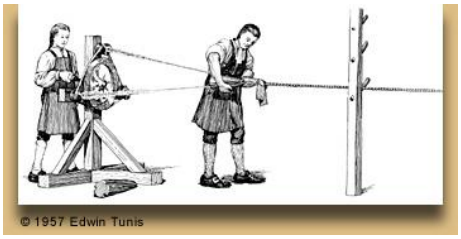


While one man cranks the spinner, the one holding the "top" walks backwards as the rope is twisted. From Edwin Tunis, *The Young United States, 1783 to 1830* (New York: World Publishing Co., 1969). Used by permission of the estate of Edwin Tunis.

Ropewalk

The Newsletter for
Shipwrights of Ohio – July 2024

Our Next Meeting: August 17, 2024;
Zoom Only
"Scratch Building" by Dr. D. Steven Keller

Table of Contents

July

Appears that the summer months do have an impact upon in-home activities, such as ship modeling. We had only two responders for the "Ships on Deck" portion of our meeting. Most admitted that other things had taken their time. We also were dealing with the libraries scheduling of family activities using all the classrooms and conference room at the library. This month we ended in a study room tucked away on the 2nd floor of the library. Lego block competition occupied the classrooms, etc.

The room is called the "Pink Study Room". Note the wall behind the smart TV. We had five in-person with an additional six on Zoom.

Excellent presentation on using an air brush by Lee Kimmins. I have summarized the content below.

Living in the middle of the State of Ohio, we seldom get notices of events occurring on the Great Lakes or the Ohio River. Check out the "Up Coming Events' section below. Just to peak your interest, "Tall Ships" are on the Great Lakes; we have a sternwheel festival at Marietta in September and the LST-325, out of Evansville, IN will be cruising on the river and will dock at Marietta also in September.

Jeff Northup, way out in Idaho, has felt the call to help on reaching other ship modelers. His efforts as well as what we are doing locally will be communicated in a separate note.

Last but not least, we are looking for a replacement for the president of this club. Our current skipper, yours truly, has held the position for 21 years and at age 87 feels the need to step down and bring on younger leadership. He does plan to continue to edit the "Ropewalk". Anyone curious

what the job of the skipper of the "Shipwrights of Ohio" consists of, contact the editor.

As always, take care of yourself and your families, look to those you know who may need help or are lonely and may be in need of human contact. Till next month. Your editor.

Announcements

Up Coming Events

If you are traveling this summer and in the area of these events, plan to include one or more of the following:

Great Lakes Tall Ship Festival

Those living around the Great Lakes as well as visitors will this summer be treated to the sight of a fleet of 25 tall ships sailing through the large fresh water lakes which straddle the border between Canada and the United States.
It is time again for the Tall Ships America's bi-national Tall Ships Challenge series of tall ship visits around the Americas. 22 USA communities and Ontario will be treated to the visits between June and September.

The festivities began June 14 with the Brockville Tall Ships 1812 Tour and will culminate Sept. 6-8 with Tall Ships Erie in Erie, P.A.

There will be an historic re-enactment of the 200th anniversary of the Battle of Lake Erie in Put-In-Bay, Ohio on Sept. 2, 2024.

The tall ships will be in Windsor, Amherstburg, Kingsville and Pelee Island, Ontario, Aug. 30 to Sept. 2. At each site, the tall ships will be open to the public for viewing and feature dockside exhibits and lively interaction with crew.

Among the ships participating at a majority of the ports are Norway's 210-foot *Sorlandet*, the oldest full-rigged ship in the world still in operation, Canada's 72-foot brigantine *Pathfinde*r and the U.S.'s 198-foot brigantine *Niagara*.

The tall ships were in port July 4-7 at Cleveland, Ohio, July 12-14 at Bay City, Michigan, and will be at Chicago, August 7-11. In Canada, the ships were at Brockville June 14-16, Toronto, June 20-23, Hamilton, June 28-30, Port Dalhousie, June 28-30, and at Sault Ste Marie, July 19-21. They will visit Collingwood, Aug. 16-18 & Penetanguishene, Aug. 24-25.

The mission of Tall Ships America is to encourage character building through sail training, promote sail training to the North American public and support education under sail.

Tall Ships America's Tall Ships Challenge is an annual series that rotates on a three-year cycle between the Atlantic coast, Great Lakes and Pacific coast.

Sternwheel Festival

Here in Ohio, visit the Marietta Sternwheel Festival, Friday, September 6 through Sunday, September 8th. More than 30 sternwheelers will be docked along the levee in historic downtown Marietta on the Muskingum and Ohio Rivers.

LST-325

If you are not aware, there is a major ship memorial dedicated to those who built and served in the amphibious forces of the United States Navy. Located at Evansville, IN is the LST-325, a decommissioned tank landing ship of the United States Navy, now docked in Evansville, Indiana. Like many of her class, she was not named and is properly referred to by her hull designation. Launched on 27 October 1942 and commissioned on 1 February 1943. She landed troops and materials in North Africa, and on the beach at Normandy France.

She was decommissioned in 1961, and reactivated in 1963 when she was transferred to the Greek Navy. In 2000, a group of x-naval personal, flew to Greece, restored the mothballed ship to working order and sailed her back to the USA in 2001. She is one of only two World War II LSTs to be preserved in the United States,

The LST-325 and her crew of volunteers, will take two cruises this summer:

- 07/03 – 08/06: from Evansville, IN south to Owensboro, KY on the Ohio River.
- 08/21 – 09/20: North on the Ohio River to: Pittsburg, PA; returning with stops at

- Wheeling WV, 09/05-10;
- Marietta, OH, 09/12-15.

SeaWatch Books:

See below, to whet your appetite with three tantalizing titles on the horizon:

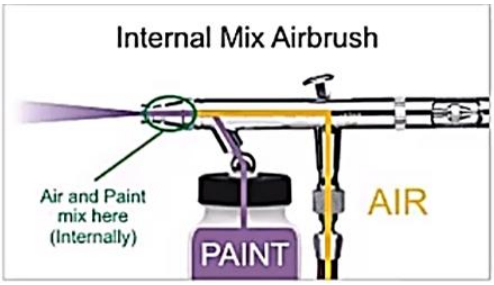
- **"The Stuart Royal Yacht Fubbs of 1682" by David Antscherl -** Prepare to step aboard royalty! This exquisite work describes the research, history, reconstruction and building of a model of the Stuart era Royal yacht. Pre-orders open next month (August)
- **"Dutch 17th Century Ship Models in Paper" by Ab and Emiel Hoving** - A different approach to ship modeling! This unique book will unveil the secrets of creating stunning ship models using paper. Pre-orders coming in the next month or two.
- **"Coasting Schooner Alice S. Wentworth" by Tom Lauria** - Embark on a journey along the American coast with this detailed exploration of a classic schooner, her people and the model.

To see their other offerings, see their web site, where you can review the above books as well as previous publications: https://seawatchbooks.com/

Presentation:

Air Brushing by Lee Kimmins

Lee, started his talk with an explanation on the types of hobby airbrushes: internal & external mix.



