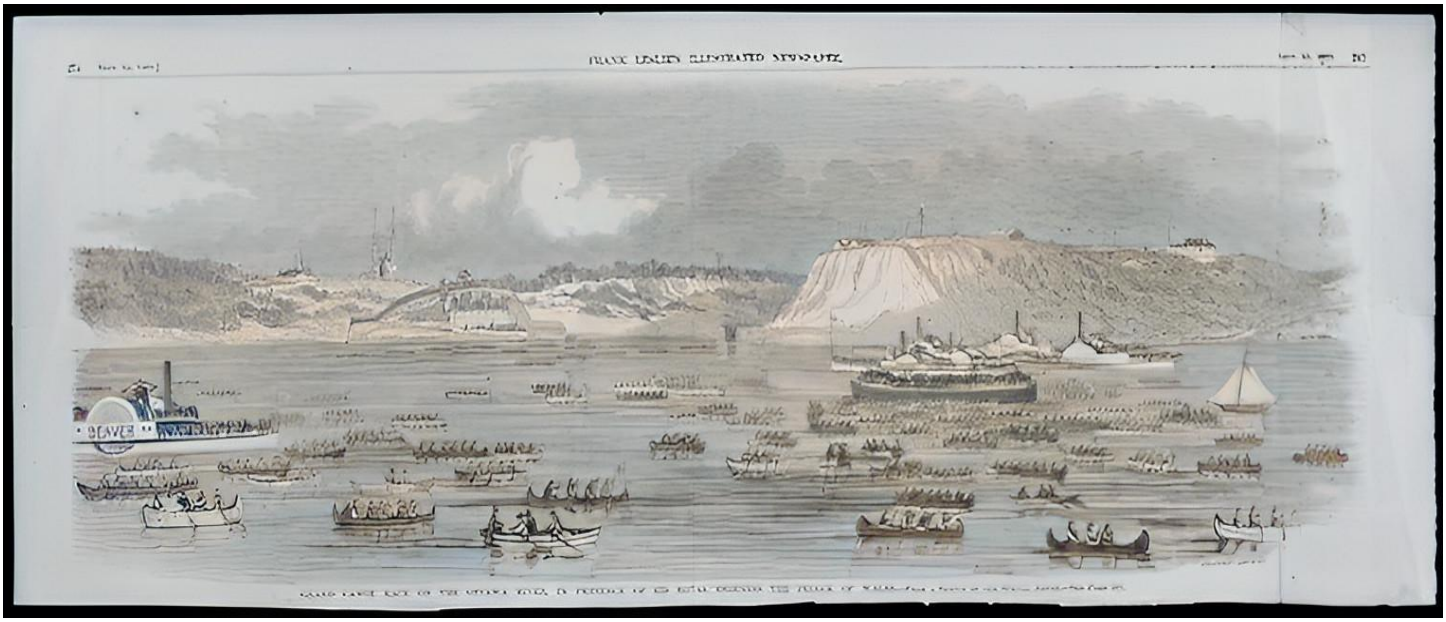
City of Toronto Archives, Fonds 1244, Item 1428

The good old days when Toronto had fun at Harbourfront.

By the 1860's the basic design of the rowing skiff was in place. Thousands would be built. Admittedly, there wasn't much room for improvement and not much room for creativity. Some US builders could be incredibly fussy, with half round ribs and mahogany decks such as J.H. Rushton, who products were really for rich customers. Few Canadian builders could be bothered putting this kind of effort into a skiff. Their boats were meant to be used, rowed through big waves, pulled up on rocks. Skiffs could be raced, and while there were skiff classes at the regattas, true race boats were a special design, invariably modeled on the British racing shells developed for use on the canals and river of the mother country. Racing shells were toys, basically and really too flimsy for anything but racing. Northeastern boats began to develop a unique hybrid of British and native small boat racers known as the sailing canoe, or deck sailer.

The importance of competitive rowing cannot be understated. This was one of the big spectator sports of the age, along with boxing, lacrosse, wrestling and horseracing (hockey and baseball would not come into their own until the 1880's). Most towns in Ontario were either on or near a river, so there was a place to row. Rowing was international and Canada already had world champions in the "Paris" Crew. Every town on a lake or near a river had a rowing regatta.

Ottawa



Ottawa river canoe races, held before Prince of Wales, future Edward VII, 1855 The water was still pristine at the time

The Ottawa River, as it was by 1889, so filled with sawdust sludge you could practically walk on it. The river was given a "funeral" in 1968 by pollution activists and serious clean-up efforts only began in the early 1980's, as logs were now transported strictly by train and truck and the paper mills became more careful about proper disposition of waste products.

Ottawa was developing an interest in boats, particularly competitive boats. There were three rowing clubs, the Dow's Lake Club, which was on Dow's Lake at the end of Preston Street, which in 1885 was the boonies. The second was the Ottawa Rowing Club, which was situated just down from the well-to-do neighborhood of Rockcliffe. The big problem with competitive rowing is where to put the boat when you are finished for the day. It wouldn't last long if left outside. You needed a place to put it. The first boathouses began to appear as places to store the more valuable boats such as rowing shells. The boathouses were literally sheds on the shore and they had a ramp going down into water. There was no slip-that was only for the very rich who wanted a covered house to park their steam yachts. Most ordinary boats stayed pulled up on the

shore, either turned over or covered by a tarp (or nothing). One easier way to deal with this was to join a rowing club. They were usually two-story affairs, with the boats and gear being stored on the first level, which had ramps leading down into the water. The second level was for offices and the club house. There was drinking and partying there, although perhaps less than most other social clubs for men. This was still an athletic association and the members had to maintain their health and not get too fried.

Dey Bros. pointer and canoes, Ottawa Rowing Club, now attached to stilt posts.

The founders of the Ottawa Rowing Club had clubhouse actually floating on the water and built it as a kind of mobile barge with the building built on top. It was tethered to the land with ropes and usually once or twice a summer after a heavy storm the structure would break free and float off down the river and the members would have to hire a tug and pull it back. Eventually they attached the building firmly to the Ottawa Riverbank. It is there still. The Dow's Lake rowing club was built in 1902, a rather fancy building complete with turret-like architectural flourishes.

This was purely for athletic contests as there wasn't much else to do on that part of the river, although there were once rental sail boats to learn about sailing on these harmless waters or just to kill time on a Sunday afternoon; now the rentals are strictly kayaks, the little sail dinghy's seemed to have disappeared.

These were big buildings and required a lot of capital to build and membership fees to be maintained. Therefore membership was limited to the well to do. The less well-off had to find their own storage means as well as bringing their boats to the competitions. That didn't stop them and more often than not, it was a miller or a steamfitter or a carpenter that took the trophy home at the end of the day. An exceptional workingman athlete might find himself invited to be a member of one of their clubs or perhaps be offered a full-time job looking after the boats so he could lead the club to victory at the next race.

By 1878 Micheal O'Gorman (his ads had two name spellings, O'Gorman and O'Gormon) had enough of Kingston. Competition was intense, so much so that other builders were regularly stealing his designs and in some cases, representing themselves as having the right to copy and sell his boats. He put an ad in the Kingston Whig newspaper warning potential customers to visit him personally at his shop and pay no attention to his dubious "agents". He decided to move to Ottawa, which had long since passed Kingston in terms of population and importance and already had a growing interest in recreational boating. A few boatbuilders were already working there, including Antoine Ratte and Joseph Dey who had teamed up with a Mr. Cockburn to build a small shop at the foot of the cliffs.

Joseph Dey was born in England in 1830. He married a Dublin girl and decided to try his luck in the Canadas. He arrived and stayed briefly in Quebec before moving to Ottawa in 1862. Ottawa was a city of 25,000 then, growing rapidly as a lumber town and since 1857 as the newly anointed capital of the Canadian federation. He started off as manager of the Bellevue Pleasure Gardens over on the Hull side, a sort of Victorian era version of a mini putt where you could try your hand a various game such trying to knock coconuts off posts with a small wood ball. He left the amusement business and in 1872 set up a boat building yard with Mr. Cockburn on the Ottawa river just below where the Supreme Court building is today. Cockburn was a commercial boat builder and is credited with building the famous pointer boat, which was used to push around the logs on the river and eventually became an icon of the river. The partnership lasted only a few years before Dey left and set up his new business, Joseph Dey and Sons, Boat Builders on the south side of the east Turning Basin. The Turning Basin was an oval pool occupying the space on the canal immediately south of where the Laurier Bridge is now, where

Confederation Park is on the west side and the NDHQ building is on the east. In the 1860's this body of water was the end of the line for many excursion boats m barges and freighters, and they used the turning basin both, as the name indicated to move their boats around, but also to dock and unload their cargo. Joseph Dey's original operation was on the east side of the basin although the sons, Ted and Peter would have to relocate to the west side when the east side was filled in so the CP railroad line could be run downtown to the new central station across from the new Chateau Laurier Hotel. Joseph eventually retired from the business and left in the hands of the three sons including the youngest, Frank. Ted was the oldest and the driving entrepreneurial force of the three and he saw the boat building as a steppingstone to a variety of potential businesses. Frank was all about sports and boats. Joseph Dey died in 1904, but the friction between the brothers had already come to head several years earlier and the brothers had split up, with Frank moving to a shop on Bank Street.

The steam powered classic pointer boat, mainstay of Dey Bros. Boat Works. Primarily commercial, it was also used by the rowing clubs as a service craft

In the late 1890's Ted and Peter had begun to branch out into other ventures. They added a lumber mill to the operation and to find a use for the lumber they embarked on their biggest project - Dey's Skating Arena, built adjacent to the Turning Basin in downtown Ottawa. Their father already had experience in running amusement ventures, so they built on this knowledge by opening up a skating rink and earning money from customer fees. The first arena was torn down, and the second rink was built at Ann and Bay Streets. In order to help make the place pay, they and other investors invited an amateur hockey team known as the Ottawa Hockey Club to hold their games in the arena. By 1893 the players were being paid, albeit this was off the books as the team was supposed to be officially amateur. Players like Fred "Cyclone" Taylor and Harvey Pulford now had work year-round. The professional athletes of the day played whatever and wherever there was money to be made, baseball and lacrosse and especially rowing in the summer and fall. The hockey team eventually became a full-time profit-seeking business, and the name was changed to "The Silver Seven" in 1903 and finally the Senators in 1908. Hockey seasons in that era lasted only as long as freezing temperatures, which was usually mid-December to mid-March. There was no rink refrigeration other than the outdoor temperature, so the ice frequently melted as the body heat from several thousand fans warmed the arena interior. Stanley Cups were played in March and if it was warm the melt sometimes resulted in a watery surface, one in 1920, against Montreal there was an inch of water on the ice.

As mentioned Frank didn't want to go along with these new ventures, or the other brothers felt he wasn't pulling his weight, or the fraternal partnership had simply worn out. In 1898 Frank left, apparently not on good terms as Ted and Peter changed the business name to Dey "Brothers" Boat Works right afterward. Frank set up shop at the east corner of Bank Street and Powell Ave. Now the elegant little gulch between Clemow Ave is known as Central Park but in 1901 it was an offshoot of the canal known as Patterson's Creek. The new shop therefore backed right on to the water and Frank could launch his boats right down a rail and into the water.

Frank was the racing boat specialist in the family. If it went fast and was a boat, he built it. He already had an impressive list of paddling trophies, so he knew what he was doing. Over the next few years he built 21 first place winning rowing shells. He built racing successful racers for many of the famous early names in competitive rowing, Monty Neate, Ernie Tresside,

Charlie Cowen, Horace Merrill, and Harvey Pulford. All names today are found only on an old photo sealed in a glass cabinet at a rowing clubhouse wall. Pulford was the exception. He was one of those athletes who was able to excel at any sport, whether playing with the Senators or winning rowing titles (or playing pro football which he also did). There were a few of them at that time but such crossover skill is (almost) unheard with today's specialized athletes. By 1904 his son Edgar was winning major competitions as well, taking first place at the big ACA regattas at Sugar Island, in both the singles and double scull. Capital Boat continued to make racing shells, but he was already becoming interested in the coming gas engine speedboat business.

Brockville

John LaChapelle had moved out of Green Bay in 1867 and relocated to Brockville. He built a small shop next to the Chaffey shipyards and began to build skiffs. LaChapelle was a fixture in the Brockville boating scene for years and he had a lot more success in this town than he had in Green Bay. His shop outlasted the business and was still around until the late 1930's when it finally burned one night. Fred Gilbert Jr. remembered how angry he was that all this excitement had taken place next to the Gilbert shop and that he had slept through the whole thing.

Another Quebec family moved to Brockville. These were the Sauve's. The father, Moises, was a blacksmith and had teams of horses pulling barges along the Lachine Canal. After the big canal improvement boom there was less need for his specialty, so he moved to Brockville and found work in the local foundry. He sent the children to the local school, and they were expelled on the very first day on the basis that they only knew how to speak French. The teacher suggested they learn English first and then come back. Instead he found work for the kids at a local boat shop (probably LaChapelle's, as he was one of the few other francophones in town). The kids learned the trade and by the early 1880's had opened up their own shop.

You wouldn't get far in the competitive work of sailing and pulling boats just being the town builder. If you wanted to survive you needed a reputation. That reputation would not get just local business, but across North America. Packing your boat into a cradle and shipping it out on a train to a customer in New York, Montreal, or even London England was just as important to your business as local sales, perhaps even more so. All four brothers were involved in the business. Cyrille was the machinist and metalworker who designed and built the various metal fittings needed on the sail and row boats. Noe was the woodworker, one of the shop boat carpenters, as was Joseph, who was already making a name as "Brockville's Champion

Oarsman". Finally, Moises was the president, salesman, front man, prime mover, and sailboat maker. Sauve made regular rowing skiffs, but it was the sailing canoes that put them on the map. After becoming a local power Moses brought one of his canoes to the 1887 Lachine Regatta and put the locals to shame, beating the entire fleet by almost two miles (many of which were probably still using the old deep water lead keel British style canoes). In 1891, a Brockville man named Ford Jones captured the American Canoe Association Annual Cup using a Sauve boat. Moises exploited this victory along with a plug from Mohawk performance artist and poetess Pauline Johnson:

> *"... she was the prettiest thing afloat at the American Canoe Association in 1889...how the good old dead Indians would have regarded this dainty offspring of birch-bark ancestors I do not know...she still has within her the blood of the birch bark."*

In spite of the success of the shop, trouble was coming in the form of tariffs. Sir John A. MacDonald's Conservatives had instituted a 25% import tariff in the 1890's and this was driving away valuable American customers, as the US Federal government of course had retaliated in kind. The Sauve's pinned their hopes on Laurier, who had opposed MacDonald but when his Liberals took power in 1896, in typical form they suddenly decided that maybe tariffs weren't such a bad thing after all. Tariffs hurt a lot of small boutique builders with US customers. The true racing fans who wanted the fastest boat would simply pay the price, but those who simply wanted a name brand drifted away-there were plenty of talented US builders as well. This didn't kill Sauve' Bros but it wore the firm down. Competition from rising stars like Nelson Gilbert didn't help either, particularly since Gilbert was only building in his spare time and didn't have to live off of his canoe-making income.

In 1892, Moses was tempted by bigger bucks across the river. Albert G. Spalding had started off with baseballs and bats and gloves and was on the way to building a sporting goods empire. He decided to take on the rowing boat industry as well. He rented a large workshop in Ogdensburg and convinced Moses to move his operation there. This lasted until 1901. No one knew what the problem was, possibly the small profits and uneven sales that dogged the industry, or the high production work-til-you-drop ethic of the big corporate monopolists of the day. Either way Moises packed his bags and tools and left for Coeur D'Alene, a resort town at a lake in Idaho. He did not return to Canada. Without Moises, the Sauve shop in Brockville faded away, although Noe set up his own boat rental and building operation. Cyrille went to find work in Rochester and Joseph went to Chicago.

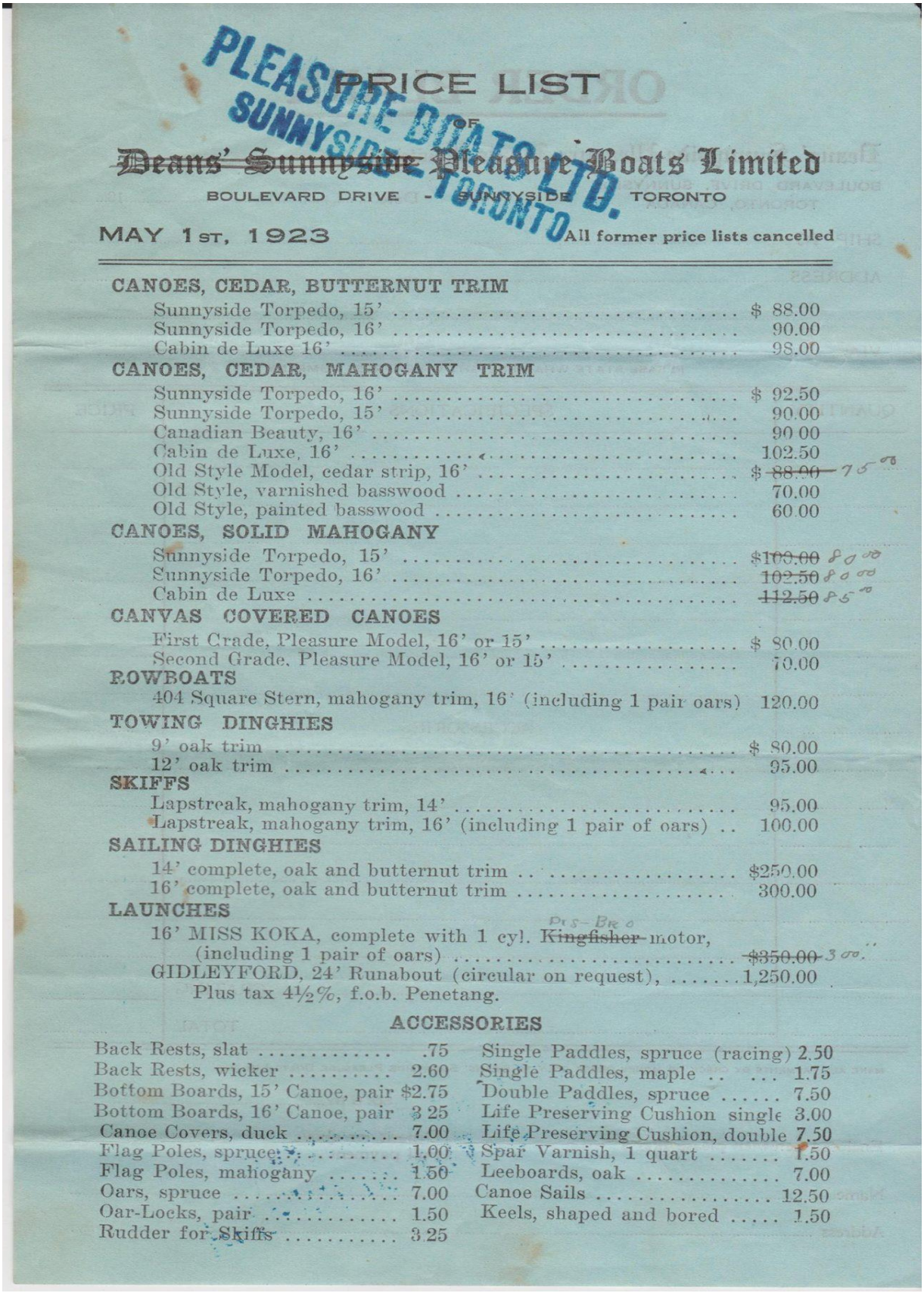
<u>Toronto Harbour 1867-1904</u>

By Confederation, Toronto had leapfrogged both Ottawa and Kingston to become the fastest growing city in the province. Pleasure boating, already well established in Kingston, Ottawa, and Peterborough, was just starting to show up at the Toronto waterfront. Prior to 1850, there was no formal professional identification as a "boatbuilder". Such a person would be listed as a "shipwright" and might build boats on the side, most of the work was still in commercial shipyards. The first Torontonian to hang out his shingle, or plank, as it were, was Robert Reynoldson in 1848 offering boat-building services, although Bethune & Co. included boat building along with that of the strictly commercial ship and steamboat work. Steamboats at the time, as noted, all had low-pressure engines, which were huge affairs that could only be found on a 150+ foot ship, although Britain was already experimenting with more compact high-pressure systems, Canada was always a technological laggard, at least at this point in history. The Hayes Bros. also listed themselves as shipwrights, although by 1861 the remaining brother Robert would re-brand as a boat builder; they may have already been in the business but were keeping their options open. There were only two others, in addition to Hayes, Reynoldson, and a new outfit set up by Walter Bolton. Henry Brown was primarily an outfitter, which meant oars, sails, rigging and retail and wholesale hardware. At Confederation year 1867 there were five now, still Reynoldson, (misspelled as "Rennardson" in the directory) John Baines, John Clindinning, Samuel Loweys and Frank Noverre, Bolton, Hayes, and outfitter Brown had weighed anchor. Noverre, Clindinning, Loveys and Reynoldson were all listed at various cross streets on the Esplanade, Scott, Church, Simcoe, and George. Today the Esplanade is an unremarkable commercial street south of Front, and several hundred yards from the water, but at the time this was the waterfront road from Simcoe out to Hahn Street. With the coming of rail yards and Union Station, it was cut off at Yonge. Over the years the city advanced steadily southward into Toronto Harbour, and what was once the edge of the city simply disappeared behind more streets and railways and still more buildings and finally the rock infill known as the Port Lands. Frank Noverre built a small 30' X 40' shop on a pier at the end of Simcoe Street. Five small boat building businesses were hardly indicative of a boom, but by 1880 there were thirteen and by 1890 seventeen, all dotted along the harbour side. Henry Aykroyd set up shop as Aykroyd & Sanders at the foot of Yonge Street in 1875, starting a family business that lasted until the Second World War. Walter Dean set up his shop on Queen Street East, only a few blocks from Kew-Queen-Woodbine Beach. Rowing and sailing clubs were popping up all over town, the first was the Royal Canadian Yacht Club, which would come to have such an impact on boatbuilding and sail racing. It was for the elite, not millionaires as there were no such exotic creatures in Toronto at the time, but for the mid upper-level businessmen and their senior executives, as well as politicians, such as R.C.Y.C. founder James Gifford, who were not

wealthy but could make things happen that created wealth.