The mix of air and paint occurs inside the head, producing a smooth, uniform spray and the best quality of paint application.

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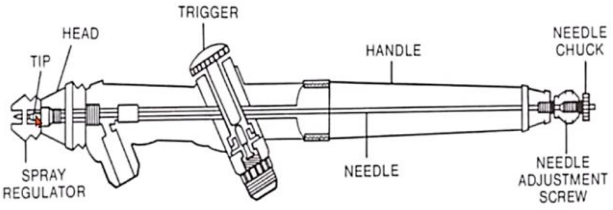
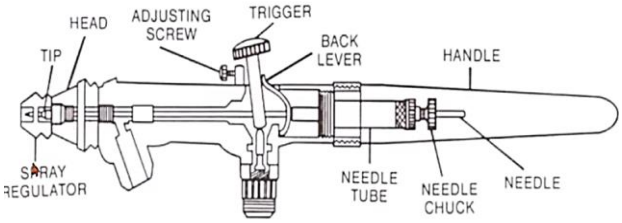
With the external mix airbrush, the paint and air atomize outside the head, producing a slightly coarse or stippled spray, similar to aerosol quality of paint (rattle can type)

There are also two different air-brush anatomy's:



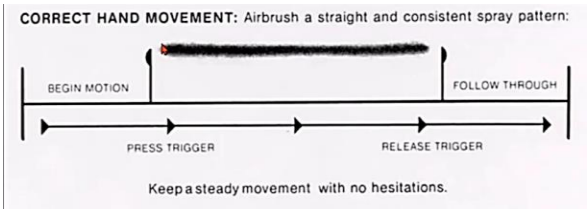
Single-action, Internal-Mix: Pushing down on the trigger releases preset amount of spray. The volume of air and color Is adjusted before depressing the trigger.



Double Action: Pressing down on the trigger increases air flow; pulling back controls paint flow – the further the lever is pulled back, the more paint flows.

Lee used a Paasche airbrush set to demo:

- Apply thin coats – barley cover with first coat.
- Continue with thin coats until coverage in complete.
- Avoid heavy coverage to reduce runs; avoid dry painting (spraying too far away from the surface or spraying to fast. Dry painting causes a rough finish.



In using an airbrush, hand motion is critical. The nozzle has to be kept parallel to the surface being painted and a constant distant from the surface. The hand holding the airbrush must move in a steady movement from one side to the other.

Lee, then shifted to the material used by the airbrush. Acrylic paints, when used, appear heavy and thick when applied which is an effect of the water carrier. As the water evaporates, pigments settle to a thin coat. Acrylic's can be sprayed over enamels or lacquers and can be used as a base coat for enamels or lacquers.

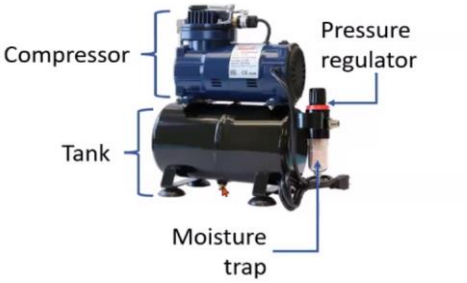
His recommendation is "Badger Model Flex". The paint is ready to use and in most cases no thinning is required. If, due to age, or climate conditions, use distilled water to thin the paint.

Badger comes is 52 Marine colors and deliver a flat finish. He recommends that the paints not to be hand shaken, but stirred which blends the pigment back into the solution. An air brush uses pressure to propel the paint solution onto the surface. High pressure leads to more needle clog, Low pressure allows more control. Pressure control for siphon feed: 18-25 psi; for gravity feed: 8/15 psi.

General specifications for air source are:

- At least ½ cubic feet per minute (cfm)
- 20-30 pounds per square inch (psi)
- Dry, oil free
- Pressure regulator
- Moisture trap (with the regulator or as an in-line filter

Lee uses a Paasche, Model D3000R (approx.: $180)



At the end of the session, the air brush needs cleaned. The cleaning process Lee uses:

- Dump last bit of paint from the air brush – remove the bottle.
- Wipe out the bowl with a paper towel – w/o solvent, then with solvent.
- Spray cleaner through the air brush into a paper towel until clear.
- Back flush
- Remove spray head; clean inside

Always use the manufacturer's recommendations for cleaning materials and procedures.

Using an air brush requires covering areas that are not to be painted with a masking tape. Tapes are also made for use with both water based and solvent based paints. Lee recommends "Tamiya" and "3M' fine line tapes, and cautions that the operator should use the correct tape to match the paint. Lee also recommends using a ventilated, three-dimensional spray booth.

Ships on Deck

Drilling Platform

Cliff Mitchell

Fine Scale Miniatures kit of a "Pile Driver"

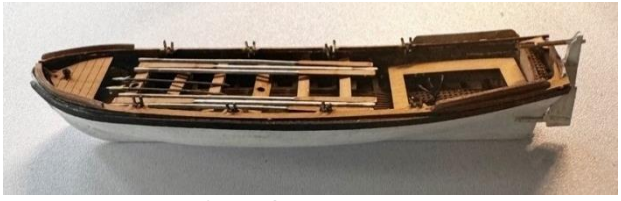
Water is made from "Scenic Realistic Water" (above)

Once poured requires 42 hours to set up

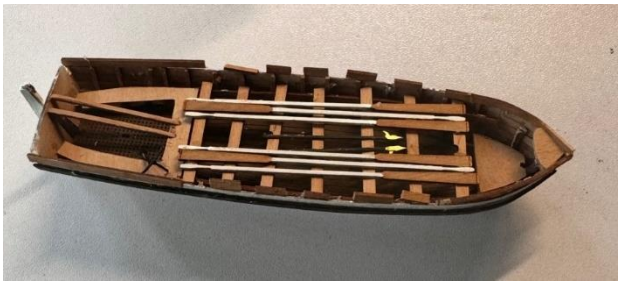
Photos of the pile driver above.

HMS Sphinx

Cliff Mitchell



28-foot Pinnace – 8-oars



24-foot Launch, also known as a long boat, one mast

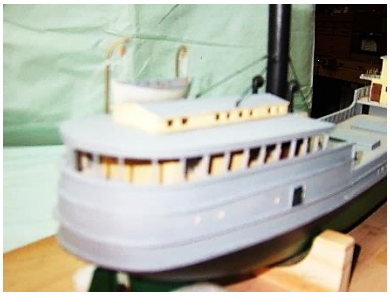
22-foot Yawl, 2-mast, fore & aft rigged, 4 to 6 oars

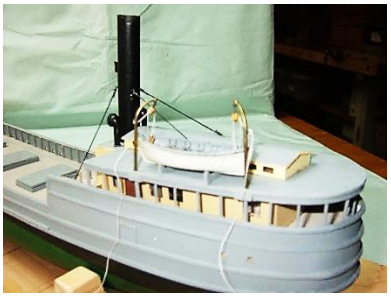
Masts built and sections painted black according to the plans Blocks and other fittings were added

Bowsprit was built and fittings added

Next up: Fore, Main, Mizzen yards

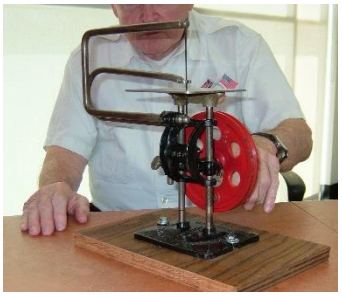
Margaret Olwill
William Nyberg





Stern deck complete
Next, touch up paint, hull fixtures, masts and rigging, then deck figures

Scroll Saw
Loran Black



Loran brought is a 1923, hand-powered, scroll saw. Loen uses it rather than a powered scroll saw.

Other Notes: “Stuff”, Tugs & Things

Nautical Terms

Nautical Terms Wikipedia

Dunnage: Loose packing material used to protect a ship's cargo from damage during transport; Personal baggage.

Dutch Barge: Any of several types of traditional flat-bottomed shoal-draught sailing barge, originally used for carrying cargo in the Zuyder Zee and on the rivers of the Netherlands.

Dutch built: Term of abuse implying shoddiness or (when directed at a person) stupidity or stubbornness, usually embellished with other oaths and insults tagged on fore and aft.

Frame: A transverse structural member that gives the hull strength and shape. Wooden frames may be sawn, bent, or laminated into shape; planking is then fastened to the frames. In traditional wooden ship building, an individual frame may be made of the following individual parts: floor, several futtocks, then a top timber as the last component closest to the deck. If the hull is built frame-first, these frame components are fastened to each other. In a planking-first construction, they may only be fastened to the hull planking.

Freeboard: The height of a ship's hull (excluding the superstructure) above the waterline; the vertical distance from the current waterline to the lowest point on the highest continuous watertight deck. This usually varies from one part to another.

Frigate: In the 17th century, any warship built for speed and maneuverability; In the 18th and early 19th centuries, a sailing warship with a single continuous gun deck, typically used for patrolling, blockading, etc., but not in line of battle; In the second half of the 19th century, a type of warship combining sail and steam propulsion, typically of ironclad timber construction, with all guns on one deck; In the 20th and 21st centuries, a warship, smaller than a destroyer, originally introduced during World War II as an anti-submarine vessel but now general-purpose; In the US Navy from the 1950s until the 1970s, a type of guided- missile antiaircraft ship built on a destroyer-sized hull, all of which were reclassified as “guided-missile cruisers" in 1975.

Full and by: Sailing into the wind (*by*), but not as close-hauled as might be possible, so as to make sure the sails are kept *full*. This provides a margin for error to avoid being taken aback in a tricky sea (a serious risk for square-rigged vessels). Figuratively it implies getting on with the job but in a steady, relaxed way, without undue urgency or strain.

Full-rigged Ship: A sailing vessel with three or more masts, all of them square-rigged. A full-rigged ship is said to have a "ship rig".

Funnel: *Also* ***stack***. The smokestack of a ship, used to expel boiler steam and smoke or engine exhaust; *Ventilation funnel*: A curved, rotatable tube protruding from the deck of a vessel, designed to direct fresh air into her interior.

Furl: To roll or gather a sail against its mast or spar.

Furring: A method of improving the stability of a wooden vessel by increasing the breadth of the hull. The planking is removed and pieces of wood are added to the outside of the frames. Then the planking is replaced. An increase in breadth of about 1 foot (300 mm) could typically be achieved on each side. This was a common remedial technique at a time before shipwrights were able to carry out mathematical stability calculations.

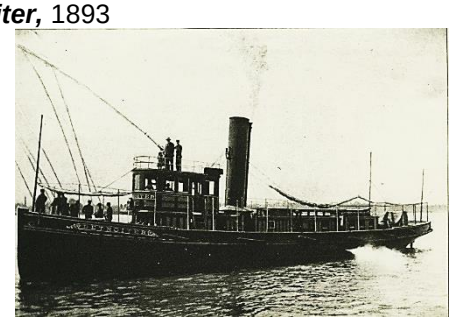
Fusta: A narrow, light, and fast ship with a shallow draft, powered both by oars and sail, with a single mast carrying a lateen sail; a favorite of North African corsairs during the 16th and 17th centuries.

Futtock shrouds: Rope, wire, or chain links in the rigging of a traditional square-rigged ship running from the outer edges of a top downwards and inwards to a point on the mast or lower shrouds. They carry the load of the shrouds that rise from the edge of the top, preventing the top from tilting relative to the mast.

Futtock: The part of a ship's frame that continues the structure above the floors. These often exist as individual pieces termed first futtock, second futtock and third futtock, numbered moving away from the keel.

Tugs: Great Lakes

Detroiter, 1893



The wooden tug *Detroiter* was built at Craig Shipbuilding, Toledo for the City of Detroit Fire Department. Her measures, recorded at Toledo, OH were: 105’ x 25.5’ x 10.4’;138.57 grt, 69.29 net. She was powered by a 1,000 hp @178 rpm engine built at Cowles Engine Co., Brooklyn, She was enrolled on July 20, 1893 and assigned official number 157370. In April 1894, she assisted steam barge *Burlington* with 4 barges in tow, when she caught fire and burned to the waters edge. In 1902 her machinery was stripped out for the new towboat *Detroiter*. In 1909, she was rebuilt by Ried at Sarnia, Ont, and renamed *Sarnia City,* C126227. She was owned and operated for Reid Wrecking Co. In 1942, the towboat *Sarnia City* was removed from the registry

BGSU University Libraries; Historical Collections of the Lakes & Alpena County the George N. Fletcher Public Library; C. Patrick Labadie Collection

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***William Dickinson,* 1893**

The wooden towboat *William Dickinson,*was built by E.W. Heath, Benton Harbor, MI, for the Barry Bros. Towing Co., Chicago. Her measures were: 78.2’ x 19.5’ x 10.9’; 78.98 grt, 49.33 net. And her official number was 81431. Her engine was rated at 375hp @ 150 rpm and was built by R. Tarrant Iron Works. She was equiped with a firebox boiler, 9’ x 14’ built by Johnston Bros.

In 1900, she was owned by Dunham Towing Co, Chicago.

In 1907, ownership was changed to Great lakes Towing Co., Cleveland. In September 1923, the *William Dickinson* caught fire and burned while on the St. Clair River.