Most of the small boats built in Toronto could easily have been forgotten, except for two icons. The first was the boat that put Aykroyd on the map and kept there for decade after decade and that was the Aykroyd sailing dingy. It was built to conform to the Lake Sailing Skiff Association requirement to establish a one-design small catboat. The idea of a one-design rule was to equalize the type of boat so that there was none of the endless one upmanship, bigger sail area, taller mast, wider, narrower, lighter, or heavier of the previous free for all contests; the plan was to focus on the skills of the sailor, not the superiority of the boat. The purpose of the one design was to avoid the U. S. competition problem, where small sailing race rules changed from lake to lake, ocean to ocean and no-one could agree on a common rule set. The LSSA originated in Toronto in 1896, and rather than signing on individual boaters on a sort of petition approach, the LSSA recruited on a club-by-club basis. In 1898 Aykroyd's came out with a model that conformed directly to the rules, 14 feet long with a drop-down centre board, but no keel, steering would be done by the solitary sailor and a gaff rig sail. For non-sailors (such as the author) a gaff rig sail has four corners. The sail is not attached to the main (in the sail dinghy the only mast) at the top but a spar attached at an angle to the main about 2/3 the way up. This approach provides a lot more give and control to the sailor rather than simply making a triangular sail attached only to the mast and boom. It also allows for a much larger sailing area. The Aykroyd dinghy had a low profile, rib on lapstrake planking, decked over leaving just enough cockpit room for the sailor to move around as needed. It was light and affordable and popular with the row and sail clubs, as well as cottagers. 2,500 were made between 1986 and 1943, when Aykroyd closed its doors. The second icon was the Sunnyside canoe made by Walter Dean. Dean was the other principal small boat builder in Toronto. He had worked for Harry Hodson for several years before striking out on his own in 1890, opening up a small shop at 1751 Queen Street East. In 1915 he moved once more to the foot of York Street and then in 1921 made the fateful decision to move to Sunnyside (his mainstay product, the Sunnyside Torpedo, was so named years before), now jammed with tourists and day trippers. He was able to secure a spot in the Sunnyside Pavilion lower level and as an income supplement opened a small restaurant on the main level, which held two large dance halls. I can imagine that given the high-traffic location rent was probably pretty high, and he now had rent on two locations, the shop and the restaurant, a new business for him. Any entrepreneur who has done the restaurant thing can confirm that nothing sucks your wallet faster; you have to keep a full staff and a full pantry whether there are customers or not. It was too much, and he closed up at the end of the 1922 season and sold the molds and the rights to the Sunnyside Torpedo to Gidley Boat Works. Gidley was primarily a motorboat builder and may have wanted to add a small

craft division, but it is an open question whether any more Torpedo's were built. The Walter Dean Canoe and Boat Co. reemerged like a ghost in 1947, settling up at 2050 Dundas West, although it disappeared shortly after; nothing more is known about this operation of what type of boats it built. The Sunnyside Torpedo was a cedar sided oak rib craft with three thwarts and a covered foredeck in place of the more familiar Indigenous curved bow and stern structures, it was meant to be used in calmer waters. The fore and aft decking was available in cedar, or for a higher price, mahogany.



PRICE LIST

OF

~~Deans' Sunnyside~~ Pleasure Boats Limited

BOULEVARD DRIVE - SUNNYSIDE TORONTO

PLEASURE BOATS LTD. SUNNYSIDE TORONTO

MAY 1 ST, 1923 All former price lists cancelled

CANOES, CEDAR, BUTTERNUT TRIM

Sunnyside Torpedo, 15'	$ 88.00
Sunnyside Torpedo, 16'	90.00
Cabin de Luxe 16'	98.00

CANOES, CEDAR, MAHOGANY TRIM

Sunnyside Torpedo, 16'	$ 92.50
Sunnyside Torpedo, 15'	90.00
Canadian Beauty, 16'	90 00
Cabin de Luxe, 16'	102.50
Old Style Model, cedar strip, 16'	$ ~~88.00~~ 75 00
Old Style, varnished basswood	70.00
Old Style, painted basswood	60.00

CANOES, SOLID MAHOGANY

Sunnyside Torpedo, 15'	~~$109.00~~ 80 00
Sunnyside Torpedo, 16'	~~102.50~~ 80 00
Cabin de Luxe	~~112.50~~ 85 00

CANVAS COVERED CANOES

First Grade, Pleasure Model, 16' or 15'	$ 80.00
Second Grade, Pleasure Model, 16' or 15'	70.00

ROWBOATS

404 Square Stern, mahogany trim, 16' (including 1 pair oars)	120.00

TOWING DINGHIES

9' oak trim	$ 80.00
12' oak trim	95.00

SKIFFS

Lapstreak, mahogany trim, 14'	95.00
Lapstreak, mahogany trim, 16' (including 1 pair of oars)	100.00

SAILING DINGHIES

14' complete, oak and butternut trim	$250.00
16' complete, oak and butternut trim	300.00

LAUNCHES

16' MISS KOKA, complete with 1 cyl. ~~Kingfisher~~ Dis-Bro motor, (including 1 pair of oars)	~~$350.00~~ 300.00
GIDLEYFORD, 24' Runabout (circular on request),	1,250.00

Plus tax 4½%, f.o.b. Penetang.

ACCESSORIES

Back Rests, slat	.75	Single Paddles, spruce (racing)	2.50
Back Rests, wicker	2.60	Single Paddles, maple	1.75
Bottom Boards, 15' Canoe, pair	$2.75	Double Paddles, spruce	7.50
Bottom Boards, 16' Canoe, pair	3 25	Life Preserving Cushion single	3.00
Canoe Covers, duck	7.00	Life Preserving Cushion, double	7.50
Flag Poles, spruce	1.00	Spar Varnish, 1 quart	1.50
Flag Poles, mahogany	1.50	Leeboards, oak	7.00
Oars, spruce	7.00	Canoe Sails	12.50
Oar-Locks, pair	1.50	Keels, shaped and bored	1.50
Rudder for Skiffs	3.25		

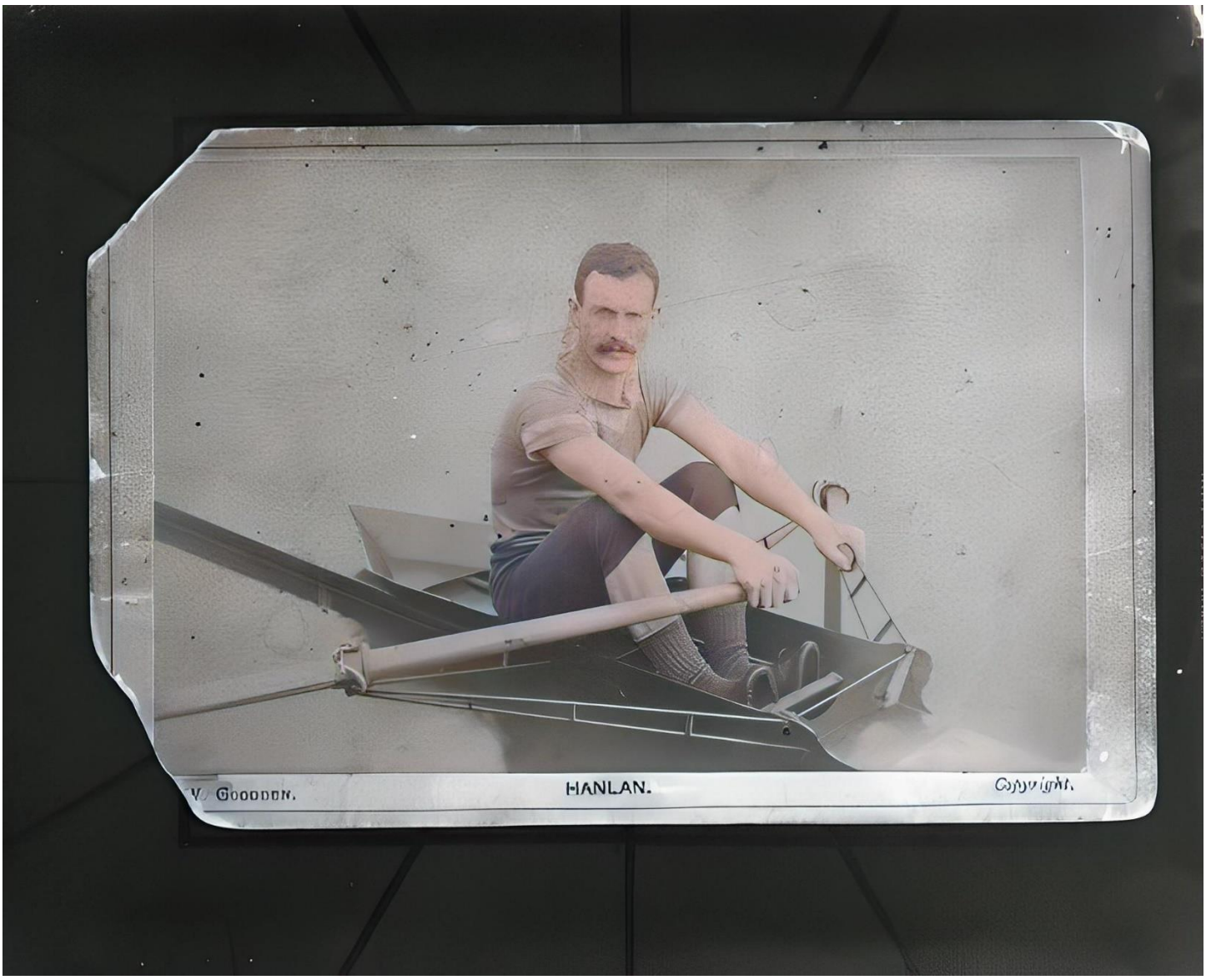
The short-lived new successor company to Walter Dean, subsidiary of Gidley, Pleasure Boats Ltd. Note the dramatic sale price discount for the all-mahogany Sunnyside Torpedo; I guess it was not selling well.

In 1861 what we now refer to as the GTA was composed of five independent urban areas, North York, Etobicoke, East York, Scarborough, and Toronto with a total population of 163,000 persons, by the 1880's it was close to 350,000, way outstripping the other "major' cities of Kingston and Ottawa. Ottawa as the new capital would grow to 100,000 plus by the turn of the century and continues to grow to this day. Ultimately it was Kingston, once intended to be the nerve center of Upper Canada, now dethroned from capital and industrial status, lost its primacy, and stabilized at a population around 50,000, comprised of students, soldiers and the incarcerated.

Walter Dean built war canoes for sale to rowing clubs, he also had ones that could be rented for a regatta. Some of the boats were from Dean's arch-rival, Frank Dey of Capital Boat and Canoe Works in Ottawa.

Rowing contests were already a big deal in Kingston and Green Bay, going on since at least the 1820's. By the 1860's Canada had its first international star in the person of Edward "Ned' Hanlan. Hanlan was a prodigy, one of those one in a hundred million who are simply better than anyone else, and he wasn't afraid to show it. He was the Canadian rowing equivalent of

Muhammed Ali, who was never shy about reminding everyone of his greatness and then proving it again and again. Hanlan's big showdown in 1880 was against another Ned, the prior world champion Edward Trickett from Australia.



Hanlan in 1878.

There was no evidence of any mismatch, Hanlan was 25 and Trickett was 29, Trickett was taller and bigger at 6' 4" and 173 lbs and Hanlan an average size of 5' 8" and 153 lbs. One might think that Trickett, being taller and having longer arms would have the advantage, but it was not to be. Hanlan pulled way ahead and then started goofing around, stopping, going in reverse a little, pretending to faint, all the while Trickett was struggling just to keep up. Trickett came back for another round in 1882, only to be literally humiliated once more, with Hanlan pulling

ahead, then rowing back behind Trickett and then roaring past once more. Sports science hadn't really even been conceived, let alone born yet, endurance athletes succeeded based on natural talent. They did practice, Hanlan had rowed from the family hotel on Toronto Island to the mainland as a child and teenager, but most also had the sort of high protein, high carb diets of the time, fruits and vegetables were rare out of season and most of the time came out of a mason jar as a preserve, often heavily mixed in with cane sugar and pectin. Hanlan continued as a rowing coach in later years and helped develop a training program. Many sportsman smoked, sometimes cigars or cigarettes, when they became fashionable; Senators team captain Harvey Pulford was often photographed off ice with a pipe in his mouth. Much of the real physical endurance came from an exceptional and freakish metabolism which provided a much higher than normal blood oxygen level and further a superior ability of the muscle cells to dispose of lactic acid, the waste product that makes you tired after exertion. It's the nature of a champion, but not necessarily a long life. In 1904 Hanlan was photographed at Sunnyside Beach in his scull, next to his friend Octavius (O.L.) Hicks, both are in their fifties, but it is Hicks who is still slim and fit from the hard labour of building boats, while Hanlan is hunched forward, and his arms strategically placed to hide his considerable gut. After retiring from the sport, Hanlan went back to the considerably more sedentary work of managing the family hotel and doing professional coaching. He died at the age of 57. Hanlan's hotel burned down in the 1920's and later the southern end of the Toronto Islands were scraped clean of permanent residents and is now a park and public nude-ish beach.

O. L. Hicks in his skiff and 50-something Ned Hanlan in his signature rowing shell, 1904 Humber Sunnyside.

Brockville and Gananoque

By 1900 with the passing of LaChapelle and the sudden exit of the Sauve's there was a vacuum in the boatbuilding field in Brockville. This was filled, at least on a part time basis, by Nelson Gilbert. Nelson Gilbert was already an established name in sailing canoe racing.

Sailing canoes or deck sailors as they were also known were more popular on the St. Lawrence that in Ottawa, where rowing dominated boat sports. The sailing canoe was, as the name suggests a canoe with a bracket for a sail mast. The original British design used common sense yachting principles and had a lead weighted keel to maintain stability. The sailor sat down low in the canoe hull and operated the boat solely from the tiller and the sail. It was safe and competitive as long as all the competitors were similarly weighed down, but it must have been about as exciting as watching paint dry. An American yacht designer chopped off the lead weighted keel and replaced it with a small drop-down keel (some were at the side, and some at the stern) and added a movable cross board where the sailor could clamber out on to on to balance the hull. Sailing canoes tripled their speed, skill requirements and excitement level. Sailing these boats was as much as balancing act as proper sail handling.

Nelson Gilbert had come to Brockville to work in the horse carriage building trade. Nelson was a foreman at the Canada Carriage Works plant where he had learned the fine woodworking skills needed to build the delicate boats. He had three sons, Fred, Merrill, and Irving all of whom followed him into the carriage works, however they did not intend to stay long. Nelson had been building racing canoes since 1882. This was a side business-most of the race boat builders had day jobs as the market was simply too small to do on a full-time basis.

Sailing canoes are a thing of beauty, even today. The wood planking is paper thin, perhaps not much more than 1/4" thickness. All the brass fittings are 1/3 of the size of similar hardware on a motor launch and are cast and polished down to the minimum thickness needed. The rudder is a very light gauge sheet of bronze, and the edges are sharp enough to cut a finger. The sails are ribbed, which gives them a slightly oriental look, but this was done to provide additional surface area for wind to push to boat.

In 1894 Gilbert spent a good chunk of savings and took himself and two canoes to the Columbian Exposition in Chicago (I expect there were probably also sponsors). The Columbian was the premier science and technology fair in North America, the period equivalent of the

modern-day tech conventions that are held annually in Las Vegas. He won an award for his display and established himself as a local master race canoe builder. This was an exciting hobby, but it was not a living, and he maintained his regular day job at the Carriage Works. In 1904, the Canada Carriage Works moved its plant to Alexandria and Nelson moved with it, leaving the boys to run the new boat plant on Jessie Street. He remained the design guru of the Gilbert shops, and the boys relied on his unparalleled knowledge of how boat hulls moved through the water. Even a hundred miles away he still carved the half hull models for both the powered and sailing craft that came out of the shop, right up to the early 1920's.

Post card showing sailing canoes on St. Lawrence; two sails, one boat.

In the mid 1920's the fastest deck sailor on the river was owned by a Wall Street financier named Leo Friede, who was also a member of the American Canoe Association, which was located on Sugar Island. Mr. Friede was the President of the ACA, its prime mover and

enthusiast and the world (more realistically North American) champion with this type of boat. Mermaid had been built by Gilbert before the war and proved to be something of a wonder boat for Mr. Friede, allowing him to win this class at the annual Sugar Island Regatta for several years in a row. The Mermaid was understandably Mr. Friede's pride and joy, so much so he wouldn't accept leaving it in storage at the river all winter, but once the season was over (after Labour Day) he would head home and arrange to have to Mermaid shipped to his winter residence in New Jersey. Mr. Friede's cottage was in Canada so technically he had to have the boat clear Customs before being shipped to Stateside. The boat was left at the Canada Customs dock overnight, and during that time, a local draftsman and sailor named William Rees took his tools down to the dock and took the lines or the measurements off the Mermaid. He drew up plans for a new boat, improving on what he thought were weaknesses and vulnerabilities in the Mermaid.

Nelson Gilbert's masterpiece, the unbeatable Mermaid, masts, and sails have been removed.

Using the obtained plans two other enthusiasts named Harry Hawke and Tommy Fields commissioned Gananoque boat builder Jack Mallette to build a rival boat, the cost of which was ultimately picked up by a certain Mr. Brittain. Mallette built pretty much anything for any customer with money, from canoes to big excursion boats to long deck launches. However, like most builders to true test of skill was a sailboat. Oddly, Mallette, who usually built round bottomed hulls used a hard chine style hull for the sailboat. Perhaps he thought this would provide the speed edge over the American made deck sailers, which all had round bottoms. It was less than three feet wide and about 14 feet long and had two sails, a large mast forward and a smaller one aft. It was completely decked over, and the hull was divided into air and watertight compartments. The most notable part was a six-foot-wide board on which the occupant sat in a mobile seat that could slide back and forth with the board, which was attached perpendicular to the deck. With this device the sailor could slide back and forth from starboard to port as needed to steer and control the boat. There was no joy for Brittain, Hawke, Fields, Rees, or Jack Mallette. Their boat. named the Tomahawk, was never able to beat the Mermaid; you could copy the product, but not the mind that went into it, as the old adage says.

Perhaps Mr. Freide got the message and decided he wanted to level the playing field and provide a kind of one -class race fleet where skill would depend more on the sailor than the boat. In 1922 he brought the Mermaid back to the Gilbert shops so they could make 12 copies (what had happened to the original model-no one knew). Merrill had almost completed the 12-boat contract when the Gilbert Factory building burned down in 1923. This disaster didn’t hurt Merrill’s reputation, and he remained one of the key sailing canoe specialists all through the years and continued to build them for enthusiasts, even as interest waned after the 1930’s.

Leo Friede, in later years, taking Mermaid out for a sail.