BGSU University Libraries; Historical Collections of the Great Lakes & Alpena County George N. Fletcher: Public Library; C. Patrick Labadie Collection

Presentation Schedule:

2024 – Schedule Tentative
~~Jan 20 CAD, 3D Printing~~
~~Feb 17 Display Case~~
~~Mar 16 CAD, 3D Printing, Advanced~~
~~Apr 20 Dioramas~~
~~May 18 Adhesives~~
~~June 22 Workshop~~
~~July 20 Air Brushing~~
Aug 17 Scratch Building
Sep 21 Planking
Oct 19 Weathering
Nov 16 Carving
Dec 14 Small Boats

Events & Dates to Note:

2024 Tentative Schedule
~~**Columbus Woodworking Show**~~
~~**Ohio Expo Center**~~
~~**January 19-21, 2024**~~

~~**IPMS Columbus**~~
~~**BLIZZCON 2024**~~
~~**Makoy Center, Hilliard, OH**~~
~~**Saturday, February 24, 2024**~~

~~**Miami Valley Woodcarving Show**~~
~~**Christ United Methodist Church**~~
~~**Middletown, OH**~~
~~**March 3-4, 2024**~~

~~**46th Midwestern Model & Boat Show,**~~
~~Wisconsin Maritime Museum, Manitowoc, WI~~
~~**May 17-19, 2024**~~

~~**Westerville Library Display**~~
~~**June 1 – 28, 2024**~~

~~**Columbus Air Show**~~
~~**U.S. Air Force "Thunderbirds"**~~
~~**Columbus Rickenbacker International Airport**~~
~~**June 14-16, 2024**~~

~~**Ship Modeling Workshop**~~
~~**Westerville Public Library**~~
~~**June 22, 2024, Noon – 4 pm**~~

~~**Lakeside Antique & Classic Wooden Boat**~~
~~Lakeside Hotel, Lakeside, OH~~
~~**July 14, 2024**~~

Great Lakes Tall Ships Festival
200th anniversary, Battle of Lake Erie re-enactment at Put-In-Bay, September 2, 2024
Erie, PA dockage, Sept. 6-8, 2024

Ohio River Sternwheel Festival
Riverfront Park, Marietta, OH
September 6-8, 2024

LST-325 Cruise on Ohio River
Wheeling, WV – Sept. 5-10, 2024
Marietta, OH, Sept. 12-15, 2024

Editor: Wiliam Nyberg
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Cargo Hold

www.shipwrightsofohio.com/cargo hold/

Here you will find how to order Challenge Coins, as shown above, on left, that have been used historically for Identification within an organization, Recognition of achievements, Appreciation of services and Trading/Collecting. Our Shipwrights of Ohio coin contains both the Club Logo and the Club Coat-of-Arms.

You can also order Logo shirts from "Lands End". They offer an on-line link for direct, personal purchases of many of their products without Shipwrights of Ohio logo.

There are currently two logo styles available**:**

- **Full Club logo – with Motto, for digital print use on the backside of T-shirts. 10" or 12" round.**
- **Small Club logo – without Motto for embroidered or digital print on the front of items. 4" round.**

Wooden Steamers on the Great Lakes

Researched & Written
by William E. Nyberg

1872-B

Lake Michigan: Melancthon Simpson, at St. Catharines, Ont., built a wooden propeller for the Lake & River Steamship Co. of Hamilton, Ont. to be used in the passenger, package freight trade. She was enrolled at Hamilton, June 1872, and her measures recorded as: 136.0' x 23.75' x 6.5'; 693-unit tons. She was assigned official number C88537. She was powered by a compound high & low-pressure engine, 80 horsepower, built by Thomas Wilson & Co., Dundas, Ont. in 1872. She would be used Montreal to the Upper Lakes, and was a duplicate of the propellers *Lake Erie* and *Lake Ontario*. Her master for the 1872 season was Captain William Rollo with A. Mills, in 1872 and Trevanion William Hugo in the 1873-74 seasons as chief engineers. In October 1872, the *Lake Michigan* lost her rudder near Grand Haven, on Lake Michigan during a storm. She was rescued by tugs but not before the swells and taken her deck load. In the 1875 season, the *Lake Michigan* was placed on a daily line between Montreal, Toronto, Hamilton and St. Catharines. October 1880, laden with railroad iron bound from Montreal for Hamilton, Ont., the *Lake Michigan* ran upon Bay State Rock, 12 miles from Brockville, Ont., St. Lawrence River, knocking a hole in her starboard side. Filling with water, the captain ran the vessel ashore where she sank in 12 feet of water. She was raised, released and repaired.

In 1884, ownership of the propeller *Lake Michigan* was changed, at auction, to R.O. Mackay, Hamilton.
Master of the propeller *Lake Michigan* was Captain William Zealand for the 1885 season.
: the propeller was licensed to carry up to for 40 passengers. Her master for the 1886 season was Captain R. McMaugh.

In October 1888, ownership of the propeller *Lake Michigan* was transferred to R.O. Mackay, Adam Brown Mackay, Hamilton, & Aneas Donald Mackay, Georgetown, British Guiana. Her master for the 1889 season was Captain Jerry Clifford. The *Lake Michigan* was rebuilt in 1890, receiving a steeple compound engine: 20", 34" bore x 34" stroke, built by F.G. Becket Engine Co.; and a scotch boiler 10'6" x 10'6", 104 pounds steam, built by John Englis & Son. She was re-measured under 84th Section M.S.A. 1854: 136.00' x 23.90' x 11.55'; 573.28 grt, 359.69 net. Her master for the 1893 season was Captain John Clifford, and Captain Robert Chestnut for the 1894 season. In 1894, while passing through Sault Ste. Marie, the propeller *Lake Michigan* was delayed three weeks due to a broken shaft. Her masters and chief engineers were: in 1897 & 98, Captain William O. Zealand Jr.; 1899 Captain Arthur Lefebvre with Joseph Dawson through 1901; Captain James Delaney for the 1900 season and Captain A. Monpetit for 1901. In 1902, Captain R. Corson and Joseph Boulanger; in 1903, Captain William A. Carson and Joseph Belanger; and for the 1904 & 1905 seasons Captain James H. Fitzgerald with J. Hamelin in 1904, and Arthur Abbey in 1905 as chief engineers.

In 1907, ownership of the *Lake Michigan* was changed to Malcolm Mackenzie & Robert Towers (Sarnia Transportation Co.) Sarnia, Ont. For the 1906 season, her master was Captain Charles E. Millard with Thomas Whittie as chief engineer; for the 1907 & 08 seasons, her master was Captain Alexander McLellan with Harvey Myers as chief engineer through 1909; and Captain Charles E. Millard for the 1909 & 1910 seasons.

In 1910, ownership of the propeller *Lake Michigan* was changed to C. Burnett, Kincardine, Ont. The following year, she caught fire and burned while in winter quarters at Port Huron.