In 1929, a Naval Architect and avid canoe racer named Hilding Froling wrote to Merrill to have a canoe made. He wrote letters almost every other week during spring of 1929 when the canoe was being built, providing new ideas and requests. The canoe was 16 feet long and 30" wide. The inner keel was to be 3/4" thickness and 7/8" wide, or about the thickness of the end of man's thumb. Planking was in Spanish Cedar (no idea what made that so special, but it had to be imported) ribs were oak, the planking was maple and the centre board to be made of aluminum. The wood was covered in seven coats of Valspar varnish and the completed rig, ready at the end of July 1929 was to cost $264.00. I hope Mr. Froling was a light man. Looking at these boats it's hard to imagine the modern heavy framed 200 lb. 6-foot North American man fitting into one without breaking it to pieces (or sinking it). According to US Army studies, the average (non-overweight) adult male in the 1920's was 5'6" and 145 lbs. That would be just heavy enough. Ultra-light racing cats such as the Y-Flyer in the 1940's and the Lazer in the 1970's would come to dominate the sport, the racing canoes eventually ended up as yard art or as fuel for an outdoor barbeque. A tiny number were still loved enough to be stored in boathouses, sheds, and basements.

Ottawa's rowing boat master was long out of the business when a young man named Frank Amyot came to him in the early 1930's for a boat, oars, and racing advice. Many years later, after shepherding Frank Amyot to his Gold medal win at the 1936 Olympics, Frank Dey summed up his career for the Ottawa Citizen:

> *Mr. Dey is more than just a builder of speedy racing shells. As a young man he paddled professionally and won many awards. He believes that in order to build a good racing canoe you must be able to know how to paddle, too. "The builder of a canoe must know what it is all about."*
>
> *He said. "He must know. Where the spring of the paddle comes from-how the shell will react to every stroke.*
>
> *The love of a good canoe runs in the Dey Family. Chatting with the Citizen reporter in his little boathouse in Hog's Back. Mr. Dey pointed to a number of trophies at the back of the boat house. They were prizes won by his son, the late Edgar Dey, whose promising career as a paddler was cut short in his 27th year. Paddling in his father's canoes Edgar Dey won over a score [25] of trophies competing in the ACA regattas. Among those was 1st prize single blade 1904 Sugar Island), ACA first prize double blade with George Burland among others."*

Frank Amyot's gold was the country's first Olympic Gold medal. By that time rowing was slipping out of the public eye as a great spectator sport. Aggressive team sports such football, baseball and hockey now dominate the sports pages.

Chapter 5 --- If at First, You Don't Succeed: Alexander Cuthbert and the Battle of the Atalanta

How they were built, in the great outdoors. Peck family archive

Alexander Cuthbert, who would make his name in building sailboats, became a mariner just in time to see the end of sail. John Molson had ordered the first steamboat in Canada in 1809, since then steam had overtaken almost all shipping on the Great Lakes. By 1859, most of the commercial schooners had their masts and rigging removed and the hulls gutted, ending their career as a tow barge. The steam ships were usually about 150-220 feet in length and cost about $20-45,000. Power was from the low-pressure system, where steam would be produced at low pressure in the boiler, introduced into the cylinder, pushing the piston down and as it did so, the

steam would condense, forming a vacuum which would suck the piston back up, providing the motive power to turn a paddlewheel or a propeller. The low-pressure engines were very slow, rarely producing speeds over 5 mph, but they would get to their destination on time and in the transport business, that made the difference. In fact most steamships were hybrids, and had both masts and steam power, but the money was in the engines, and as those powerplants became more powerful and reliable the sails eventually disappeared altogether, the remaining masts eventually to be used only for navigational purposes. A few sailing schooners remained in commercial service, mostly to haul non-time sensitive, low-value bulk cargo such as lumber or coal.

Cuthbert was part of a transformational generation including William Polson, a steam engine designer and founder of Polson Iron Works, Alexander MacDougall, who would design and build the whaleback series of lake freighters, as well as Robert Davis, who would establish his own boatyard at Kingston. Cuthbert was born in the north of Scotland in 1840 and came with his family to what was then known as Upper Canada and settled in Frenchman's Bay, near the village of Pickering. Cuthbert learned the cobbling trade from his father, but a working life spent in a cramped workshop making boots and shoes was not for him. He began building ship models and then gravitated to building small sailboats and finally left to pursue a career as a ship master and boat builder. His first sailboat contract was the John A. MacDonald, in 1866, then the Norah and then one of his best and fastest boats to date, the Annie Cuthbert. He also made himself available as a racing captain for hire, and caught the attention of James Gifford, a lawyer and businessman who had recently served a stint as an Ontario MPP. Gifford purchased an American built racer which he named the Gorilla. The Gorilla was not particularly attractive, with a strange sweptback bow that made it look like a cross between a rowboat and Roman trireme. But it was lightly built with a large amount of canvas, and it was fast and in the hands of Cuthbert, a winner. With Gifford having the connections and Cuthbert having made a name for himself both as a winning builder and racing skipper, they convinced the Royal Canadian Yacht Club to sponsor a shot at the America's Cup itself.

The Gorilla, at left-centre. It was fast, it didn't need to be pretty. This New York built sailing sloop was the spark to the Cuthbert-Gifford America's Cup challenge.

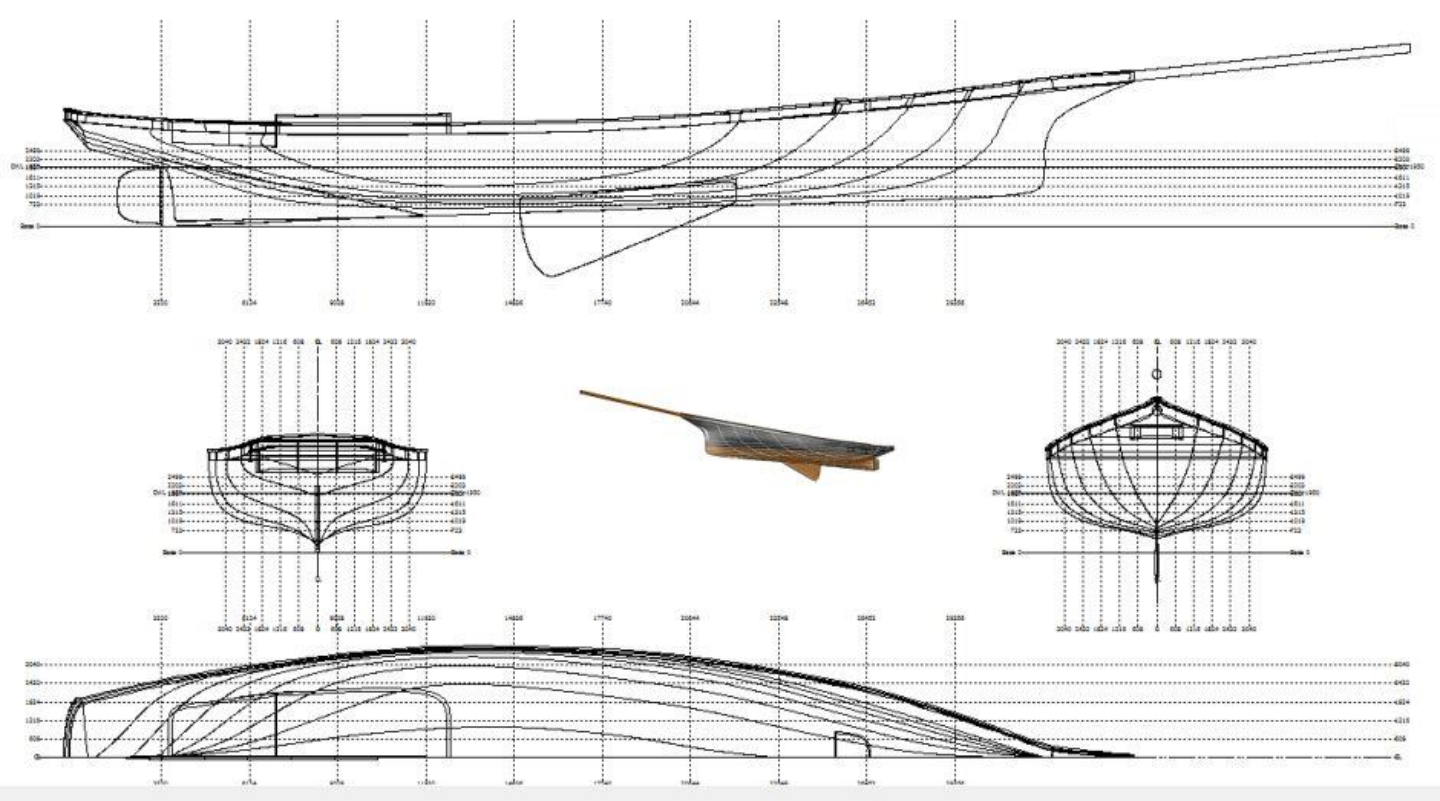
The America's Cup was actually made in Britain for a British race in 1851. Americans in a schooner named America showed up and took the trophy home and kept it. The trophy itself is I can only describe it as a sterling silver, grotesquely ornate and thoroughly ugly thing that you can't even take a celebratory drink from, as there is no bottom. The "cup" was donated in 1857 to a non-profit entity under an agreement known as "The Deed of Gift" which set out a system of rules to be followed for any such challenge. The rules were both specific and a little vague; the challenge had to come from an organized yacht club, it would take place on the waters nearest the location of the club who had previously won (this was New York City) and entry was exclusive to sailing craft, no steamboats allowed. The first race was in 1870 and the second in 1871, the Americans, represented by boats from the cup holder, the New York Yacht Club won both times, in each case by a fleet of defenders against a single challenger; in the 1871 challenge a broken spar on the main defending schooner resulted in a second schooner brought in against the solitary British boat; not surprisingly, the American boat (or more correctly fleet) won. The British countered that the Americans were effectively gaming their victory and that was the end of British involvement until 1893. The Americans had to cede that point (only after

winning the 1871 competition) and restricted the race to one challenger and one defender. True to form, they found a way around that rule as well as we will see later. In May 1876, the New York Club received a challenge letter from the Royal Canadian Yacht Club, located in Toronto.

The gentlemen of the Royal Canadian Yacht Club were well-off, none were rich. Toronto was booming, but the city and the businesses in it were still relatively small, in the 1870's no one would qualify as a millionaire; the big money men and big businesses were in Montreal and their pastimes were houses and horses. The truly big money men were in New York City; fortunes of $10-15 million were not uncommon; writing a cheque for $20,000 for a fast sailboat and a professional crew was nothing for the sort of men who would bet $10,000 on a pair of raindrops coursing down a train window (true story). For the well-heeled thousandaires of Toronto, the kick in for the syndicate members was $100 each, even though that was a strain, particularly for a leisure time activity. The syndicate operated as what we now call a limited liability partnership, most partners' liability is their investment, the main partner has unlimited personal liability, in this case, that was Gifford. The lead partner has effective control over the project, but they are on the hook if something goes sideways. On the other hand, a win could put the new country into international prominence, in sailing and boatbuilding the equal of two of the world's marine superpowers. It might be enough for Gifford to make a serious run at Parliament, possibly even into the Prime Minister's office itself. This isn't as stupid an ambition as one might think, Justin Trudeau's amateur prizefight success against a considerably more buff opponent spoke to his capacity for careful planning and canny action under pressure. Still, the project was risky, and both Gifford and Cuthbert were well aware who and what they were up against, and they had to have an edge. That edge was simple, more sail. By comparison, the race-winning Bluenose, built almost fifty years later, had a waterline length of 143 feet and 10,000 square feet of canvas; Dufferin had a waterline length of 81 feet and 20,000 square feet of canvas. Sheer size and force might just do the trick. The design origin was disputed, the American press said Dufferin's hull was a copy of the racing yacht Cora, which was built by a Patrick McGeehan of Chicago, against which Cuthbert had already raced. Cuthbert had a number of successful designs already and unless he had gone swimming underneath Cora's hull, this is unlikely.

At the time, the racing yacht of choice was a schooner, a two masted boat, with a mainmast fore and a slightly smaller mast aft. There were generally mainsails, trapezoidal sheeting attached to the masts, and a triangular topsail on each. At the fore, there was the jib, another triangular sail (or sails, there could be two or three) that provided some steering control as well as additional speed, in the form of the balloon jib. Sometimes there was a square topsail, on the foremast and

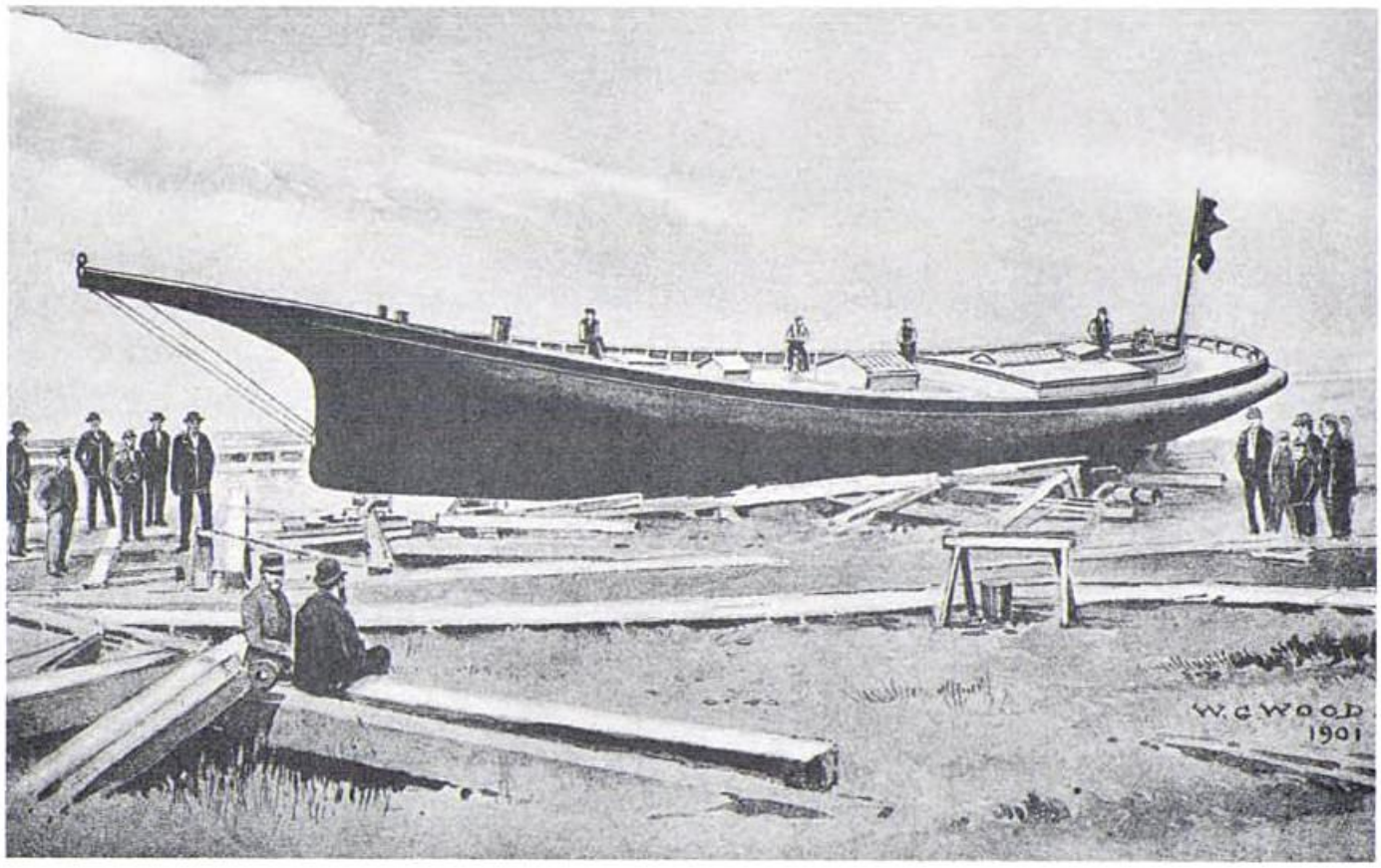
unlike the other sails that were more or less parallel with the hull, the topsail was perpendicular and provided another power boost. At the time sails were made of cotton or linen duck (doek is Dutch for cloth). White oak was used for the keel, frames, stem, stern and all other structural support. The hull planking was white pine. I never understood the preference for white pine. It is only intermediate in terms of rot resistance and why it was preferred over native yellow cedar, which is extremely rot-resistant I do not know. Both trees were abundant in Ontario, the fact is the cedar became the wood of choice later in the 1890's and stayed as such up to the advent of fibreglass and aluminum in the 1960's. My best and only guess was that clear cedar was hard to obtain, while clear pine was much easier and cheaper. Still the pine planking on a later racer called "Canada" built in 1899 was grey after 100 years in the great outdoors, but still solid once you shaved off the weathered surface. Also, there was the question of frames v. ribs. Frames were sawn pieces of oak cut from a single tree trunk and scarph-jointed together to make the required hull curvature. Ribs for the Canada were 2" X 2" oak boards that were cut green, put in a steam box (rule of thumb was half-hour per square inch) and then once softened by the steam heat, were yanked out and stuck in the hull sides and clamped to the planking (usually every fourth plank was missing, so a clamp could be applied. With the frame approach you would build the frames first and then attach the planks after, working your way down from the top to the keel. All large wooden sailing ships were built this way. With the rib approach you would still have to build frames to temporarily attach the planks and then remove the frames one by one as they are replaced by oak ribs. The benefit of this approach is that the frames are re-useable, and you can build multiple copies of the original boat. The Countess of Dufferin was made with the cut-frame method; at what point Cuthbert changed to the steam rib method I do not know. I would assume that a racer needs to be light, and ribs are lighter than frames, most likely his later boats were racing sloops, which were smaller than the previous schooners and likely rib structured. As for the masts, they were some type of conifer, it is one of the few trees that grows with a very straight trunk, up as much as 60 or 80 feet when mature. By the 1870's southern Ontario had been so heavily logged it was increasingly difficult to find very tall trees. That was just the wood, there were also a hundred other items that every wishful amateur always forgets in any wood boat project, chocks, cleats, nails, screws, paint, nuts and bolts, metal for the rudder and steering apparatus, lead, or steel blocks to serve as ballast, sails, ropes, an anchor, even a stove onboard to cook meals while on a long trip. The bills began to add up quickly. Was there potential help elsewhere, possibly the Governor General himself, who was also a sailor?



The Countess line plan.

Frederick Temple Blackwood, better known as Lord Dufferin, was a peer by birth and a senior civil servant by occupation and an adventurer in his youth, making a tour of the arctic regions around Greenland, Iceland, and the open sea north of Norway. He became Canada's third governor general in 1872. The Countess of Dufferin was named in honor of his wife, a nice gesture and possibly loaded with some hope that the sports-minded Governor would be sufficiently honored to write a cheque to help with the project. He did not, having money issues of his own; later he would go into partnership with fraudsters, although he claimed to be innocent and was never charged. Gifford and Cuthbert were on their own and had to cut costs in any way they could. The planking for the Dufferin came straight from the sawmill and attached as they were, leaving the hull surface "as rough as a nutmeg grater" so one New York journalist put it. There was no windlass for the anchor (another item being skipped), when it was time to go, the crew lined up on the foredeck to play tug of war with the mooring ropes. This was a big boat, 81 feet long at the waterline, overall 101 feet, a beam of 23 feet. Estimates of it's weight varied wildly, one source stated 95 tons, another 200. The first set of masts were procured in Kingston, and the rigging and tackle from Grant and Fayette of Oswego, New York at a cost of $500. The Dufferin was launched on May 12, 1876, and on her way by the second week of June, with Cuthbert and a bare-minimum voyage crew of 9. The actual race would require a

complement of 22 sailors in total, the additional men would take the train from Cobourg to Montreal and then on to New York. That was the plan, anyway.