In 1913, ownership of the propeller was changed to Point Anna Quarries Ltd., Toronto, and she was used as a stone carrier. Masters of the propeller *Lake Michigan* and her chief engineers for the 1913 & 1914 seasons were: Captain J. Quinn and John Larken for the 1913 season; Captain Thomas E. Hefferman and Ed. Conden for the1914 season. In 1916, the propeller *Lake Michigan* was cut down for coarse freight and her measures recorded as: 136.00' x 23.90' x 11.55'; 402 grt, 157 net. Masters of the propeller *Lake Michigan* and her chief engineers for the 1916 to 1921 seasons were: Captain John Wharry, 1916-18, with J. D. Miller in 1917, and K. Connor in 1918. Captain James Cuthbert was master for the 1919-20 seasons; with Captain H. Brown as master in 1921. She was retired at Toronto in 1920, dismantled and scuttled in 1925. In 1926, the hull was buried in the Toronto harbor redevelopment

Enrollment for the propeller Lake Michigan was surrendered November 23, 1938 and endorsed "abandoned".

Lake Ontario: J. Andrews & Sons, at St. Catharines, Ont., built a wooden propeller for the Lake & River Steamship Co. of Hamilton, Ont. Her initial enrollment at Hamilton, Ont. in 1872, lists her measures as: 136.66' x 23.66' x 7.50'; 306-unit tons. She was powered an engine with two cylinders, 20', 34" bore x 34" stroke engine, 80 horsepower, built by T. Willson, Dundas, Ont. The propeller *Lake Ontario* was built for package freight trade and was a duplicate of the propellers *Lake Michigan* and *Lake Erie.* She was readmeasured as 411.65 grt in June 1872. At Chicago, May 1874, she collided with the bark *A.P. Nichols* at while on the Chicago River. In September of that same year, bound down from Chicago, the propeller *Lake Ontario,* laden with flour and wheat for Montreal and Brockville, went ashore in the Detroit River near Ecorse, MI. She required lightering to be released. Her master for the 1878 to 1881 seasons was Captain Robert Williams. In June 1878, while loading old railway iron at the Great Western Railroad wharf, a thirty-foot bar weighing over 600 pounds fell eighteen feet into the hold poking a hole in her bottom. The captain covered the hole with canvas, cut loose her moorings and steamed to Port Dalhousie, Ont. for repairs. She returned back to the Great Western Railroad wharf the next morning to finishing loading. In August 1882, the *Lake Ontario* stranded in Beauharnois Canal and lodged sideways. In June 1883, the propeller *Lake Ontario,* after discharging 7,000 bushels of wheat from Toledo at Kingston. She left for Montreal and while in the St. Lawrence River. she went aground on a shoal near Morrisburg, Ont. Released.

May 1884, ownership of the propeller *Lake Ontario* was changed at auction to R.O. Mackay & Elizabeth Mackey, Hamilton, Ont.

In October 1888, ownership of the propeller *Lake Ontario* was transferred to R.O. Mackay, Adam Brown Mackay, Hamilton, and Aneas Donald Mackay, Georgetown, British Guiana. In December of that same year, the *Lake Ontario* caught fire and burned at Clayton, NY, St. Lawrence River and was abandoned.

In 1889, the burned hulk of the *Lake Ontario* was sold to Thomas Ryan, Buffalo. He rebuilt her as the U.S. steambarge *Charles C. Ryan* (US126622); 138.5 x 30 x 13; 491 grt, 404 net. Her master for the 1889 & 1890 seasons was Captain Michael Carr. In June 1890, bound down from Midland, MI for Buffalo, the steambarge *Charles C. Ryan,* laden with 500 tons of ice and towing barges *E. Cohen* (US8192) and *Journeyman* (US75549), sprang a leak ten miles off Port Austin, MI and sank in Lake Huron. One live lost.

Enrolment for the steambarge *Charles C. Ryan* was surrendered June 30, 1890.

Lincoln: Melancthon Simpson, at St. Catharines, Ont., built a wooden steambarge for Captain James & Alex Norris also from St. Catharines. She was enrolled August 17, 1872 at St. Catharines and her measures recorded as: 131.0' x 23.9' x 11.9'; 346.65 grt, 247.43 net. She was issued official number C88638. The steambarge *Lincoln* was powered by a low-pressure engine; 20" bore x 20" stroke, 300 horsepower, built by George N. Oille, St. Catharines. She was built for the Montreal and Upper Lakes bulk freight trade and sailed for the Merchants Montreal & Chicago Line from 1873 through 1880. Her master for the 1873 to 1884 seasons was Captain John Duncamson with William Trevanion Hugo as chief engineer. In 1878, the steambarge *Lincoln* was rebuilt, and her measures recorded as: 131.0' x 23.9' x 11.9'; 347 grt. In August 1878, she broke her machinery at Kenosha, WI, Lake Michigan. In 1885, bound down Chicago to Kingston, Ont., the steambarge *Lincoln,* towing the schooner barge *Lisgar* (C83150), both laden with wheat, ran aground on Big Point Sauble during a gale on Lake Michigan. In October 1887, bound up from Windsor, Ont. for Chicago, the propeller *Lincoln*, laden with cedar lumber, went ashore during a gale, on a sunken reef at Little Pike Bay in the Fishing Islands on the Lake Huron side of the Bruce Peninsula, Ont. and became a total loss. No lives lost. Her enrollment was surrendered and listed as wrecked.

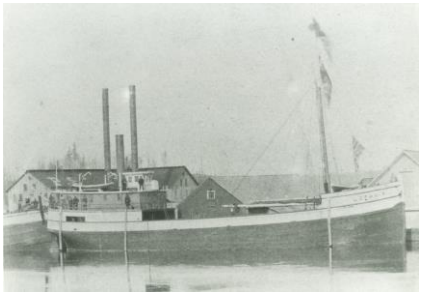
Ownership of the remains of the steambarge *Lincoln* was changed in 1888, to George E. Smith, Southampton, Ont. who salvaged the wreck and rebuilt her. She was renamed and registered as *Lillie Smith* (C94911) with measure 130.0' x 26.0' x 9.4'; 302.31 grt, 205.57 net at Saugeen, Ont. in September 1888. Her master for the 1888 to 1898 seasons was Captain J. E. Williscroft. In 1890, the steambarge *Lillie Smith* received a new engine during the rebuilt: fore & aft, 18", 32" bore x 26" stroke, 300 horsepower, 110 rpm; built by Doty Engine Co., Toronto. In 1897, the steambarge *Lillie Smith* collided with the wreck of the schooner *American Union* (U307) of Port Huron. In May 1898, the steambarge became disabled while on Lake Huron. She was towed to Port Huron by the bulk freighter *Thomas Davidson* (U145482).

Ownership of the propeller *Lillie Smith* was changed in 1914, to Canadian Sand & Gravel Co., Thorold, Ont, and she was renamed *Mary Battle* (C94911). In August 1916, the steambarge *Mary Battle* was badly damaged in a blow on Lake Huron and her license was revoked until she was repaired.

In 1917, ownership of the steambarge *Mary Battle* was changed to Reid Wrecking & Salvage Co., Montreal.

In 1918, ownership of the steambarge *Mary Battle* was changed to Maritime Wrecking & Salvage Co., Montreal.

In June 1922, the steambarge *Mary Battle* stranded on Cape Des Rosiers, Gulf of St. Lawrence, where she broke up.