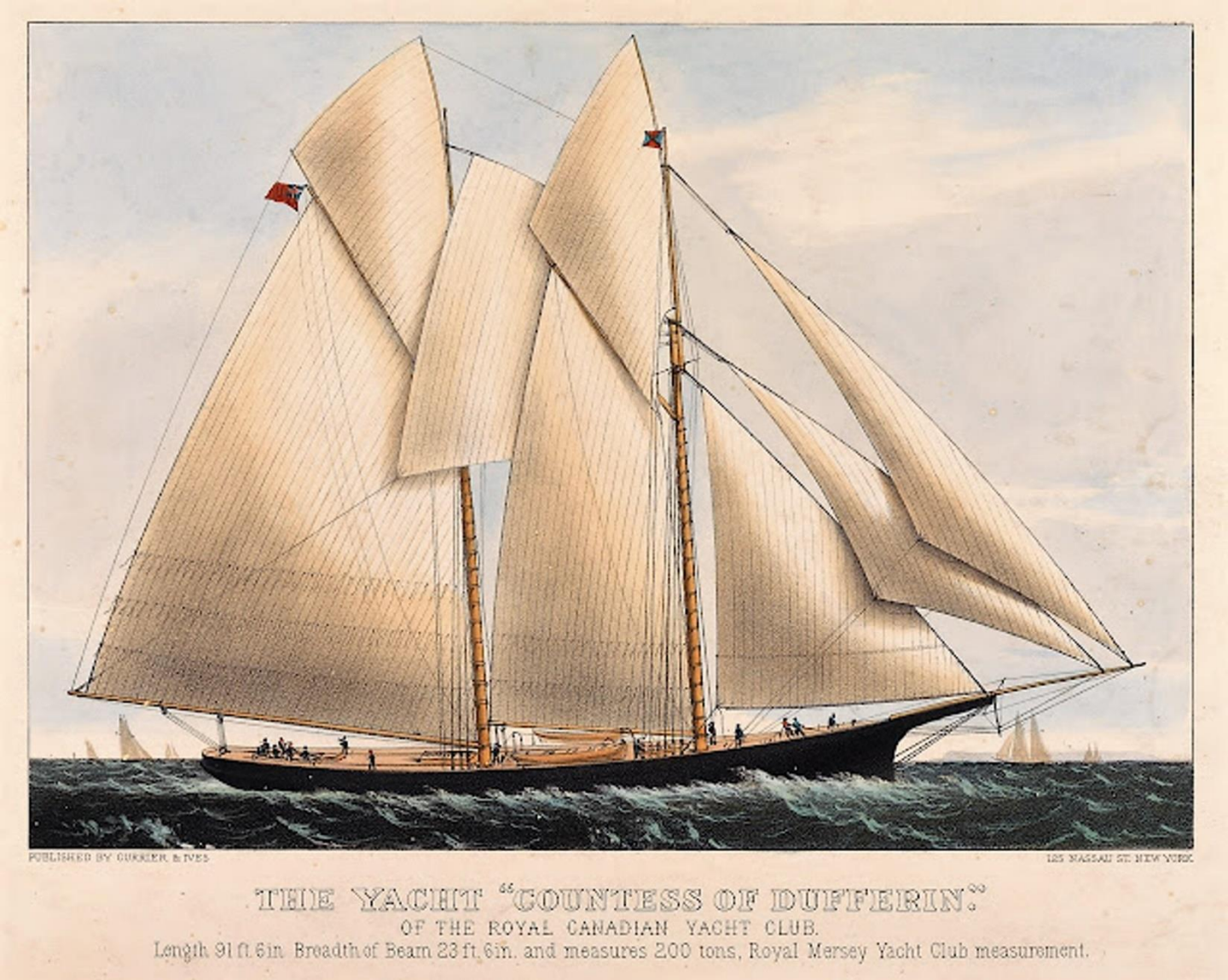
COUNTESS OF DUFFERIN

Third challenger for the America's cup (1876), as she appeared on the ways ready for launching at Cobourg, Ontario. From a wash drawing by W.G. Wood, after a photograph used by courtesy of Alexander G. Cuthbert, son of the vessel's designer and builder.

There were problems almost immediately. The mainmast had a habit of twisting under full sail; it was too thin and possibly still too green, Cuthbert had to make a stop in Montreal for a new and more solid one, again more upgrades needing more money they didn't have. This wasn't entirely Cuthbert's fault, most of the marine outfitters in the area had shifted their sail business to small pleasure craft and the Dufferin needed ship-sized masts that most likely were simply no longer available locally. The two-thousand-mile trip was uneventful, but even more issues became apparent once the Dufferin reached New York and had a chance to see the competition yachts firsthand. Reporters said that the boat was "over-canvassed" a vague sounding criticism but is this really a problem; I suggest you dial up photos of the Herreshoff-built Reliance, the

1903 Cup winner. It looks like a sewing needle attached to a Kleenex, the absolute limit of sail vs. safety. But there were definitely issues with Dufferin. The sails were not well fitted to the spars, being too big and prone to wrinkling and bagging. (I suspect they were bought secondhand, off another long-gone and much larger schooner).

The owner of the American boat Madeleine was Benjamin Butler, politician, businessman and Union Army general, particularly noted for his stint as military governor of New Orleans, so controversial Lincoln fired him not once but twice. The war was over, and Lincoln was gone, so Butler could concentrate on rebuilding his reputation and having some fun while he did so. The Madeleine was made of wood, but like many wood boats of the time had a copper sheathed bottom, which kept barnacles from attaching. Madeleine was pulled from the water and the metal polishers set to work, putting on such a shine one could shave in it. It was also lighter, a mere 180 tons as opposed to 200 for Dufferin.



The Countess at full 20,000 square feet of sail. The schooner on the dime, Bluenose, had 10,000 square feet. Compare the 5'5" crew member average height on deck with the masts.

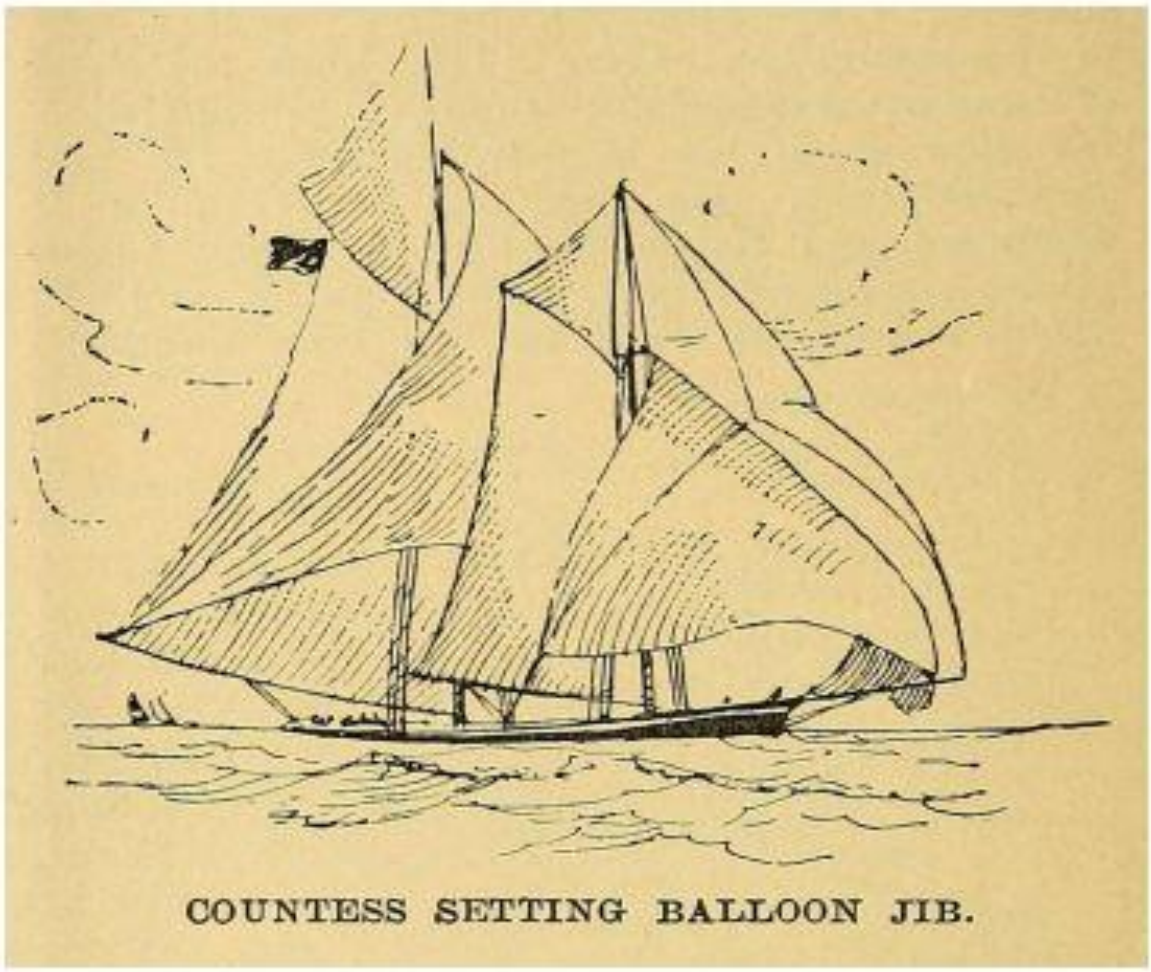
The first race was decided on local knowledge the Canadians did not have. Madeleine avoided the waters where a flood (incoming) tide water pressure was very high. Usually this is a function of the seabed geography, certain underwater features cause incoming tidal forces to be stronger in some locations as opposed to others. Cuthbert had no firsthand knowledge of this effect and sailed right into it and the Dufferin slowed down as it fought though to open water, most of the race was effectively lost at this point. Catching up was impossible and Madeliene won by 10 minutes. The next day the winds were rather weak, and this seemed to hurt the Dufferin more, it was almost eight hours from start to finish and Madeline won by 26 minutes. The Madeleine's crew was just too good and their boat just a little faster. Or was that the only reason? The commentator for the race noted for the first race, that Cuthbert "did not follow

convention" and stick to Madeliene's course to avoid the high-speed flood tides. What does this mean? Was Cuthbert informed of this? I assumed that if he had been informed, he would not have gone the wrong way and got caught in the tow. Cuthbert and his crew were resolute amateurs, not necessarily because they wanted to be, or had some higher moral dedication to the gentleman sailor principle, there simply was not the money to pay them to train full time. The endless bootstrapping could only go so far, and they still had covered the costs to make their way up the St. Lawrence and around Cape Breton and from there to New York City harbour.

The Countess at the dock.

The New York journalists referred to Madeleine's crew as "experienced sailors" and that the boat was "tried and re-modelled and fixed over until they were as good as could be made". Where did they find the time to carry out all this work? The problem with the Deed of Gift was not in what the rules said, but what they didn't say. In the latter 1800's most people worked 59 hours a week, ten hours Monday through Friday and for some reason, only 9 hours on Saturday. (this was reduced to 4 ½ hours by the 1920's and finally Saturday more or less disappeared as a workday after the war, except for retail businesses). Sunday morning meant going to church, then lunch and finally you had the afternoon off, which for many men meant playing sports, baseball in the summer and ice hockey in the winter. For those next to water, this meant rowing or sailing. Yacht and rowing clubs began to appear in the 1860's, complete with regular contests and competitions throughout the season. This is where the issue of amateur v. professional began to get complicated. The general theory of the time, and to some extent to today, is that certain sports are intended to be based in the amateur principle (most notably the Olympics, according to the rules set in place by Baron de Coubertin); the sport was a pastime, and the player worked a regular job, and could only practice their sport during leisure hours, which as noted, were restricted to evenings or Sunday afternoons. Outdoor water sports were particularly weather-dependent, you couldn't row a scull in waves and wind, but you couldn't sail when it was calm. Even with wind, there was always a challenge, light winds made the racecourse boring, high winds were dangerous; if you capsized you could be in real trouble, sailboats were heavily laden with ballast, usually stones or lead, they would go down quickly. Rescue boats were rowed, and it could be a long time before you were picked up if you went into the water, assuming you could survive, as no one wore life jackets at the time (they were advertised in Eaton's catalogue but were for women and children and seagoing ships). What this meant was that you had maybe 30 Sundays in the season, maybe half of those had a decent breeze. A few hours out on the water once a fortnight was not going to make you the greatest of all time, but assuming all your competitors were coping with the same limitations, at least it was a fair fight when regatta day arrived. But there was always that desire for an edge, for your team to beat the other team and the accordant desire to bend the rules, or possibly break them, just a bit, as long as no one could find out or really do anything about it, and that meant the more time spent on the water, the better. The job of professional athlete was just coming into sports culture, someone who played a sport and was paid for it, on a full-time basis. As noted, rower Ned Hanlan had turned pro and lived in part on competition prize money.

The professional-amateur line was at play even a hundred years later with snickering in the sports press when it was revealed that the victorious "gentleman" of the 1980 Cup challenge, Dennis Conner, was essentially a paid professional athlete. With Canada's challenge in 1983, the skipper had been similarly set up with a non-sailing "job" doing promotion and PR work, but he admitted openly to reporters that his real 9-5 work was preparing for the big race. No one bothers asking any more.



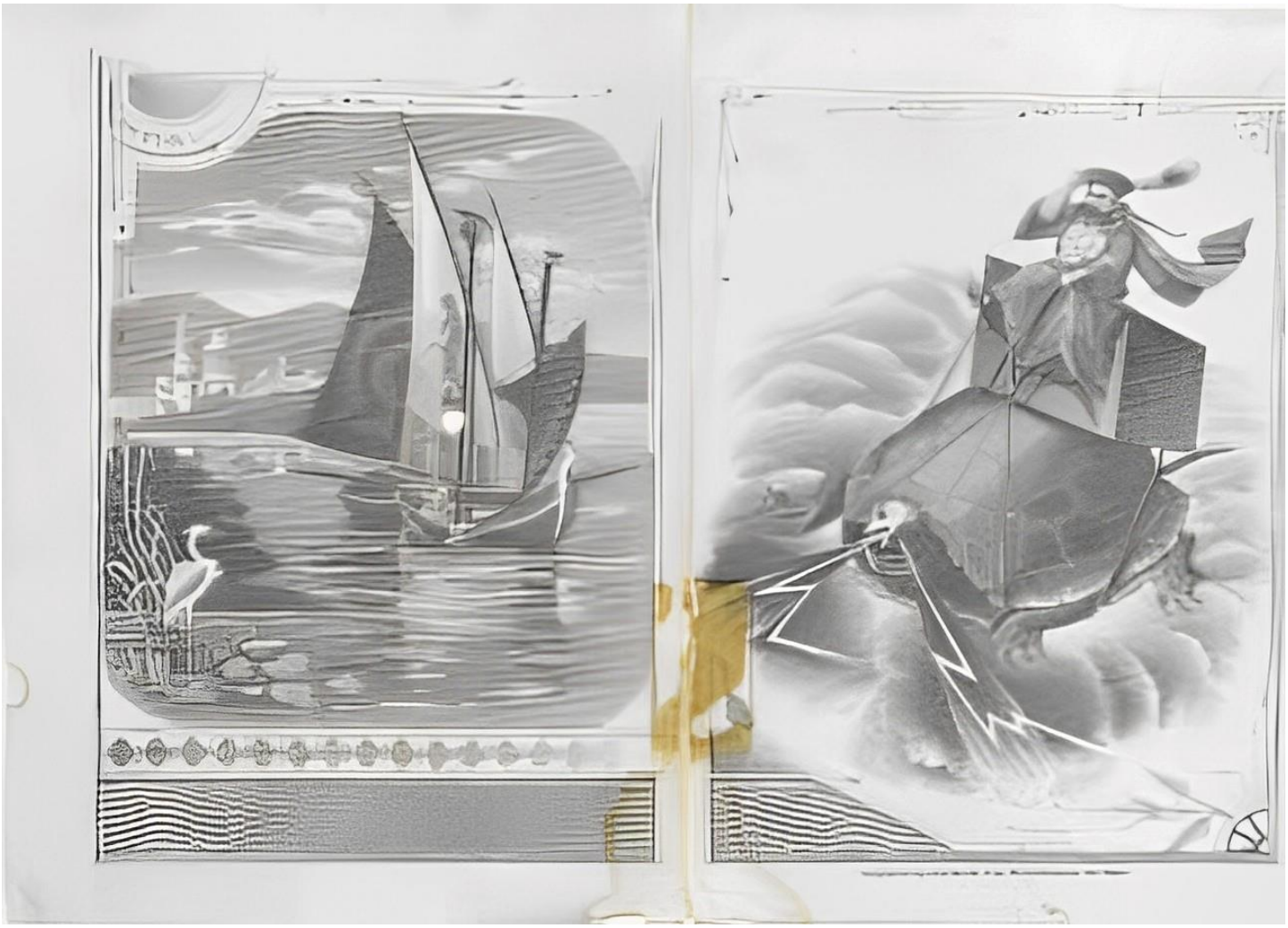
The Countess in racing mode.

Cuthbert had planned to make changes to the boat, shortening the overhang on the stern to save weight, fix the mast and sail issues and take another shot at the Cup the following year. He tried to get support from associates back home to back his plan to buy Gifford out, that was turned down. The syndicate had finally run out of financial steam or willpower to continue. The Dufferin was listed for sale at a price of $5,000, most likely the total construction cost. But the

boat had no business value and was essentially just a $5,000 toy. Now there was another problem. It appears that a lot of the financing for Dufferin was just that, a series of accounts payable on top of more payables, and another layer after that. Cuthbert had used his charm and skills of persuasion to get enough cash to get the project underway, after that it was order after order of goods and lumber and an accumulating chain of payment delays. Creditors began to register with the courts for the unpaid amounts. As the Dufferin was still docked in New York City harbour, payment enforcement fell under the jurisdiction of the City's Marshals. The Marshal was the civil judgment enforcement officer, the one who actually collected the money from a court judgement, for which he received a fee of 5% of the monies recovered. The yacht was sold to the first offer that came along, a businessman from Chicago; the offer was a fraction of the list price, this was never disclosed I suspect it was about $1,000 to $1,500, the proceeds were distributed to the business creditors, the syndicate members got nothing; as the principal, Gifford ended up being stuck to cover the unpaid bills. Their stake was gone, the boat was gone, there was no cup, even the papers, particularly the New York dailies criticized the challenge as shambolic; too little money (true), poor craftsmanship (not true), an undertrained crew (partly true), the nerve of those Canadians thinking they could challenge the American juggernaut and it's deep-pocketed sportsmanship. No one questioned the fairness of money being the determinant for success in sporting activities, this was promoted as being completely reasonable and has dogged competitive sports even since; to win the big prizes you need to spend the big dollars.

Gifford did not run for public office again and returned to his law practice. The Royal Canadian Yacht Club stuck to local races. After 1876 there were no Cup challengers; the British remained uninterested. It's fun to be on top, less so after a while when you realize no one else wants to play. But the Canadians had not been idle, Cuthbert finally found new backers in the Bay of Quinte Yacht Club, set up in the small town of Belleville. The Bay of Quinte supporters were even less well-heeled than the Royal, mostly sawmill operators, single factory owners and small-town professionals such as doctors and lawyers. To allay fears after what happened to Major Gifford, Cuthbert decided to act as the boat owner; he would take on all the risk on his person. He just needed some cash and the consent of the Club. The challenge letter was sent to the New York Club on May 16, 1881, and accepted in a return letter on June 12. The challenge was to be made by a boat called the Atalanta; the only problem was that no such boat existed at that point and only the acceptance letter provided the leverage to jumpstart the project. The main funding appeared to come from the Flint and Holton Lumber Company. Billa Flint and Ezra Holton had built this enterprise through exploiting timber in Hastings County, the company was passed on to Flint's adopted son Gregory, who had married Holton's daughter. By

1881 Flint Sr. was largely retired, Gregory now ran the mills and like many entrepreneurs then and now, had an affinity for sports and was willing to sponsor a competitive activity ostensibly for publicity, but most often just because. He provided workspace for the Atalanta construction, and provided the lumber and materials for the project on a pay when you can basis. At least Atalanta, as a sloop would be, in theory, a more manageable and affordable project. The racing schooner with its two masts had been replaced by the racing sloop, with a single mast and smaller sail area. The new boat would be 64 feet at the waterline and 46.6 tons and in theory this size of boat was rated for 3,118 sq feet of sail, Atalanta had over 5,000 square feet, still at least just a quarter of what had been on the Dufferin five years earlier at a total build cost of $2,100. Since construction had begun so late, there was a mad rush to get the boat seaworthy even for the 1881 season at all, and not to make the B.Q.Y.C. have to ask for an extension to 1882, which wouldn't have been granted anyway. The boat was launched and ready to sail, more or less, by early October, and even as it sailed out into Lake Ontario, Cuthbert and his shipwrights were still nailing down the decking and doing the very basic finish work below. A full trip up the St. Lawrence and around the Maritimes and down to New York was simply out of the question, there wasn't enough time, so the boat would have to go through the Erie Canal, it was the only way. Sailing through this narrow waterway was almost impossible, the cost of a small steam tug out of the question, Cuthbert went old school and hired a team of mules to pull the boat from a now little used path at the bank, his men using barge poles to keep the craft away from the muddy sides. Worse still was finding out that Atalanta's draft was too deep for the lock stations, so the crew had to shift the ballast to one side of the bilge to heel the hull over so it could be pulled through, and then right it once more out the other side. There are a total of 35 locks on the canal from the Lake Ontario entrance point to Albany, so this should give one some idea of the epic hassle of the trip. Once they reached Albany, they were now in the Hudson River itself and could sail the rest of the way. News about the transiting problems reached the press, and they dubbed Atalanta, "the Canadian Mud Turtle" and there is even a cartoon of Cuthbert, clad in Scottish shop finery, crowned with tam-o-shanter and tartan scarf flying in the breeze as he steered such a creature through rough seas, lightning bolts issuing from its mouth.



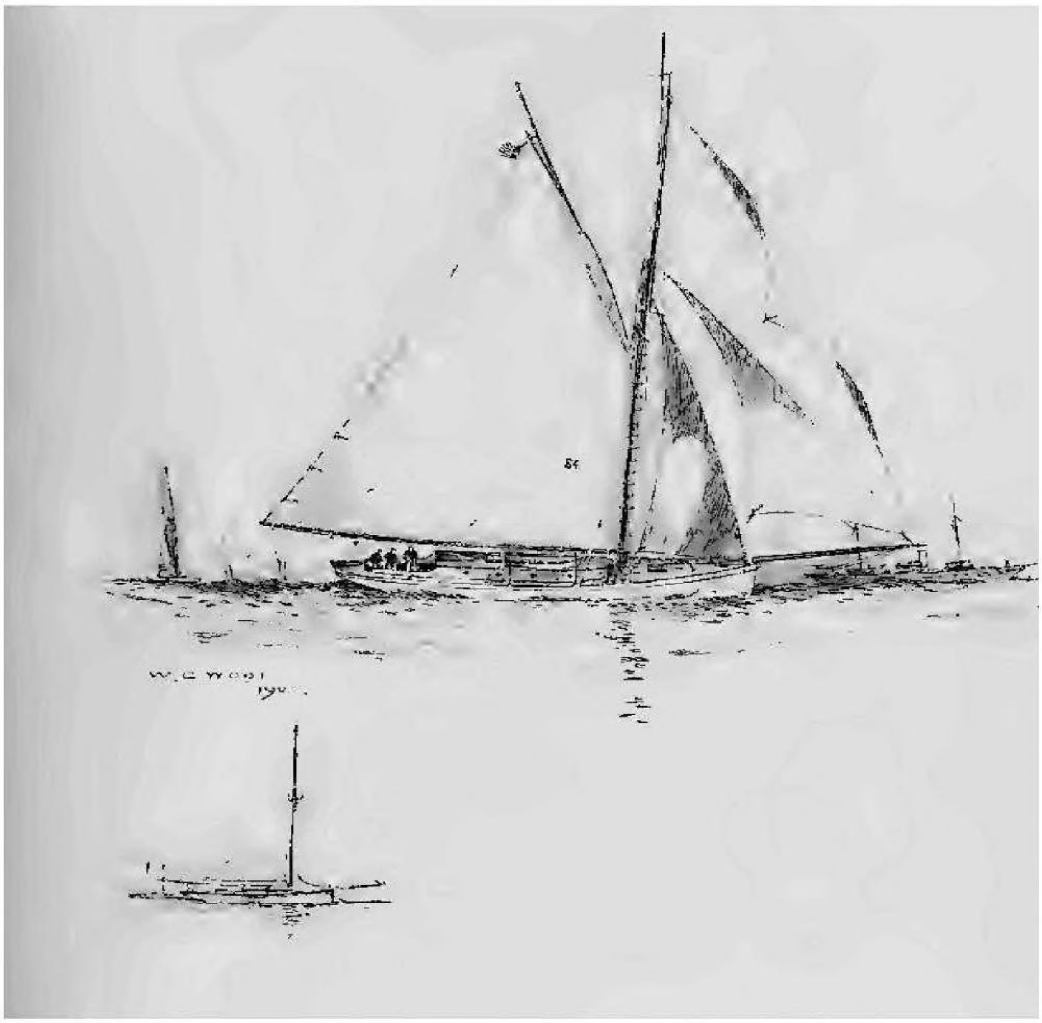
Alexander Cuthbert enroute to New York, on his mud turtle

Once Atalanta reached New York on October 30, familiar problems began to resurface. The extra men needed for the race would not be coming, I suspect because the was no money to pay for their train trip or food and lodging. It was already past the season, now the first week of November and Cuthbert literally threw himself on the generosity of his adversaries, who agreeably rounded up a brace of amateur local sailors to get the program moving again. A weeklong break was granted so Atalanta could be hauled out and the rough plank surfaces hand-planed to some degree of smoothness. Once again, there was the issue of excessive and poorly fitted sails, and Cuthbert realized this wasn't going to work and spent the hull improvement time cutting down the sail size and tightening the fabric, so it didn't crease and bag.

Canada had but one challenge craft, the defending Americans had a small fleet of racers to pick from. All of them cost $20-25,000 each just to build; the Pocahontas, the Gracie and Mischief,

so in raw dollars, the America spend on the Cup was $70-80,000, probably more, against the Canadian spend of $2,100 -$2,500. Mischief was unique as it had a forged iron hull while the other two were made of wood. Its design was the work of naval architects applying mathematics and fluid science, rather the old school rule of thumb to whittle a half model out of wood (Atalanta's half model hull still exists and is on display at the Bay of Quinte clubhouse, as is the model for the Countess of Dufferin). Mischief was chosen as it had a smaller gross weight handicap (three minutes) as opposed to Gracie (seven minutes). The Deed of Gift says nothing about weight handicaps, so why this became an issue is not clear, but it caused a lot of ill-will in the New York club, not the least of which was the shifty personal attributes of Mischief's owner, Joseph Busk. Mischief was hauled out and its hull sanded to a mirror smoothness, tinned with lead and as with Madeleine, polished to an absurd degree.

There were supposed to be three races, the first was scrubbed due to fog, Mischief won the remaining two by a half hour margin in each case, over a 30-mile course. The reporters blamed Atalanta's loss on poor sails and an untrained and unpracticed crew with little knowledge of ocean competition, but what really happened this time, particularly given that the winning margin was even greater than between the Dufferin and the Madeleine.



Atalanta, with its balloon job unfurled.

The first race started at 11:15 AM on November 9. Neither boat spread their topsail. Mischief's main sail was spread fully, Atalanta's were partly reefed for good reason, hit by a sudden wind blast the boat almost went over and the safety tug kept close to the Canadians in case they did so. Once out on the open water, both craft spread their jib topsails, Mischief's crack team did this quickly, Atalanta seemed to be fumbling for several minutes with theirs and once it was done the boat began to heel over badly and they had to take it down again. At the turn point in the course, Mischief slid around comfortably, Atalanta missed the marker buoy and had to do a quick circle to get it right the second time. Over the three-four-hour race, Mischief beat Atalanta by 28 minutes. The second race was run the next day, the gun went off at 11:30. This time it seemed to be a real race until 1:13 PM Atalanta's spinnaker-boom snapped and its crucial speed sail, the balloon jib collapsed, and the race was effectively over. Still, when the boats reached the turn around point on the course, Atalanta was only 2 minutes behind Mischief, even though the balloon jib had been out of action a half hour earlier. Mischief gained a further 36 minutes on the disabled Atalanta, which finally made it over the line in the late afternoon November dark of 5:30PM. However, if you do the arithmetic, the time loss between 1:13, arriving at the turn and finally making to the finish would indicate that prior to the failure, poor sad-sack Atalanta was actually ahead of shiny big-bucks Mischief. The idea that Atalanta was an inferior craft does not, as they say hold water. However breaks and crashes are part of sporting competition and compounded with the dumb mistakes of the first race, the Americans kept their cup.

Still, the actual issue of exactly who what country won (or lost) is hard to assess. Cuthbert came with half a crew, all Canadians, but had to recruit Americans to make up for the missing race complement. Still, Atalanta's owner lived in Canada, his family lived in Canada, all his boats were built in Canada; he had even carried out some of the shipwright work himself. As for Joseph Richard Busk, it was hard to pin down exactly where he lived or even where he was at any given time. Like many modern wheeler dealers, he was a citizen of the world. He maintained a house, not in New York, but in Newport, Rhode Island, 175 miles away by train. Not only was he not American (he never took out U.S. citizenship), he was not even British, as had been reported, but he had in fact been born in the Russian Imperial capital of St. Petersburg. His paternal grandparents were from Gothenburg in Sweden. His main business Stateside was as a cotton broker working for Rathbone Brothers of Liverpool. According to the Deed, the nationality of the actual boat owner (or owners) was not material, as long as these persons were paid up members of the challenged club (Busk was that, at least, the NYYC now has a branch in Newport, although it is not clear Busk had anything to do with this). So the America's Cup remained in America, after having spent 30 times that of the challenger, won by a crew of

highly trained, full-time salaried sailors, in a boat owned by a foreigner. In spite of what had been a fairly easy victory, the America's Cup advisory board decided to amend the Deed to exclude any yacht club not in a city that bordered on salt water. Since the American money was in the coastal cities (how little times have changed!) and most Canadian money was in on inland waters, this effectively eliminated any competition from anyone on the Canadian side of the Great Lakes. This move seemed baffling and more than a little vindictive; there was no clear reasoning ever put out for the change. I suspect they were more than a little afraid of the Canadians, and that with time and some extra dollars and a little more practice time their rag-tag team and rough $2,100 craft might humiliate the Americans and their lovingly burnished $25,000 super-sloops. Well and truly beaten after this, Cuthbert called it quits and returned to his trade on the shores of Lake Ontario.

Cuthbert may have been the most storied and formidable figure in racing sailboats, but he wasn't the only game in town. Cecil Marlatt, the owner of a large tannery in Oakville, commissioned a shipbuilder named Captain James Andrew to build a racing schooner called the Aggie, named for Mrs. Marlatt. Having survived the Countess of Dufferin fiasco, the R. C. Y. C. was back in the game with Aggie, which would go on to win 83 races; albeit all local ones, international competition would have to wait for the coming of the racing sloop Canada in 1899.

Marlatt/Andrews Aggie, still hard at it in the 1920's.

Cuthbert was in Cobourg once more, working on another sailing yacht project when he passed away in 1890 at the age of only 49, leaving his wife, five children a still well-used fleet of sailing and steam craft, and an estate estimated at nothing. There was no one of his stature, that is no one who could do it all, and did, since then.

The next big thing, the first successful international challenger Canada. Built in New Brunswick, it became a sensation in Ontario.

The Countess of Dufferin was raced for several more years, before being set up as a floating restaurant for the 1893 Chicago World's Fair. After that the hull was towed out into Lake Michigan and sunk. Atalanta also raced for some years and finally ended up in New Orleans,

with an engine installed, as an excursion boat. There was no further information on it after 1910. The last of Cuthbert's boats, the Katie Gray, was still afloat in the early 1930's a sixty-year lifespan and was finally left on the banks of the Moira River, to return to the elements. Aggie lasted even longer, from 1887 to 1945, when it was wrecked near the Burlington Bay lighthouse.

Katie Gray in the 1920's, the last survivor of the Cuthbert Fleet.

Chapter 6: The Mariposa Belles: The Steam Excursion Boat Robt. Davis & Sons, William O'Mara

The **Olive** was built in Smiths Falls in 1875 by William O'Mara. Although very much a "freighter" it became a popular excursion boat in the 1890s.
- National Archives of Canada

The Olive was part of Ogle Carss's transport and excursion business, based in Smiths Falls

In 1845 owning a pleasure steamboat was about as likely as owning your own private jet is today. If you wanted to journey by water, you went on a commercial excursion craft, much as you would a cruise ship now.

Captain Robert Davis learned the trade the way they all did, starting off as a chore boy and working his way up to the wheelhouse as a ship's master. Like Knapp, Mallette and many other rivermen, the season on water lasted from April to November and then you had to find other work or live off your summer savings, which were usually pretty minimal. Davis wasn't the

first boatbuilder from Wolfe Island. The first was Thomas Davis, builder of the legendary sloop Nonsuch, which was launched in 1841 and sank shortly after, the first major commercial ship to sink in the Great lakes. There was no relation though, Robert Davis was born in Ithaca, New York and moved to Wolfe Island to set up a boat and later shipbuilding business.

The St Lawrence Seaway in the late 1800's could not be navigated all the way by any but the smallest boats. Seagoing ships could venture as far south as Morrisburg before running into the Long Sault rapids. There was a navigation canal dug on the south side of the Cardinal village peninsula which allowed passage by smaller boats (it's mostly still there, with the stone riprap sporting a fading version of the national flag). There was unimpeded progress straight from there to St. Catharine's, where you came to the Welland Canal, which was expanded in 1882 to allow for ships over 200 feet long through. The Americans built much larger locks at Sault Ste Marie and on the St Clair River which allowed for development of the big ore and grain ships known as Lakers. The big ships, which would include the Noronic, Hamonic, Assiniboine, and Keewatin were all true lakers, they were all too big to escape the Seaway and until 1913, Port Weller and Buffalo were the end of the line.

As a result of the planned 1878-1882 Welland canal expansion, there would be larger boats needed to be built and needing repair. Davis was able to find the backing for a drydock installation. His company, known as Robt. Davis & Sons (Matthew had been born in 1861, John, George and daughter Francesca came shortly after) had actually been set up on Wolfe Island and his earliest steamboat projects Constance and Princess Louise were launched there in 1878 and 1879. This was only temporary as he had purchased a strip of waterfront behind French harbour known as Fort Frontenac. This was to be the new home of Davis & Sons and where he would build a dry dock.

There was no shortage of ship and boatbuilding competition in Kingston. The first steamboat, a low-pressure steam powered boat named Juno was built and launched from Kingston in 1833 by John David Smith. The boats rolled off the launch ways regularly, from schooners, barques, brigantines to the low pressure and after 1860 the high-pressure steamboats. Some were specialized boat building companies and others were shippers who rented a yard and hired carpenters and millwrights to build them a cargo carrier. After the boat was launched and sent on its shakedown cruise, the tradesman moved on. All of them used a wooden rail leading into the water to set up and launch their boats. They all went stern-first. At the time Kingston ship building (these were commercial builders) was dominated by Calvin Company and Henry Roney, both who had yards on Garden Island. Calvin Company, was run by Dexter Calvin, was

part of a trading and shipping business that had been in the business since 1841. Later Calvin picked up Henry Roney's operation and put Roney in charge of the combined enterprise. Davis was the new man in town, literally.

The drydock concept had been around, in various forms, since the Phoenicians, but only came into its current form with iron hinges and gates and steam pumps to remove water. These structures required considerable capital investment. A large hole had to be dug in the shore, in this case 180 feet by 31 feet wide and 10 feet below the waterline. The earthen walls had to be lined with pilings, watertight swing doors installed as well as powerful steam pumps to pump the water out and keep it out. However, once it was working you could simply build a ship or boat in it, flood the drydock and open the gates or have a ship steam in, close the gates pump out the water and work on the hull. In 1879 the dry dock opened. Shortly after the steamer Myles headed in for hull repairs. Myles's hull stuck on the sandy bottom before even getting close to the dock facility. The boat was pulled loose, and Davis's first big customer steamed away for service at a yard in Port Dalhousie. Further dredging was done. It should be noted that there are actually two separate dry docks in Kingston. The first, as noted, the Davis installation, the second was a government project on the Lake Ontario side. The Davis dry dock was a basic no-frills, wood-walled dirt-floored hole, the government operation had concrete reinforced sides and floor, with large step-like shelving at the bottom. The Davis dry dock is still in business, the government dry dock was closed years ago and now is permanently flooded as part of the in-water display of the S.S. Keewatin, the last of the Great Lake cruising ships.

The real money was in building steamboats and the challenge was in building the steam engine. The early steam engines were huge and slow. They worked on the low-pressure principle, which had been the standard for almost 150 years. Steam built up in a boiler and by means of a valve was let into the cylinder where the steam cooled and then a valve let the steam out into a second chamber where it condensed. Originally this system was used in a water pump, but James Watt came up with the idea of containing the steam in a cylinder and using the steam to push a piston up and down, turning a metal rod now known as crankshaft. The condensation left a partial vacuum in the cylinder which pulled the piston up, creating the power stroke. A flywheel kept the motion. This action provided a useful power source, since almost all powered mobile action requires the turning of a wheel.

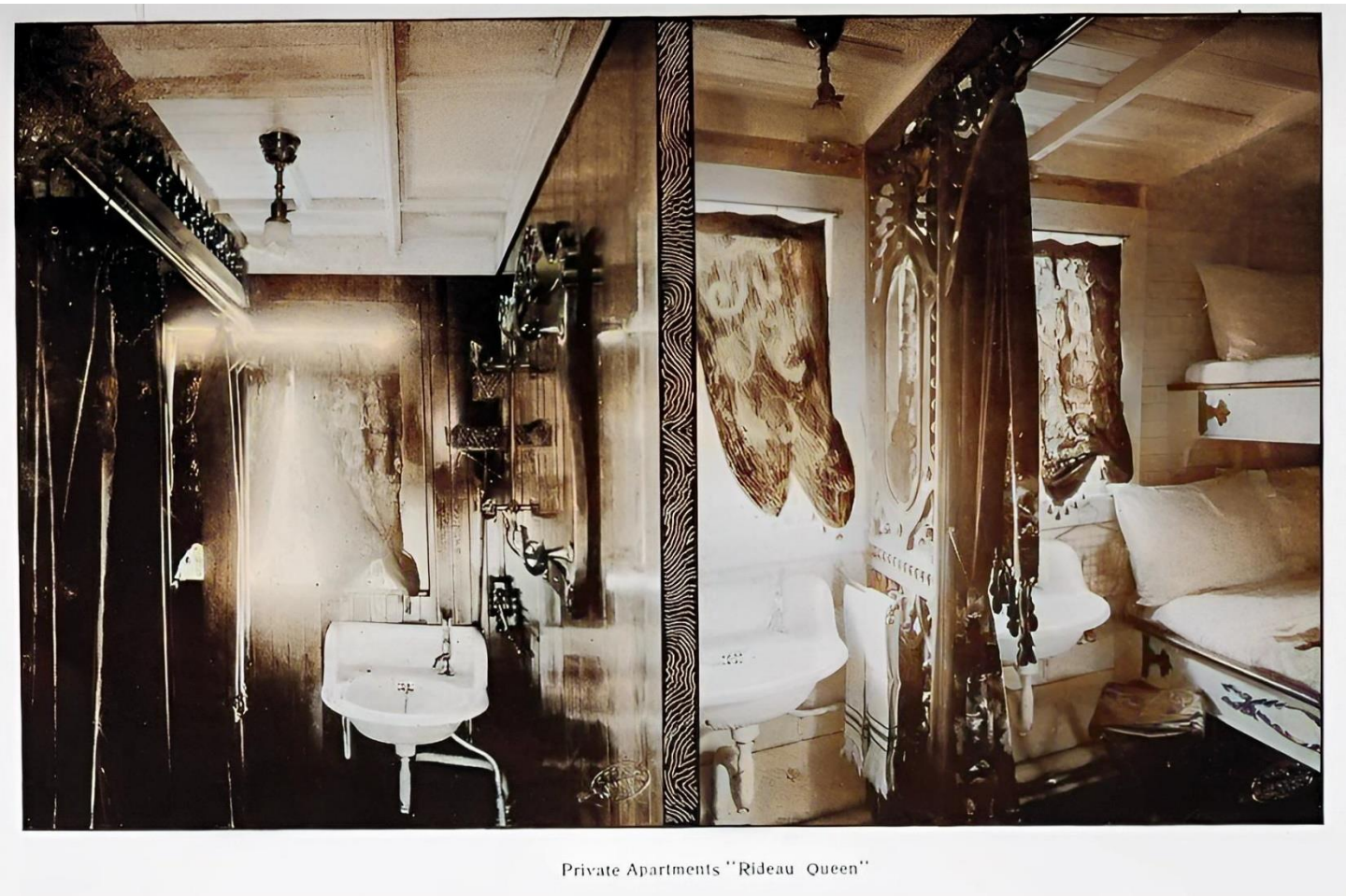
The machining work for the early engines was crude in the extreme. Cylinders were made by attaching concave forged iron plates together to form a tube, which was then clamped into a large wooden brace which contained a vertical boring device. The boring device was run by

horses at a wheel which would run the boring bar at probably little more than 30-40 rpm which as any machinist knows, such extremely low speed cuttings tend to sound like the giant fingernail on a giant blackboard. This process usually took six weeks and if there was an error, you had to start all over again. By the 1850's the low-pressure engines were being phased out by the new high-pressure systems, which ran much higher boiler pressures and worked by forcing steam into the cylinder and pushing the piston down and then letting the partially condensed steam out so the cycle could begin again with a fresh charge. Later, engineers added a second and sometimes a third cylinder to make maximum use of the exhaust steam from the first cylinder. These compound marine engines were complex and extremely expensive and were usually only seen in naval and commercial seagoing ships. The small boat engines on the Ottawa, Rideau and St Lawrence waterways were usually just singles. The most important advance was made in 1862 when a young British machinist and model maker named John Thornycroft built a scaled down version the huge ship steam engines and fitted one into a 36-foot launch. The boiler and engine were housed below decks where they would be attended to by an engineer while the passengers rode in comfort in an aft cockpit with seats and a canopy. The engine drove a shaft which fitted through the keel to which a screw propeller was attached. The powered pleasure boat had arrived.