Lotnair: Melancthon Simpson, at St. Catharines, built a wooden steambarge for the bulk freight trade Georgian Bay and the Upper Lakes. She was enrolled at Newcastle, Ont. in 1872, and her measures were: 129.8' x 23.1' x 11.7'; 351.0 grt, 218.0 net. The steambarge *Lotnair* was assigned official number (C71170). She was powered by a fore & aft compound engine, built by Yalis Foundry, St. Catharines. Her master for the 1873 season was Captain J. Strickland. In November 1874, the steambarge *Lothair* went ashore on Amherst Island, Ont., Lake Ontario during a gale. Released.

Ownership of the steambarge *Lothair* was changed, in 1875, to Huron & Ontario Transportation Co. In May 1878, the tug *Sanford Davis* (C71118), about to take the steambarge *Lothair* under tow into Collingwood, Ont., struck her amidships and broke a water-pipe, dumping the boilers water into the hold which was fully loaded with grain, damaging her cargo. She was rebuilt that year and her enrollment measures updated to: 129.80' x 23.10' x 11.70'; 413.00 grt, 218 net. Her master for the 1880 season was Captain Casey with Frederick Potts and Fred E. Wheeler as chief engineers. In March 1880, bound up from Kingston for Chicago, the steambarge *Lothair,* laden with 12,000 bushels of barley, and her barge *Corisande* (C71163), laden with scrape iron, went ashore on Colchester Reef, Lake Erie in a gale. The steambarge *Lothair* and the barge *Corisande* resumed their journey but both vessels were driven ashore on Point Pelee, Ont., Lake Erie during another gale.

During winter layup, 1881/82, Ownership of the steambarge *Lothair* was changed to Parry Sound Lumber Co., J.C. Miller, Parry Sound, Ont. She received a new firebox and was overhauled at Wolverine Dry Dock, Owen Sound.

Her master for the 1882-83 season was Captain James B. Symes and during the 1883 – 85 season, Captain David Allen Kiah with W. Parker as chief engineer. In November 1883, the steambarge *Lothair* lost her barge tow during a gale on Lake Superior and sought refuge in Jackson Bay, Ont. In 1887, the steambarge *Lothair* ran between Parry Sound and Buffalo with lumber and coal.

Ownership of the steambarge *Lothair* was changed in 1889 to Thompson & Co. and she ran in the lumber trade between Windsor, Ont. and the upper lakes. During the 1890 season, the steambarge towed the barge *Huron*. In August 1891, the steambarge *Lothair* became waterlogged on Georgian Bay after a desperate conflict with a northeaster. She was towed into Tobermory, for repairs. January 1893, while docked at Windsor, Ont, Detroit River, the steambarge *Lothair* caught fire and burned to her waterline.

Ownership of the wrecked hulk of the steambarge *Lothair* was changed to Crawford Tug & Towing, who had the hull rebuilt as a schooner rigged barge: 129.8' x 23.1' x 11.7'; 386 grt.

In 1906, owned by Wicher's Mill, Colpoy's Bay, Bruce Peninsula, where she was deliberately sunk and became a breakwall for the logging mill pond.

Her enrollment was closed December 16, 1911 and endorsed "passed out of existence".

Issac May: S. Andrews & Son, at Welland, Ont. built a wooden steambarge for the Isaac May & Co., of Toronto, for the Georgian Bay, bulk lumber trade. Enrolled at Toronto in 1872, her measures recorded were: 161.0' x 28.0' x 13.0; 590.99 grt, 401.88 net. She was assigned official number C100031. Her master for the 1876 season was Captain M. McGregor with Captain C. H. Jenkins as master for the 1879 & 80 seasons. John Francombe was chief engineer in 1881. In May 1879, bound up on the Niagara River, the steambarge *Isaac May* with three barges, including the *Waubaushene, Severn, & Muskoka* in tow, passed the down bound tug *Bryant* with three barges, including the *Brickhead*,

in tow, when the *Brickhead* was forced by strong current to collided with the barge *Waubaushene,* staving her in badly. The barge was repaired at Buffalo. The following month, the steambarge *Isaac May* was seized for debt, at Bying Inlet, owed to the Georgian Bay Lumber Company by the Isaac May Co. In December 1880, the steambarge *Isaac May,* cut by ice in Bying Inlet, Georgian Bay, went ashore on the rocks and sank. In May of 1881, she was released from the rocks at Bying Inlet. Her bow of was up on the rocks and hull, twenty-five feet back, had been broken away by the pounding and her machinery and boilers damaged. Supported by pontoons, she was towed to Detroit for repairs. In August 1881, the steambarge *Isaac May* and her tow, took out two million feet of sawn lumber in one trip.

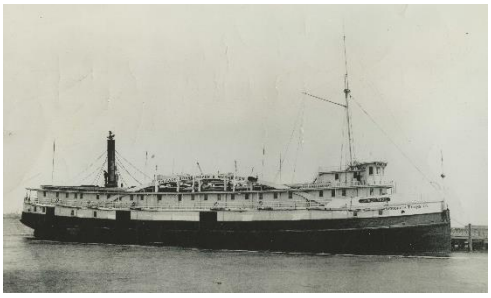
In November 1883, ownership of the steambarge *Isaac May,* and her consorts *Severn, Muskoka,* and *Waubaushene,* were sold for payment of several libels by U.S. Marshal to R. Moat, Montreal - for: *Isaac May* - $16,000; *Severn* - $5,300; *Muskoka* - $3,200; and *Waubaushene* - $3,000. In December 1884, bound down, from Port Arthur for Goderich, Ont. laden with corn, she arrived at the Sault in a leaking condition with her rudder damaged. Her grain cargo was discharged and she was repaired while in winter lay-up at the Sault.

In January 1885, ownership of the steambarge *Isaac May* and her consorts *Severn, Muskoka,* and *Waubaushene,* were changed to A. N. Moffat & Co., Kingston, Ont. Master of the steambarge *Isaac May* for the 1886 season was Captain Muir. In May of 1886, bound up, the steambarge *Isaac May* with a two-barge tow, stranded on Grassy Island in the Detroit River in dense fog. Released. In July of that same year, the steambarge *Isaac May* arrived at Chicago under sail, no food, and without her consorts. She had left Chicago for Manitou Island early in July, towing three barges to load posts and ties. While loading, a fire broke out on the island due to lack of rain. For 10 days they continued to load and when leaving found smoke limiting their view. When one hundred miles north of Chicago the coal bunkers were empty and they were down to salt pork for food. Burning their load they found the cedar wood to wet so they released the barges and set sail for Chicago. The barges were found at Racine, WI and were towed to Chicago. The steambarge *Isaac May's* master for the 1888 season was Captain James W. Mawdesley. In October 1888, the steambarge sank in eighteen feet of water on the Indian peninsula near Tobermory, Ont. She had a loose shoe and a leaking bearing. Raised.