Steam yachting in the US was expensive. The boats and engines cost several thousand dollars and you still needed a certified steam engineer to run your steam engine, regardless of size along with regular government boiler inspections. That is to say you could still run your own steam engine, but you had to take all of the courses and qualify, whether you were a doctor lawyer or engineer. Steam rules in Canada were predictably more muddled. You didn't need a licensed engineer, officially, for a small personal steamboat. But you needed to know what you were doing.

The Rideau Queen

Davis's two sons joined the business in 1878. John had learned the business on the ground and Matt learned it as his father had, as an apprentice on a ship. The first big contracts were for commercial shipping, mostly for hauling bulk cargoes such as lumber or coal. In 1885 they built the Rideau Belle. The Belle was one of the first excursion boats built. An excursion steamer is basically a party boat, and the Belle was designed to carry 40 passengers for day trips-there was no overnight accommodations. It had one closed deck and was trimmed with cherry wood.



Private Apartments "Rideau Queen"

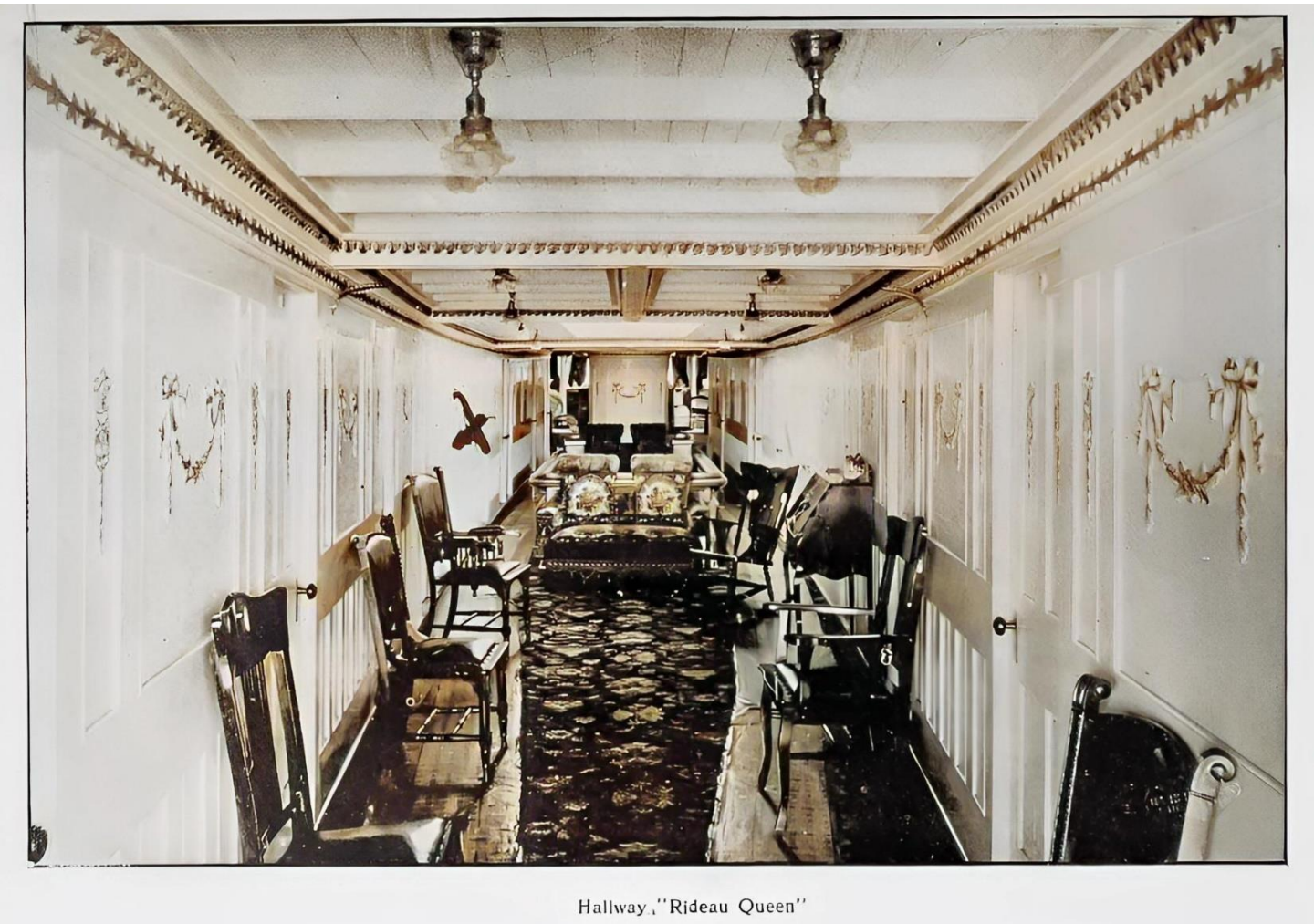
The original investors Willam Bajus and Donald Norman operated the Belle for only four years. The boat caught fire and partially burnt in 1884. It was sold to Ned Flemming and his brother William in 1885 and rebuilt and recertified for 50 passengers. The Belle continued to have problems. Excursion passenger traffic was growing, but it was still a short season, basically June through to the first Sunday in September (the Labour Day Monday was still to come). In 1887, Rideau Belle was held liable for causing $1000 worth of damage to the newly built Tay locks. The reason for this is not known, it certainly wouldn't have been due to a collision, the boat didn't have enough power and couldn't go fast enough to do anything more than bump into a lock gate. The other possibility might have been as a result of storage. During the winter it was normal for the big steamboats to winter inside a lock. This served as kind of a drydock for hull repairs and marine inspections. It is possible that the Belle wintered in Beveridge locks and its weight caused damage to the stone walls during spring thaw. That is more likely the source of such a big bill. At any rate that was a huge and unexpected cost.

Dining Room "Rideau Queen"

Flemming was an experienced captain and just as important, a popular cruise host. However, by the mid 1890's there were numerous cruise boats running the Rideau and St. Lawrence systems and the Belle may have been one too many. In 1893 its passenger capacity was recertified from 50 to 100 passengers. This hints at some urgency in finding a way to make the boat pay (there were rumors that Flemming was even trying for a 200-passenger limit, fortunately this prospective disaster never went through). Finally in 1895, while tied up at Sand Lake, the Belle caught fire once again and was a total loss. In spite of the fire, some of the cherry wood trim was salvageable and the Newboro Lockmaster used it to build himself a handsome outhouse. Flemming took a job as Captain of the Rideau Queen. After the cruise boat era declined, he finished his career as master of the government run work tug Loretta .

Another master, Captain William O'Mara of Smiths Falls built a steamer named the Olive in 1879. The Olive, like all steamers of the period was built outdoors, there were no buildings to house these big boats. The men did all the woodwork, fastening and fitting and testing in the

open air, dealing with the cold wind, frigid East Ontario winter temperatures and ice and snow when it fell. For O'Mara, like all builders, winter was building, and the open water season was for shipping or cruising. The Olive was a dual-purpose boat, with the main deck used for hauling cargo and the top deck for cruise customers. Unlike Rideau Belle, Olive was a success (I expect the cargo paid the bills) and remained in service into the 1920's.



Hallway, "Rideau Queen"

The grandest and most memorable of the Davis excursion boats was James Swift. James Swift was the principal coal merchant for Kingston and had a hand in a number of businesses, (and I suspect, was one the original backers of the dry dock project). Swift decided to get into the excursion boat business as well. This was Matthew's first big project. He was the designer as well as the project leader. Matthew had the designer's touch and Swift was one of the handsomest of the excursion boat fleet. The Swift had an iron plated hull, so there was less hassle with rot in the wooden hulls. It had a 25 hp engine. All of the excursion boats had relatively low horsepower high torque engine. The torque makes all the difference. The historical record rates these engines as very weak, at 5, 10, 15 or 25 hp, but I suspect the power

assessments of the time are different than today, if you put one on a dyno it would show a lot more; recent studies with draft horses had found that a live horse actually pulls about 14 hp.

In less than six years the Swift had burnt, not to the point of being unusable, but it needed a complete deck and cabin reconstruction. Davis had the Swift towed back to the dry dock. The steel hull was gutted, the boiler and engine replaced and a whole new deck and superstructure was built. The boat was renamed the Rideau King and fitted out with an observation deck on top and staterooms below for overnight cruising. The King had cooking galleys, toilet facilities and running water going through taps into a small porcelain sink in each stateroom. The rooms themselves had two beds which could be divided, as on a train, by pulling a heavy curtain. The King carried trippers up through the Rideau system from Kingston to Ottawa and back again.

Davis was only one of the number of commercial ships and boatbuilding yards that had appeared in the latter 19th century. The largest was Dexter Calvin's installation on Garden Island. Calvin had a genuine business empire, including shipping, storage, and the shipyard. Under the supervision of Henry Roney, the Calvin yard produced ships from the 1850's up until the end of World War 1. However they were strictly commercial builders and did not make any private yachts, or bother with cruising steamers, they were strictly in the freighter, tug, and barge business.

Chapter 7 The Private Steam Yachts 1885-1915: Robt. Davis & Sons, Davis Dry Dock Ltd. Polson Iron Works, Limited

22 THE CANADIAN CANOE CO., LIMITED, PETERBOROUGH, ONT., CANADA.

Portable Steam Launches.

FOR some time there has been a rapidly increasing demand for small boats having some motive power to propel them, other than the oars or paddles—something so simple that they will not require a practical engineer to

The private steamer, very much like the one advertised in the Canadian Canoe Co. brochure 1895, on Lake Muskoka.

When a new product hits, everybody tries to make one. The motorboat mania of the 1901-1914 period was matched was a mad rush to build gas inboard boat engines. Hundreds, maybe even thousands of builders appeared in North America during this era. It was not hard for a small machine shop to build a basic inboard boat motor. One relatively small Canadian builder built quite a few such engines, although perhaps no more than many. Yet today it is St. Lawrence that is the definitive marque of old boat inboards. Perhaps a thousand still exist and many more are being found and rebuilt. Davis had jumped into the gas engine powered boat business, they basically pioneered in Canada, but their motorboat line continued to be very heavy solidly built slow moving Something new was appearing in Canada as well, the private steam powered pleasure boat. Until the 1860's steamboat engines were simply too large and at several thousand dollars at a minimum still useful only for commercial purposes. The idea of owning your own steamboat made little sense unless you were a king or a rajah. This would change.

All polished up and nowhere to go. Actually a reproduction, built by Hunter Boats for Cameron Peck to demonstrate a turn of the century naphtha steam engine. Gasoline was boiled in a boiler, then condensed, sent to a second gas tank and then used to feed the boiler. Go for a ride? Thanks I'm good. Peck family archive

In 1862 a young British machinist and model maker named John Thornycroft built a scaled down version the huge ship steam engines and fitted one into a 36-foot launch. The boiler and engine were housed below decks where they would be attended to by an engineer while the passengers rode in comfort in an aft cockpit with seats and a canopy. The engine drove a shaft which fitted through the keel to which a screw propeller was attached. The powered pleasure boat had arrived. Before we get carried away, it is important to note that steamboats were still only for the very well off. These boats, even the simple ones, could cost anywhere between three to five thousand dollars even for a 25–40-foot launch. The owner needed a qualified fireman and engineer aboard and this was a highly paid servant.

Davis Dry Dock 1907 Steamboat "Scudder" Peck family archives

Elizabth J Author Photo

Interior shots of Davis 1905 built Elizabeth J. Author photos

Elizabeth J Bow view. Photos by author

The 1890's was the Golden age of the private steam yacht and its preeminent builders in Canada was Polson's in Toronto and Davis in Kingston. Private steam yachts prior to 1870 were usually only for the richest individuals. Davis began building smaller scaled steam yachts frequently only 35-40 feet long and even smaller, some only 18 feet long. The personal powered watercraft had arrived. Again, this was still at a price and that price was between $2-$3,000 at the lowest, and $5,000 and up for some of the 40 foot plus models. This was serious money and way past the means of most families, even in the middle class. This was the cost of an average family home. This was something mostly heirs, factory department store owners and generally any owner of a medium-sized business could afford. Like the gasoline engine cars that would show up thirty years later, they often needed a chauffeur, or in the case of steamboats, an engineer.

1907 Davis Dry Dock steam boat Scudder Peck family archives

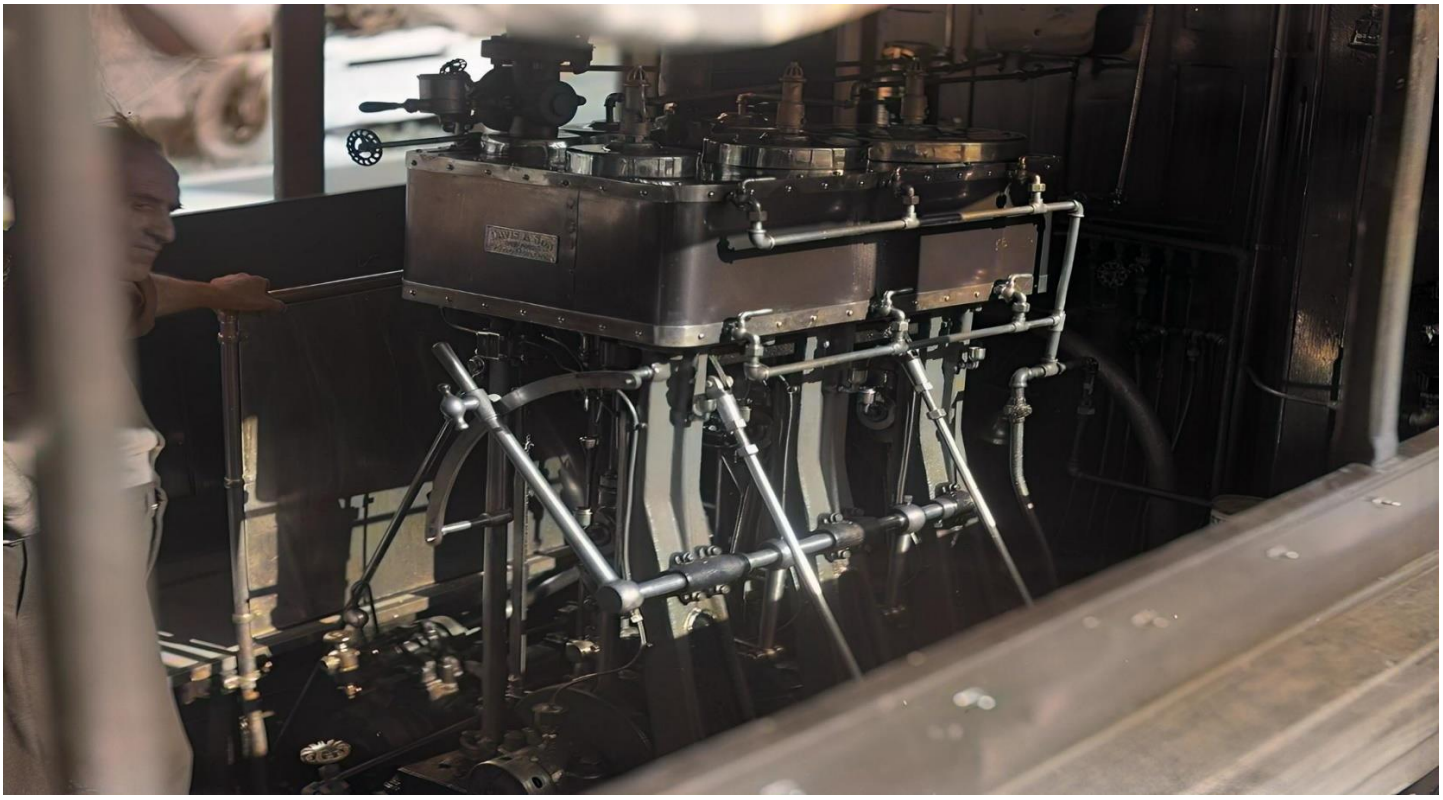
Scudder's small triple expansion Davis built steam engine. Peck family archives

You had to know what you were doing in running a steam engine. A half hour before leaving the dock, the engineer would climb into the boat and open the boiler and start the fire. This was done by setting a few small sticks in the fire chamber and then feeding in progressively larger pieces of wood. This was usually hardwoods such as maple or oak although birch would do. Coal was expensive and mostly for commercial craft, wood was cheaper and easier to obtain. The boiler was comprised of a combustion chamber at the bottom and on top was a series of tubes through which water was fed. The tubes provided greater heat surfaces and got the water boiling that much faster. The steam was let into the cylinder by means of valves, operating very much in the same manner as car engine valves today, although the tolerances were not as tight as they needed to be in a gas engine. The steam pushed the piston down until the valve opened again and let the partially condensed steam out. In some of the later turn of the century models, there would be an expansion chamber on each side of the piston. doubling the power output. Some of the larger engines were compound double and even triple expansion engines where the cooling steam would travel from the small initial cylinder to two or more progressively larger ones to extract all possible power from the steam. But these were rare at the pleasure boat end of the business, and only appeared in Davis boats by the end of the 1890's. There were other pressures, not just mechanical and economic ones. John was the company president, Mat worked as the plant manager, boat designer; he was the senior carpenter and problem solver, but he was still management and part of the Davis family executive. At the time the Davis boat shop staff were all listed as carpenters, and there was a set pay of $0.175 an hour and given 59-hour work week meant an annual salary of just under $600 a year (note boat carpenters at the Knapp shop in the 1870's made $350-400 a year). The per hour was just an average, all workplaces had a sliding pay scale; the foremen and senior workers made more, the apprentices and new guys and low-skill guys made a lot less. The steamfitters and boilermakers were paid much better, and they were not as prone to fomenting labour trouble. By 1900 the carpenters were demanding a pay increase to $0.20 an hour for a nine, as opposed to a ten-hour workday. This seems to be a perfectly reasonable request; John replied with a firm no and told them to get back to work. The following events were reported by the Kingston Whig-Standard March 15, 1900.

"The carpenters employed last week at Davis's shipyard at the joiner work on the new steamer, numbered ten men, nine of whom belonged to the union. On Thursday they sent a requisition to Mr. Davis, requesting that on and after Monday, March 12th, they be allowed the privilege of working nine hours per day and their wages be twenty cents per hour. This was signed by eight of the union men. Nothing was spoken of the matter again until Saturday afternoon, March 10th, when three of the men received a note in their envelope with their

money stating that their services were no longer required. The other five men got a note stating their services were no longer required unless they would work for $1.75 for a ten-hour day. They went back pending a meeting of the union on Monday night, and at the meeting decided to quit the next day if a settlement was not arranged between the head men of the company and a committee appointed by the union. The committee visited one of the company and he stated he could do nothing until he saw another of the company, who was out of the city at the time. The men then visited Mr. Davis, who stated that he would not grant the men the privilege of working nine hours a day, or twenty cents per hour either."

Of the ten workmen on the project, eight made demands, three were fired outright. The eight men (and the three dismissed and remaining five under threat belonged to be United Brotherhood of Carpenters and Joiners of America. The union generally provided strike pay ($1 a day for six days) in these situations, but this time, couldn't seem to decide about what to do and ultimately never provided any support. The strike fizzled out. As is always the case, the actions left a bitter taste, the next year Mat, who had worked closely with the strikers, left the company, and set out on his own as an independent designer and ship inspector on contract with the Federal Government. John simply moved past the issue, there were new contracts, both commercial, but increasingly for private luxury steam yachts.



Davis "Il Cid" triple compound engine Peck Family archive

El Cid coming into a lock. Peck family archive

And going… Peck family archive

Dr. John Alfred Brashear's long association with Lake Muskoka and Davis did not begin happily. Brashear had started out as a Pittsburgh millhand in the 1850's and through sheer force of intellect, personality and effort had risen to become, first expanding on his millwork skills, an optical products manufacturer and using this technical know-how to become a respected astronomer. He lectured, served on the boards of Carnegie Mellon and Pittsburgh Universities, set up the Allegheny Observatory and his optical business outfitted the high-resolution reflecting telescopes that made possible the astronomy breakthroughs of the next fifty years. As often happens in successful lives, the trouble piles on all at once. in 1895 he was faced with the death of his only son from typhoid. To make the weight heavier, his wife, Phoebe, exhausted from caring for their son, tripped on the stairs and broke her leg in several places. The next summer he was able to convince Phoebe, who was fading physically from the mental and physical stresses of the previous year, to take the summer off and rent a cottage in the Muskoka's. Three years after, using money earned from lecturing, he bought an Island in Lake Muskoka and had a cottage and boathouse built on it. Mrs. Brashear enjoyed the cottage lifestyle but with her leg injury never felt comfortable in the little rowboat they owned. In 1901 He contacted the Davis works and ordered a thirty-four-foot steam launch. This was not cheap. The boat, complete with steam engine would cost $5,000 (probably more than the island and

cottage had cost). He had some mad money saved up for a trip to Europe so he had planned to buy an island he knew he could get cheap (recommended by a rich friend) and then flip it at a quick profit (cottage properties were hot in Muskoka, as they continue to be 100 years later). However another one of their rich friends a Mr. Oliver, simply paid for the cost of the boat (It must be nice to have friends like that...). The Brashear's were the kind of magnetic couple that people simply gravitate around, they provide a kind of charisma and warmth many could not find elsewhere.

Phoebe the Second, shortly after arriving in Gravenhurst, summer 1915. Herb Ditchburn (at far right, in familiar straw boater hat) takes five to admire the competition.

The first boat, which they named the Alleghenia, was thirty-four feet long. It had a Davis built vertical water tube boiler and a compound steam engine. The boiler and engine compartment were amidships, and the cabin was separated into stern and forward sections. This is just a

guess, but I assume the women would congregate in the stern section and the lads would head forward where they could smoke their cigars and hang out with the Professor who would be at the helm. They hired a local boy to serve as engineer and fireman and it was his job to watch the pressure and feed hardwood pieces into the boiler. He had a habit of stowing extra wood underneath the boiler so to have a supply handy. In the summer of 1903 after a rough trip back to the island they tied up the boat and left the boiler apparently to burn itself out. However, the heat from the boiler continued to cook the wood stored underneath and at 11at night their neighbor saw a fire in the boat, rowed over to their island and raised the alarm. Dr. Brashear was able to put the fire out with dry chemical fire extinguishers but there had been a fair amount of charring and scorch damage to the woodwork and planks. He decided to have the repairs made. This time none other than Andrew Carnegie himself came to their aid and paid for a whole new launch from the Davis works. The new boat, a copy of the Alleghenia was named the “Phoebe” and it was completed in 1904 and delivered, by flatcar to Gravenhurst where it was launched in the spring. Phoebe survived Mrs. Brashear. who died in 1910. In 1913 the boat was put up for the winter in a boathouse owned by Mr. Robinson. The boathouse burned in November 1913 while Dr. Brashear was lecturing in California. The boat was destroyed. Once again, Mr. Brashear’s Muskoka friends came to his rescue and ponied up for a for a third steamboat, to be known as Phoebe II. Again they contacted Matt Davis to provide the design and Davis Dry Dock to build the boat.

Steam technology had come a long way since the Davis’s had started in business. Phoebe II’s boiler could produce 180 psi and the double compound engine could produce 65 hp. In this case the steam was let into the space above the piston and the space below as well, doubling the power output. It was a very efficient way of using steam but the convenience of gasoline engines, even with their notorious starting problems, was pushing steam aside. Weight was a problem, for one. Advanced as it was, Phoebe II’s steam system including boiler, engine and the assorted metal fittings weighed 2.2 tons or 4,400 lbs. A medium duty 36 hp four-cylinder gas engine made by Erd Motor Co in 1910 weighed 700 lbs. Like all of its predecessors, Phoebe II was a solidly built boat. The cabin work was all Honduras mahogany (at the time referred to as “Cuban“, although this was just advertising, as most mahoganies were now sourced in French West Africa). The planking was 1” pine over oak ribs and engine stringers. The boat was 9 feet wide but 48 feet long which gave it the appearance of a fast launch , even though its top speed was 10 mph.

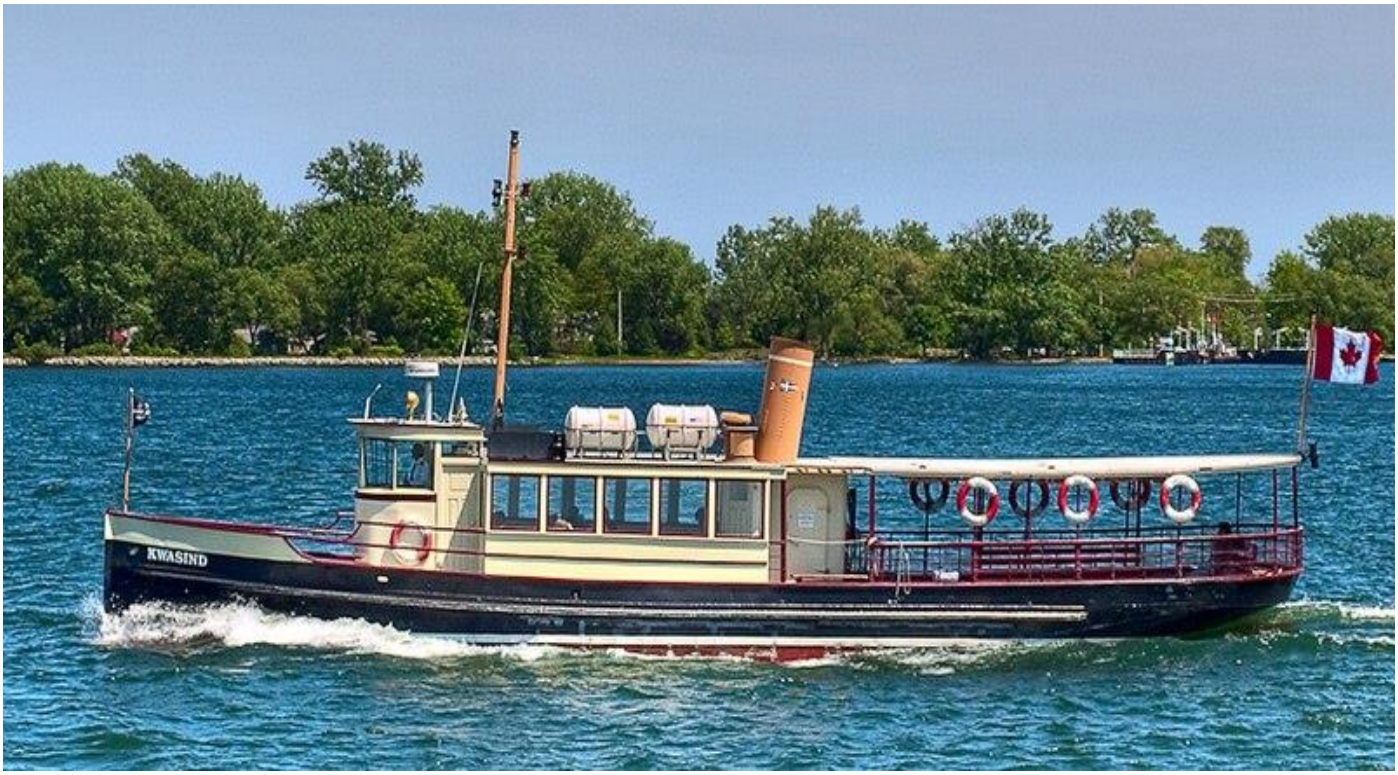
Preparing Phoebe II for spring launch, 1920's. Photo Peck family archive

Dr Brashear died in 1920. The boat went through several owners on lake Muskoka until it was purchased in 1939 by D. Cameron Peck, another Muskoka cottager. After Peck sold his collection of boats and cars in 1952, Phoebe was purchased by a steam enthusiast named William Weiant. Mr. Weiant was part of the first generation of antique boat restorers, who focused on reviving the old steam launches. The steamboat group, mostly Americans, gravitated around several East Coast old timers such as George Whitney and Oscar D. York who had actually built and run the old steam launches, in one case since 1879. They kept Phoebe for several year and after a few more owners a man named Jack Telgmann would be able to purchase the boat and donate it to the Kingston Pump House Steam Museum. Phoebe II was still floating and workable and was able to make the trip up to the Manotick Antique Boat show in 1980. Even so it was in serious need of attention and the pilots were extremely careful not to bump the boat's frail and crumbling stem.

IN all respects the Davis works was in the mold of the classic British yacht yard, in the same manner as Herreshoff in Massachusetts or Thornycroft in England Everything for the boat was made in the shops. The boat hulls were built there, the steam engines were made in the machine shops (one of Herreshoff's boilers exploded in 1888, and Nat Herreshoff lost his steam license, and therefore was barred from designing engines for sale; they stuck to boat hulls after that). Davis had no disasters on its resume, although a number of its boats were lost to fires, this was considered to be a natural hazard of steamboats. Small hardware items such as fittings were made at foundries, particularly the Ontario Steel works in Gananoque but everything else was the creation of the works craftsmen. Steam engines were built, as much as possible out of stock metal products, round bars, sheet metal and cast-iron plates. Cylinders were ordered from the foundry and then set in a boring device and bored out. Pistons were set in a lathe and cut down to fit in the cylinder. There was no concept of mass production, but since every boat was a special custom contract there was little need for it. This was the same for Polson Iron Works, but with more justification.

Davis yacht up on blocks at Baysville, mid 1940's. Photo Peck family archive

The Polson Iron Works: Boats and Ships

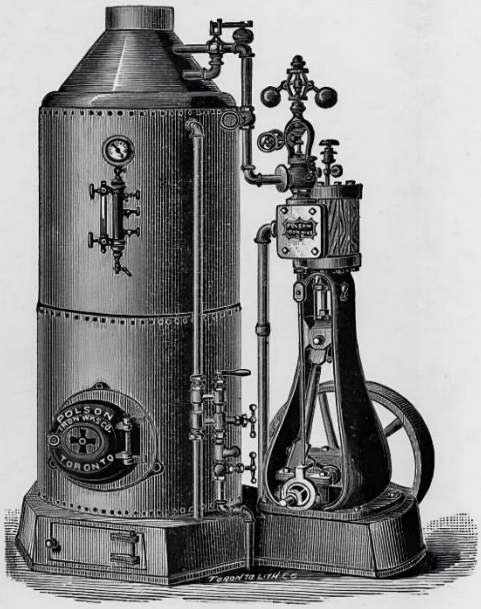


The Kwasind, purchased in 1912 and still owned and in use by the Royal Canadian Yacht Club

Everyone in Toronto knows Polson Pier, but who was the name behind it?

Born in 1834, William Polson was a self-taught mechanic who worked his way up to the position of senior engineer in several regional railroads. After his son Franklin graduated from college as mechanical technologist in 1878, he followed his dad into the railroad industry, learning the trade. In 1878 father and son started a side business making a line of 3-20 hp steam engines in their home town of Cobourg. In 1883 they set up full-time with a plant at the foot of Sherbourne and Esplanade in Toronto, with facilities now for both engines and boats. The business grew quickly and investor capital was secured for a much larger operation at the foot of Sherbourne and Esplanade in Toronto, with facilities now for both engines and boats.

The POLSON IRON WORKS COMPANY, Ltd.



No.	ENGINE						BOILER						ENGINE AND BOILER.					
	Horse Power.	Diameter of Cylinder.	Stroke.	Diameter of Band Wheel.	Width of Face.	Revolutions per minute.	Diameter of Shell.	Length of Shell.	No. of Tubes.	Size of Tubes.	Length of Tubes.	Square feet of Heating Surface.	Floor Space occupied.	Height over all.	Weight.	Price complete, with all Fittings.	Price, Boiler and Fittings.	Price, Engine and Fittings.
		Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.		Ins.	Ins.		Ins.	Ins.	Lbs.			
1	3	4	4	20	4	200	26	54	30	2	30	65	30x50	72	1300	$250	$125	$115
2	4	4	6	24	5	180	28	60	36	2	38	80	30x54	82	1700	315	160	135
3	6	5	7	26	6	175	30	72	45	2	44	120	36x60	92	2200	400	230	150
4	7	6	7	28	6	160	34	72	82	2	46	150	44x68	92	2800	475	265	190
5	10	8	8	40	10	150	42	84	92	2	52	260	52x78	104	4200	655	300	330
6	14	8	10	40	12	120	44	84	96	2	54	350	52x78	104	4800	680	315	350
7	18	9	12	48	12	150	48	96	104	2	60	452	52x90	120	5400	810	420	365
8	20	10	12	60	14	130	52	96	120	2	50	500	56x96	120	6000	900	450	425

Prices of Engines include "Judson" Governor, all oil cups and drain cocks, fly wheel pulley, throttle valve, lubricator and wrenches.

Prices of Boilers include steam and water gauges, safety valve, blow off cock and pipe, check valve, grates, cast base and smoke-box.

The Engines and Boilers complete and connected include all the above, and Pump or Inspirator.

ENGINE AND BOILER WORKS,
ESPLANADE EAST.

TORONTO, ONT.

Polson offered a full line of small-medium size steam units including both boiler and engine, 3 hp to 20 hp.

The Toronto plant in 1888 was already a big operation, with several mid-sized buildings; was this all just from bank loans? It's worth remembering that the small operations were usually just one owner-builder and a few workmen, the owner owned the business and relied on the local bank for any financing needs. But at a certain size, you needed capital from other investors, much like the investor television game shows of today, an entrepreneur would pitch an idea to investors and they would receive a share of the business in turn. Cuthbert, Gilbert, Gidley, Greavette, were all financed by investor capital, the owner often started out with a minority interest. In some cases, such as Greavette, Tom Greavette eventually bought out the initial investors, or in the other direction, such as C & C Yachts, eventually the name founders were bought out by new investors coming in. Herbert Ditchburn financed his company's expansion from bank loans. It was good news in good times, he kept the profits and called all the shots, but when things went south the financing costs began to weigh heavily.

The Toronto plant in 1885 was already a serious concern.

The first yacht at the new Toronto works was Mocking Bird, built in 1886 for Owen Sound businessman Edward Todd. Todd moved it along in 1895 to a new owner in Port Arthur and thereafter continued its westward journey by being loaded onto a flatcar and shipped all the way to Lake Winnipegosis in Manitoba, where it ignominiously sank in 1901. Vivid was built on spec in 1886 and sold to John Hanlan (hotelier and father of rowing champion Ned) later that year. Both Vivid and Mocking Bird were big boats, the latter 84 feet long and 56 gross tons, and the former 72 feet long and 38 tons., over 1886-88 they produced a string of much smaller craft, Rescue, Devenish, Express, Cora, Spartan, and Siesta. Rescue (also purchased by Hanlan) was 7 tons, the remainder a modest 2-4 tons, complete with equally modest 2-4 hp engines. In 1887 they built the first composite yacht, the 49-ton Electric for J. J. Wright, president of the Toronto Electric Co. Although equipped with a small steam engine, Electric was also a schooner, with two equipped masts and quite capable of sailing should the owner so desire. The Electric was known as a “composite” hull, made of both wood and iron. The logical assumption would be that the below water would be steel and above wood, but strangely it was the opposite. The above water was iron (with wood finishing) and the below water was traditional wood plank

construction. Iron plates were relatively easy to seal, and could be relatively easy to replace, whereas wood would be prone to rot and needing a lengthy over-winter amount of dry dock time to fix; the engineering escapes me. One reason could be that the below waterline part of the hull required compound curves, something that with lumber could be relatively easy with a steam box. Above waterline metal shapes were flatter and bending could be done with forges and sledgehammers. Compound curving steel plates required heavy steel pressing machines, something Polson did not have at that point. That would change.

As soon as the Toronto plant was up and running, Polson was after an even bigger deal; to be the first steel hull shipbuilder in Canada. The C.P.R. having just finished its transcontinental railroad, was also expanding its passenger steamship division. One of its first ships, the Algoma, had recently run aground and the hull could not be repaired, therefore they put out the bid for a replacement. Such work was usually awarded to yards in Glasgow, but this time the CPR executives Beatty and Van Horne decided to take a chance on William Polson & Co. Polson had experience with smaller craft, but big ships required a different level of technology, knowhow, and equipment such as large steam powered metal presses. They did have significant backing from John Bellamy Miller of Parry Sound Lumber and Navigation Co., the assumption being, like many bootstrap bids, that the capital infusion and the progress payments would finance the project; the banks would take up any credit needs, and all would be well.

Toronto was no help, as usual but the town of Owen Sound had provided all sorts of support, including free waterside property and a seven-year exemption from business taxes, free dredging for the launch basin and a low-cost option to buy a vacant dry dock for $15,000. Ironically the one thing Polson's did know, which was engine building, was not needed here as the engines to be used were salvaged off the wrecked Algoma. Bruce Randolph in his article on Polson and the CPR contracts openly queried why the CPR would award the project to a small engine building firm with no specialized staff or equipment, let alone any real shipbuilding experience? Answer: because it was cheaper. The completed ship build price was $132,000 and given the ultimate hit of $40,000 to Polson's books, it was clear the CPR had gotten a deal. Manitoba was far from perfect, a carping journalist who visited the ship once it was launched noted the rushed and sloppy above-waterline work "loose rivets and putty everywhere". CPR and Polson rushed in media spin doctors who published a number of countering articles praising how wonderful in fact it actually was. The capital of Polson, at least prior to the Manitoba, was $100,000 comprising the Polson's share, (probably around 25-30% with Miller and other outside investors bringing up to the remaining $70-75,000. The good news was that all the hard asset costs, building the shipyard, bringing in the needed capital equipment, including massive

steel bending presses were already in place. The loss on the Manitoba, while concerning, was not unexpected for a startup enterprise, profitability is a learning process, and as we know so well from the online empires of today, you have to sacrifice profits and eat losses to grow the business, sometimes this takes years, along with very patient investors. They simply moved onto the next project, a railcar ferry (at the time it was not uncommon for trains to be ferried across a river in the absence of a bridge) to be called the Ontario. Polson came in at $231,000, $40k under any of the other bidders, supposedly with some hope that the government in Ottawa would take tariff's off the needed speciality steel from the U.S.

The railcar ferry Ontario, pushing through winter ice

When this didn't happen, they switched to importing steel from Mother England, which did not have tariffs as part of the Commonwealth, but had transatlantic shipping costs added to the bill, so there wasn't much of a difference by the time the material arrived. Halfway through the Ontario build, the Polson's began to run out of money and began to offer shares in exchange for trade payables, the result being that the vendors now had a majority interest in the company.

Ottawa senator and wool tycoon Edward Sanford kicked in more cash for shares and a project of his own, the yacht Naiad. The Naiad was a return to the bigger yachts like Vivid and Mocking Bird, at 29 tons. The Naiad was listed as a composite yacht. Steel was durable and perfect for commercial use, but it was not a very warm material, hard and mean and not very inviting to the rich persons who paid for luxury and that meant white oak of cherry which could be sourced from Ontario forests, or expensive mahogany.

Senator Sanford's Naiad, on its way to the Cameron Peck collection, 1943.

There was one more yacht, the Annie C. Hill, built in 1890, a little lighter at 17 tons, but that was the last project. Polson had been in a continuous state of capitalization, reorganization, restructuring, receivership, liquidation, and recapitalization since 1885 and after another lowball bid in 1892 it finally went bust for good in 1893. The good news was that the engine plant in Toronto had been doing well, and Miller and Polson, who still controlled the Toronto operation, purchased the Owen Sound yard assets from the receivers. As we will note later, there was no formal bankruptcy law in effect in Ontario at that time, when a firm ran into trouble, the owners and the creditors sat down and worked out a plan of continuity, sometimes this meant new owners, new debt arrangements, even the former owners could bid on the bankrupt assets of the corporation they were the shareholders of! Polson and Miller were able to buy the assets of their former enterprise, once capitalized at over $300k at the low price of $41,000! But the town of Owen Sound had lost patience with the ever-troubled Polson shipyard operation, particularly

after an implied-threat to the town council for a loan of $50,000 or that they would shut the plant and go under, leaving 300 unemployed workers for them to deal with (this was denied). In 1895, Polson's packed up it's equipment and left town, with the plan to restart the ship operation in Toronto.