In January 1889, ownership of the steambarge *Isaac May* and two of her consorts, was changed to William Leslie, Manager of the Collins' Bay Rafting and Forwarding Co. Her master for the 1889 & 1890 seasons was Captain Milligan with Mr. Boyd as chief engineers. In November of that year, while moored at the pier at Port Colbourne, Ont. on Lake Erie, the steambarge *Isaac May,* rolled one of her smokestacks off during a storm. In July 1890, bound up light on Lake Erie, the *Isaac May,* with three consorts in tow, caught fire above her boiler and was badly damaged, off Long Point. She was towed into Port Colbourne for repairs. During winter layup, 1890/91, the *Isaac May,* was rebuilt at Port Robinson, and registered as renamed *Orion:* her measures recorded: 173' x 30' - 591 grt. She received a new low-pressure engine built by Doty Engine Co., Toronto, 30" bore x 30" stroke. In December of 1891, the steambarge *Orion* took fire at Tonawanda, NY and was damaged above deck. Loss to the hull was set at $600. In 1896, the steambarge was rebuilt, receiving steel arches. Her enrollment measures were entered as: 174' x 30' - 846 grt. The master and chief engineers serving the steambarge *Orion* were for 1901 & 02: Captain George Mackey with W. H. Cunningham and George Cook as chief engineers; 1903, Captain Patrick Gallagher and John Taylor as chief engineer. In 1906, the steambarge *Orion* was rebuilt, and her measures recorded: 174' x 30' - 572 grt.

Her ownership was changed in 1906, too J. S. Thom, Quebec Transportation, Quebec. In 1907, master of the steambarge *Orion* was Captain J. Bernier with A. Marcotte as chief engineer. In August 1907, the steambarge *Orion* was wrecked on Calf Island, eastern Lake Ontario. She was recovered and converted to a barge. She may have been rebuilt as a barge, which foundered at Oswego, NY in August 1917.

Final disposition unknown.



Menominee: George S. Rand & Henry Burger at Manitowoc, WI, built a wooden propeller for the Goodrich Transportation Co., Kenosha, WI; A. E. Goodrich, president. The propeller *Menominee* was enrolled at Milwaukee, WI, October 07, 1872, and her measures recorded as: 184.0' x 34.0' x 11.0'; 796.31 grt, 712.52 net. She was powered by a high-pressure engine, 36' bore x 42" stroke, built in

Chicago She was issued official number 90720. The propeller *Menominee* was built for the passenger, package freight trade on Lake Michigan, and ran in the Goodrich Line: Green Bay, WI – Escanaba, MI & Chicago – Green Bay.

In May 1874, the *Menominee* had received a full-length cabin with 44 staterooms for the passenger trade between Chicago and Muskegon, MI. That same month, she broke her machinery on Lake Michigan. Repaired. In December of that year, the *Menominee* stranded on a reef between Basin Island & the mouth of Sturgeon Bay on Lake Michigan and required lightered to be pulled off. In 1877, the propeller *Menominee* ran Manitowoc, WI to Lake Superior. In 1878, her run was Chicago to Mackinaw Island. In 1881, she ran between Milwaukee to Grand Haven, MI. Her master for the 1880-81 season was Captain William F. McGregor with Jeremiah Havelick as chief engineer.
June 1882, the propeller *Menominee* had been refitted with sleeping accommodations for 100 passengers. For the 1883 season, the propeller *Menominee* ran Milwaukee – Manistee – Grand Haven – Muskegon. In 1885, she ran between Chicago to Grand Haven. Master of the *Menominee* for the 1886 & 87 seasons was Captain Rossman with Charles H. Wilcox as chief engineer. In 1895, during a dry dock inspection, the *Menominee* was found to be in bad condition. She was abandoned and her final enrollment was surrendered at Milwaukee, June 06, 1896 and endorsed "abandoned".

The propeller *Menominee* was sent to be dismantled by Burger & Burger, Manitowoc, where the hull was found to be sound and a new ship was rebuilt on the old hull. She was renamed and launched as the *Iowa* on May 11, 1896. In the rebuild, the stem and apron piece was reinforced to over 3 feet thick, molded and covered from below light water line to the underside of guards, for protection against ice for winter lake steaming. She had a cabin deck with fifty-two cabins for 108 passengers and on the hurricane deck were twenty-four cabins for 48 passengers. The propeller *Iowa* was enrolled as for *Iowa* with official number (U100613) issued at Milwaukee, June 15 1896. Her recorded measures were: 202.42’ x 36.33’ x 13’; 1157.47 grt, 846.38 net. She was powered by a steeple compound engine: 21", 42" bore x 36" stroke, built by C.F. Elmes, Chicago. Her master for 1896-1905, was Captain John C. Raleigh with Julius M. Buschmann as chief engineer. In January 1898, the *Iowa* collided with the propeller *Petoskey* (US150425) near Kenosha, WI. In November 1905, the propeller *Iowa w*ent ashore north of the North Point, Milwaukee, and required major repairs.

In April 1906, the Goodrich Transportation Co. was reorganized into Goodrich Transit Co. Cleveland, OH.
Master of the propeller *Iowa* for the 1906 season was Captain E. Dorsey. Captain William Plummer was master of the propeller for the 1907 – 1910. In October 1907, the propeller *Iowa* stranded on Hill's Point, Sturgeon Bay, WI. In April 1910, the *Iowa w*ent aground north of Kenosha, WI, Lake Michigan. Her master for the 1911-12 seasons was Captain William E. Franklin, with Captain B. J. McGarity as master for the 1913 season. In that year, the sidewheel steamer *Sheboygan* (U115119) collided with the propeller *Iowa* in the Chicago River in heavy fog, severely holing her starboard bow. Tugs assisted *Iowa* to her dock before she settled to the bottom of the river. She was subsequently raised and returned to service in July 1913. Her master for the 1914 season was Captain Gerald E. Stufflebeam. In September of that year, the propeller *Iowa* crushed a small tug against a dock in the Milwaukee River due to the swift current and a malfunctioning bridge. Her master for the 1915 season was Captain B. J. McGarity. In February 1915, the propeller *Iowa,* trying to take advantage of a midwinter thaw to haul a valuable cargo to Chicago, was caught in the ice in a refreeze while trying to enter the harbor. She was crushed by the ice off Chicago Harbor and sank. The 71 passengers and crew were able to walk ashore on the ice.

In 1916, the sunken hulk of the *Iowa* was determined to be a hazard to navigation and was destroyed by dynamiting.

Mary Mills: Philander Lester, Vicksburg (Marysville), MI, built a wooden steambarge for the bulk freight lumber trade with a capacity for 210,000 feet lumber. Her original owners were Nelson B. & Reuben Mills, and James Taylor, all from Vicksburg. She was enrolled at Port Huron, August 1872, and her measures recorded as: 113.2’ x 23.6’ x 8’; 119.59 grt, 88.00 net. She would be powered by a high-pressure engine, 16” bore x 20” stroke, 210 horsepower, built by D. Bell Engine Works, Buffalo, NY in 1872. She was also equipped with a firebox boiler, 6’ x 12’. Her official number was U90493.