Franklin Polson, 1890's

William Polson had retired from the business at this point, Franklin was the CEO, with Miller as the sole owner. It appears the Polson family had put all their money into the Owen Sound operation, and when it finally expired, so did the family fortune, so their income depended on Franklin's executive salary of Polson Toronto. Ultimately stock options would allow him to regain a small share of the surviving Toronto Polson works, but Miller would remain the principal holder until the end. The Toronto plant continued to build engines but even by 1896, with the Owen Sound equipment and launching ramps in place, there were no yacht or shipbuilding contracts, understandably perhaps as Polson did not have a very good reputation and no one needed drama; they needed ships and were more inclined to award big contracts to Dexter Calvin's yard or smaller ones to Robert Davis, both in Kingston and considerably more stable and reliable operations. Polson needed something to get back in the game, at this point that would be anyone willing to spend money. That anything came from an unusual source.

Steam excursion boats were ubiquitous during this period. They tended to be similar in design, with sharp bows to cut the water but sufficiently beamy to remain stable and carry a lot of passengers. They were not fast, and even the most modern triple expansion engines usually

could not push a boat much faster than 12 mph. The only real speed was being made by large passenger ships. A few wealthy individuals in the US were experimenting with steam race boats, but these boats, such as the Norwood, were 60 feet long and could produce 400 hp with special super high-pressure boilers that could handle as much as 600 psi. The Norwood did make 40 mph in 1891, followed by several other one-off steam speed cruisers but the enormous torque needed quickly wore out their lightly built hulls and the boiler pressures over 300 psi were so risky the only consolation was that in the event of steam rupture, death would be instantaneous. What other options were there? Perhaps a complete rethink of the boat itself was in order. Enter Frederick Knapp of Prescott, who had just the answer.

Knapp (not related to the Barriefield Knapps) was a lawyer by training and a mad scientist by avocation. His inspiration was an entire boat hull that turned, rather than a propeller pushing a large hull. He actively promoted this idea for several years, but it only gained traction when it came to the attention of another promoter, William Leonard Hunt, aka “The Great Farini”. Hunt started off as a high-wire performer, following up the first Niagara Falls walk of Charles Blondin in 1859 claiming to be even more daring, but basically copying Blondin’s stunt routines. After his high wire career wound down, he built a promotional empire on booking stunt performers and circuses. By 1896 he was looking to branch out into innovative engineering projects and came across the Roller Boat concept. The meeting between Knapp and Hunt was a meeting of supersalesmen, and with Knapp’s concepts and Hunt’s financial backing, they signed a contract with Polson to build the craft.

Inside the Roller Boat: The steam engine and boiler are clearly visible at the back. The unit is very small, given the work required, a Polson product, around 10-14 hp. The man is possibly John B. Miller and son Henry, who would have been 10 at the time.

It's hard to understand the engineering behind this. Knapp's thinking appears to have been that ordinary steamboats ploughed through the water, rarely exceeding 14 mph, whereas steam trains, on the other hand ran on wheels and were approaching speeds of 60-75 mph. If you could build a boat that was a giant steam driven wheel, in principle it would be as fast as a locomotive, would it not? Knapp's initial idea was a hamster wheel set-up with a geared circular train track inside the hull with little steam trains continuously climbing the track and as they did do their own gravity driven weight would cause the hull to rotate the theory being that locomotives could go as fast as 50 mph on a track, just put a locomotive inside a wheel and it

should be able to achieve similar speeds over water; why not?; this idea was put aside, but it formed the basis of the final design. The result was a fairly big boat, 110 feet long and with a diameter (breadth isn't really an appropriate measure here) of 22 feet. There is some published confusion about how the machine worked, including an inner and outer tube, however, this is incorrect. There are two parts. The first is the outer hull, which is a tube with longitudinal baffles at the centre that would provide the forward (sideways?) water traction, essentially operating as a giant elongated paddlewheel. Inside there was a longitudinal platform with two steam engines at either end. The engines drive a spur gear, a small gear which drives a large ring gear the circumference of the outer hull. The steam engine reaches say, 150 rpm, the outer hull perhaps 10 rpm. A photo of the interior shows the inside of the craft, the boiler and engine visible, the engine itself is a single cylinder, and about four feet tall, I would guess about 10-12 hp, although with a fair amount of torque. So with two such plants, a total of 20-24 hp, it is still relatively little given the considerable size of what they had to move. On its inaugural run in Toronto it reached only 3 hp, but in fairness, a 110-foot yacht with similar power would not likely go much faster. It always has been the subject of derision, but it should be noted that the original craft was simply for proof of concept and was not intended for commercial production or use. It didn't help that Knapp was talking through his hat about investment capital of $3 million and potential speeds of 60 mph to the papers, almost guaranteeing bad press even if did exceed realistic expectations. Of course he was undaunted.

DOCK TRIAL OF THE ROLLER BOAT IN THE SHIP YARD, TORONTO.
A NOVEL CRAFT.—[See Page 1110.]

After docking the roller boat at Polson's, Knapp continued to look for funding. The $3 million of investment was not forthcoming, more promotion was needed. Knapp presented his ideas at a luncheon of the Canadian Society of Mechanical Engineers on November 9, 1905. Knapp's pitch was so good one of the engineers later admitted he almost believed it was possible. From the December 1905 issue of The Canadian Engineer:

> *Inasmuch as Mr. Knapp is not a trained engineer, but a barrister, with some highly original ideas in mechanics, it seemed like an act of temerity to appear before such past masters of the Science of Engineering as formed his audience, but with serene manner, and perfect confidence in his project, he set forth claims for his boat, explained away the causes of apparent failure in the past and propounded heterodox views on skin friction, wind pressures and horsepower formula in a way that even the most skeptical listener could admire.*

He told the audience that work was already underway for an even bigger roller boat, with better propulsion systems and more powerful engines and power drive. He did raise enough money to expand the propulsion blades on the existing boat, which had initially run only for 1/3 of the hull length all the way from side to side (end to end?). However, no further significant funding appeared after that, certainly nothing like the vast sums of his imagination. The boat sat in the slip, unmoved until one wild storm in 1907 it broke loose and floated around Toronto Harbour until it slammed into a tour boat. The owners of the tour boat tried to sue Knapp, but the courts awarded them a peanut sized settlement of $250. Knapp finally gave up. He sold the hull and the steam engines for about $500, but the successful bidder never claimed his purchase. Polson tried to re-purpose the Roller Boat into a sort of Whaleback freighter, but it's odd construction and unseaworthiness scuttled any commercialization plan.

Wanda the First, foreground, ahead of two other yachts and excursion steamer.

Even with the potential bad look of this project and it's ultimate failure, it had at least proved that Polson could build a ship without making a mess, and contracts began to come in once more. Polson's biggest fan turned out to be none other than Timothy Eaton, who multi-product department stores were popping up all over Canada. Ultimately three Wanda's would come out of the Polson works. Wanda I was built in 1898, the first private yacht for Polson Toronto. George Gooderham could have walked from his offices in what is now the Distillery District a few blocks over to check on the progress of his yacht Bobs. William Gage, founder of the company that made Gage school textbooks, ordered the 12 ton Ina in 1901 as did Elmore Harris, a Baptist Minister, although where Harris got the money for this sort of indulgence is not clear, he may have justified it as an expense for the Toronto Bible College, which he founded; often yachts or retired ferries or tour boats were sometimes used for revival meetings, although what benefit a boat on the water was supposed to have to do with the salvation of one's soul is not clear. The funds may have been from the family, the Harris's made farm equipment, and their company was eventually merged into Massey-Harris. Llano and Keego, built in 1905 were purely wood construction, the remainder of the post 1898 yachts were all steel or composite; one unique feature was the steel yachts could be disassembled and shipped in pieces by rail and then reassembled in a relatively straightforward manner once they reached their destination.

Reverend Elmore Harris' yacht, the Llano. Boat is actually backing away from dock, note the Captain's turned head

Hugh MacDonald Mowat, son of Ontario's first premier, Oliver Mowat ordered 22-ton Kate in 1903, again Mowat the younger was a lawyer and militiaman, not high paying positions to generate the kind of money for a yacht. John Pell Northey owned a small business supplying pumps and designed an upgrade to the foghorn, incorporating an electric motor and compressed air to boost the sound. This made him successful enough to purchase the 50-ton Ariadne, a used yacht and have it rebuilt by Polson to his personal specifications. The largest of them all, at 72 tons, went to Sir Clifford Sifton who made his money in railroad contracting before a turn in politics as the Minister of the Interior (unsettled and Indigenous lands) who opened to the doors to settlement and agricultural development of the prairies. William Mackenzie, who like Sifton made money off of railroad contracting (something Franklin Polson couldn't seem to get the hang of) and founded the Toronto Street Railway Company (we now know it as the TTC) and ordered the 68-ton Wawinet. But the new yacht builds simply dropped off to almost nothing after 1907 after Sifton's Morning Star. The Royal Canadian Yacht Club ordered a party boat named the Kwasind in 1912, and Eaton ordered the Wanda III, the last and grandest of the Wanda series in 1915 complete with triple compound steam engine. Was steam the problem? Polson had the big-money Toronto customers and the high-priced yacht contracts, but it was

Davis that was making advances in steam technology; their engines were getting much smaller with much higher output, they were also jumping in with another brand-new technology, naphtha explosive engines, or as we known them now, internal combustion.

The Wawinet

In 1891 in Gananoque a taxi boat was launched with a gasoline engine, (probably Davis as they were the only ones with the technology) known as the Tackhammer, for its “tap tap tap” engine sound. (unmuffled as mufflers had yet to be designed). This was Canada’s first gas engine powered boat. More would follow.

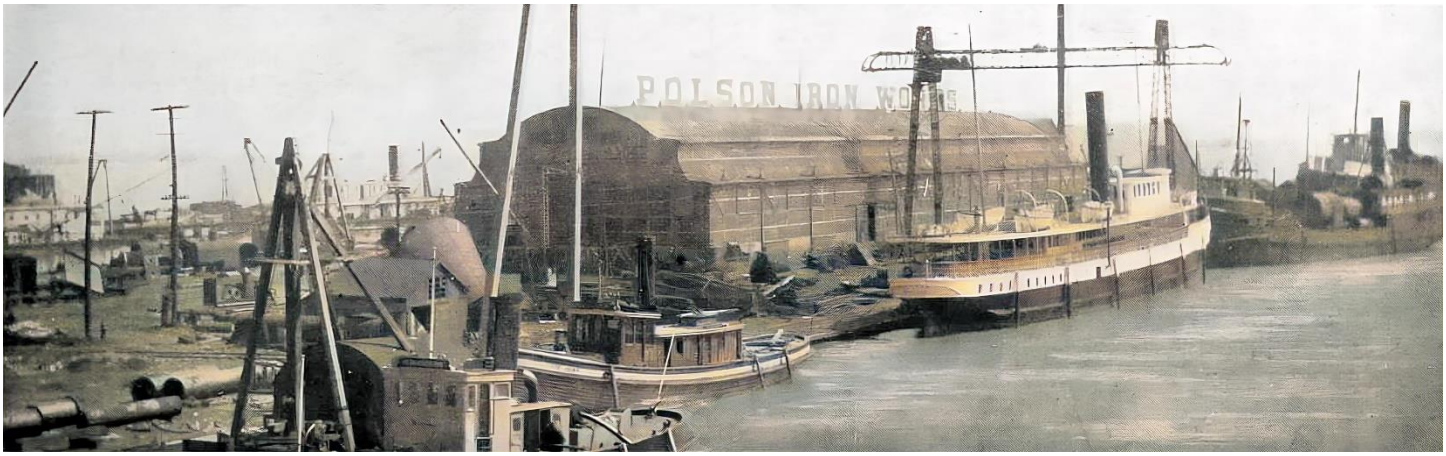
In 1894, Davis put out an advertisement for a gas engine in the periodical The Canadian Engineer. This was a single cylinder gas engine producing 12 hp and weighing (allegedly) 300 pounds. The magazine was a respected periodical on scientific matters, and I have to assume

this was merely relaying promotional information passed on by the Davis Works. It is complete blarney. No gasoline engine of that time had such horsepower with so little weight. The author's 1911 Ferro produces 12 horsepower at 350 lbs. in weight, almost 18 years later. Although the science of gas engines was developing quickly, this is a very pioneering stage, I would estimate the real stats as 2 horsepower at 500-600 lbs. weight. This had a Marshall gear, which used a feathering propeller activated by a screw rod turned by a small wheel. The feathering propeller was standard in steamboats and would have been on most Davis launches. Most small steamboats used them. As the picture shows you had to turn the wheel rapidly to shift from forward, neutral and reverse. This was a big machine and the cylinder stood about chest high. Spark was from a make-and-break system, known as an ignitor, where the crankshaft, through a complicated set up of levers and escapements opened up a set of points in the cylinder head, causing a spark to jump. The engine weight, complete with shaft and shift gear was probably closer to 1300 pounds,

The smaller launches came in standard and were 18, 22, 28 and 33 feet. The 18- and 22-foot models were fantail style, with one large open cockpit and the steam engine and boiler in the middle. Canopies were optional. The 28- and 33-foot models (the Alleghenia was a 33-foot style) had closed cabins made out of mahogany fore and aft with the engine compartment in the middle. The gas engine powered option had the engine set closer to the stern and the passenger cabin was set in the middle of the hull.

The luxury launch business built steadily and by the 1900's the business had fifty full time employees (labour unrest notwithstanding) earning a gross salary of $500 a week and the company had gross sales of the year of $50,000 (the strike had been over an average salary of $10.32 a week, apparently little had changed in terms of pay). In 1904 alone Davis turned out the Ilseway, a 51 foot excursion steamer for the Ilseway Fish and Game Club, the Erie, a 30 foot gas engine powered yacht for John Cleary of Wolfe Island, refitted the Arrow, a 35 foot gas powered launch sold to Hon. Raymond Prefontaine, Minister of Marine and Fisheries, the 51 foot steamer Margaret to John Geoghan of Kingston, the 69 foot steamer Willowdee, sold to W.L. Hepton of Leeds, England, the Wanda, a 34 foot steamer to John Davis himself, refitted the 40 foot steamer Bella Vista for John Wilmott of Beaumaris. Mr. Wilmott also acted, apparently as the expeditor for American customer in buying the Phoebe, a 40-foot steamer. The American customer was Andrew Carnegie, who was buying the boat For Dr Brashear. Only the largest boats had to register. The smaller 18–28-foot launches were not listed. so we know of only the largest boats.

There was a total of 16 boats launched in 1903, 14 in 1904, 8 in 1905 and 10 in 1906. Orders picked back up in 1907 with 18 boats launched and then slowed in 1908 with 7. 8 more went off in 1909 and 10 more in 1910 and 1911. One of these was one of Matt Davis's project (as designer), a 45- foot steamer called the Adjie was sold to Mr. Wilmott, who delivered it to customers near his cottage at Beaumaris. The sixth registered boat built in 1912 was not a boat but a scow to be used for hauling sand. No boats were launched in 1913. Only one boat, a second Phoebe to replace the earlier one went out in 1914. One more boat, a steamer called the Modello, was launched in 1915. After that boat building for Davis, as with Polson stopped cold.

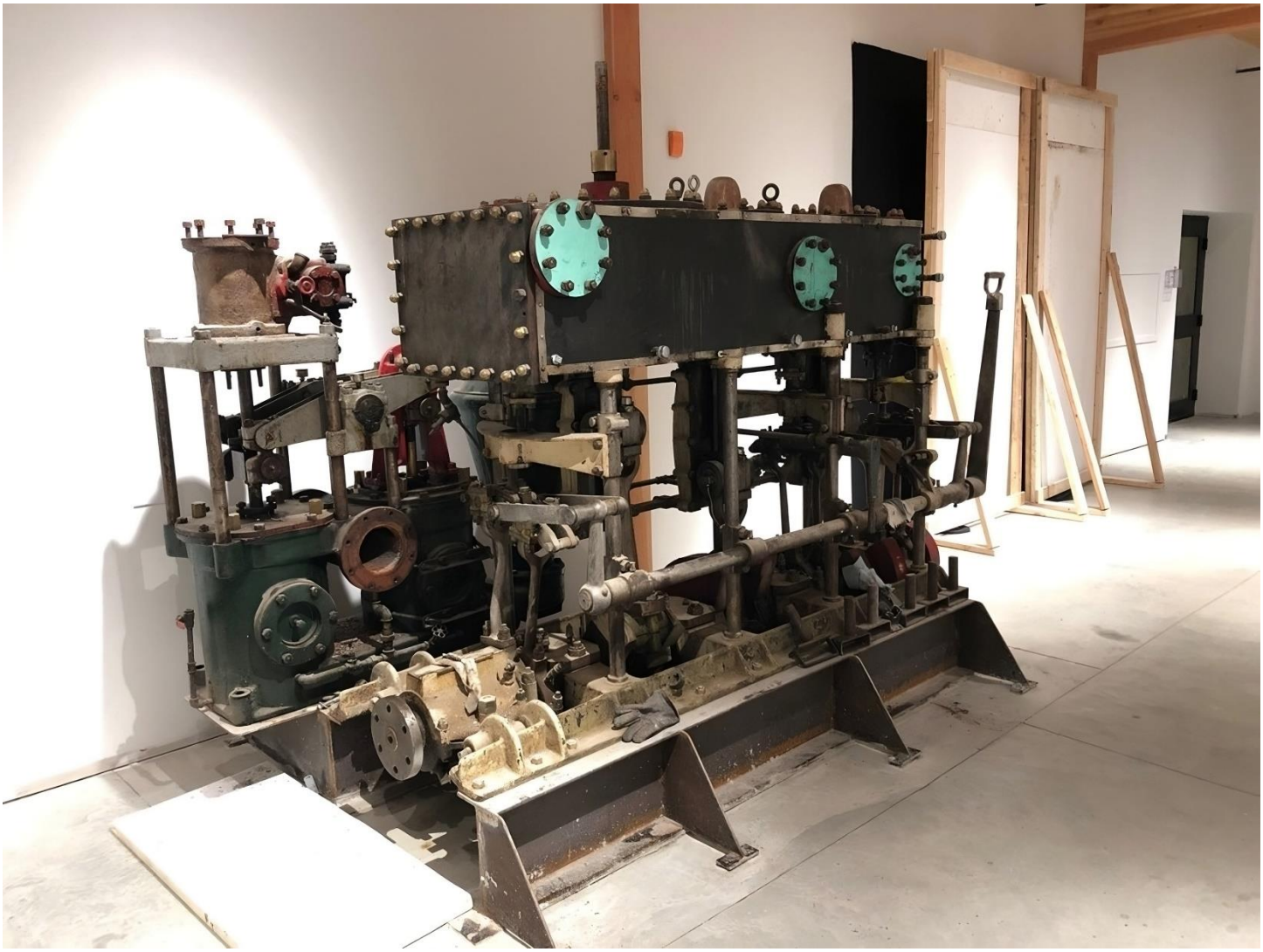


The final Polson Works, circa 1916

The real reason for this was simple. The steamboat era was over. So far as that mattered, so was the age of the gentle fantail launch. The fast and powerful launches of Gilbert had seized the boat buyer's attention. Davis had made some overtures to building fast launches and apparently had plans to build a gas engine racer in 1909, but nothing came of it. In the US steamboats were being practically given away and the steam engines were scrapped and replaced with gas engines. Up until 1907-8 steamboat engines were still being aggressively marketed in the ad pages of boating magazines but 1909 these ads had completely disappeared. More bad news was to come. In 1913 construction was started to expand the Welland Canal to handle ships over 700 feet long, in other words, real seagoing vessels. Davis's original 1878 dry dock had been expanded in 1889 to deal with ships 220 feet by 43-foot beam but now the big Lakers would have the run of all of the Great Lakes, from Port Arthur up to Brockville. The dry dock facility was now effectively obsolete save for repairing older, small lake freighters, tugboats, and work barges. Davis never made the transition to gas engines, and the industry simply passed it by in a

matter of a few years.

Polson's last steam yacht, the Wanda III, built for the Eaton family; photo taken 1920's



Polson built steam engine from Wanda III, now on display at the Muskoka Steamship and Discovery Centre

Sir Clifford Sifton's Morning Star, refloated in 1947 after 20 years underwater near Gananoque.

Franklin Polson had regained some interest in his firm before his death in 1907. His time was not an easy one in business or life, his first wife had died at the age of 25. Of seven children with the first wife Emma and his second wife Bessie only one lived past the age of 30, that was his son Franklin Murray, who became a successful architect and lived to the age of 75. Franklin had typhoid fever several years earlier and suffered bouts of "indigestion" and it was such an attack (most likely a perforated ulcer, which we now know to be caused by a bacterial infection, possibly a long-term symptom of the typhus). John Miller took over as President, but the day-to-day operations were run by his second in command, John Main as Miller had his other lumber and shipping operations to oversee. Polson concentrated on commercial ships and engine building after that. John Davis continued to run Davis Dry Dock, but his business attention began to wander as the years passed. What would the next opportunity be and what would it involve?