In May 1873, her ownership was changed to C. McElroy, New Baltimore, MI. The vessels chief engineer for the 1874 -1882 season was William Elliott. In October 1874, the steambarge *Mary Mills* was rebuilt at Marine City, MI, receiving a new boiler 6’ x 12’, 90 pounds steam, built by Philbrick & Christie, Detroit; her tonnage recorded as: 243.55 grt.

In April 1875, ownership of the steambarge *Mary Mills* was transferred to Marine City Stove Co., C. McElroy, president. In November 1876, the steambarge *Mary Mills* went aground on Windmill Point, Ont., Lake Erie. Released. In April 1882, ownership of the *Mary Mills* was changed to Charles Whitaker & Jules Munn, Detroit.

In April 1884, ownership of the steambarge was changed to Stronach Lumber Co. of Michigan, John Thomas, Milwaukee, president. In October of that year, the *Mary Mills* was damaged during a gale on Lake Michigan. In 1886, the steambarge received an engine from the steambarge *G. P. Heath* (US85216); it was a high pressure, 12' bore x 12' stroke, built at Manitowoc, WI.

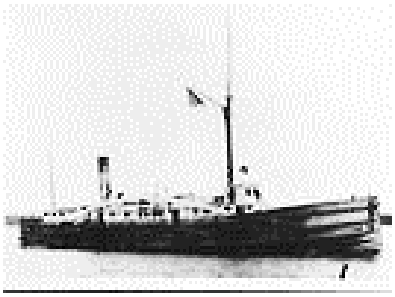
In August 1887, ownership of the steambarge was changed to Christian Braunsdorf, Sheboygan, WI.

In, April 1889, ownership of the steambarge was changed to James Tuft, Clays Banks, Door County, WI.

In April 1892, ownership of the *Mary Mills* was changed to Waukegan Lumber Co., Menominee, MI; George McKinney & James Tufts. She was rebuilt at Ahnapee, WI, and enrolled in June 1893 at Superior, WI; 117.9' x 24.2' x 8.6'; 180.64 grt, 119.6 net.

In April 1895, ownership of the steambarge *Mary Mills* was transferred to Menominee Transportation Co., George McKinney, president. In May 1898, the steambarge collided with a dump scow owned by Starke Dredge Co. In July of that same year, the steambarge, laden with coal, caught fire and burned opposite Jones Island, Milwaukee. The fire extinguished. Two months later, the *Mary Mills* was seized by U.S. Marshalls at Milwaukee as a result of the May 5, 1898 collision with the dump scow.

August 1899, ownership of the steambarge *Mary Mills* was changed to John Bolton & M. Bilty Lumber Co, Milwaukee. In December 1900, laden with hay, the *Mary Mills* caught fire and was destroyed in the harbor at Sturgeon Bay, WI. The fire also destroyed a nearby dock, warehouse and 300 tons of hay. No lives lost.



Montana: Alexander Muir at Port Huron, with A. W. Smith as master carpenter, built a wooden propeller for the Western Transportation Co. of Buffalo, to be used in the package freight trade. She was enrolled at Port Huron in June 1872, with measures: 236.25' x 36.42' x 14.0'; 1535.59 grt, 1382.51 net. Issued official number 90501, she was powered by dual steeple compound engines, 20", 40" bore x 36" stroke, 700 horse power, built by King Iron Works with steam generated by a firebox boiler. In May 1874, laden with wheat, the propeller *Montana,* was damaged by ice in the Straits of Mackinac. In November of 1874, she went ashore at Elk Island, Saint Clair River, then struck on a bar while entering Chicago. The following month, laden with grain, she went ashore at Bar Point, Lake Erie. Her master for the 1877 season was Captain Peter Johnson, with Captain Henry Carter as master for the 1879 – 80 seasons.

In April 1884, ownership of the propeller *Montana* was transferred to Western Transit Co., Buffalo. September 1886, in a dangerously, heavy fog on both Lake and St. Clair River making navigation difficult, the package freight propeller *Montana* ran hard aground near Vicksburg and required lightering to be release the vessel. Master of the *Montana* for the 1888 season was Captain Samuel Golden. In 1893, the *Montana* received a firebox boiler, 10' 9" x 15' 6", 100 pounds steam, built by Farrar & Treft. Master of the *Montana,* from 1893 – 97, was Captain Stephen R. Jones with James Anderson as chief engineer. In August 1895, the propeller *Montana*, bound down with a cargo of flour for Buffalo, ran afoul of the sunken steamer *Britannic* (U3400) then ran aground near Ballard's Reef on the Detroit River to prevent sinking. In September 1895, bound down, Duluth to Buffalo, the propeller *Montana,* laden with flour, was holed and sank in the Portage Canal. In August 1897, the *Montana* while entering Coit Slip, Buffalo, went on the rocks next to the channel. Released by tugs, the *Montana* then struck the schooner *Belle Hanscom,* injuring her slightly.

Masters of the propeller *Montana* in 1899 & 1900 was Captain Henry Murphy with James Walker as chief engineer; Captain F. J. Johnson in 1901 with George H. Blineby as chief engineer; Captain John McKinnon in 1902 with James S. Sangers as chief engineer. In 1902, the *Montana* was reduced to bulk freighter from a package freighter. She was cut down and had her masts and handling winches removed. Her master for tor 1903 was Captain H. Holmberg with Albert S. Scott as chief engineer.

In December 1904, ownership of the propeller *Montana* was changed to Great Lakes Engineering Works, Ecorse, MI.

In July 1908, ownership of the *Montana* was changed to Benjamin Tripp & Co., Cleveland.

In August 1909, her ownership was changed back to Great Lakes Engineering Works, Ecorse, MI

In November 1909, her ownership was changed to Gustav von de Steinen, E. Cleveland, and then to Hugh R. Havey, Detroit, and then to Theobald Emig, St. Clair, MI.

Four months later, February 1910, ownership of the propeller *Montana* was changed to Captain James E. Sheehan, Detroit. She would tow the schooner barge *William McGregor* (U80268). In April 1910, her ownership was transferred to James E. Sheehan, ¾; and George C. Burns, 1/4, both from Detroit.

In October her enrollment was updated after she had been rebuilt at Sturgeon Bay. Her measures were recorded as: 236.3' x 36.5' x 13'; 1,212 grt, 952 net. June 1911, bound down, laden with a cargo of pulp wood, the propeller *Montana* ran hard aground on the lower Detroit River. Released.

In May 1912, her ownership transferred to George A. Kotcher, 3/4; George C. Burns, ¼ both from Detroit.

Ownership of the propeller *Montana* was transferred to George A. Kotcher, Detroit, in April 1914. In September 1914, bound from Detroit to John Island, ONT, to load lumber, the propeller *Montana* caught fire and burned to water's edge, sinking five miles from Alpena, MI, one mile south-southwest of North Point and 3 miles ENE of Sulphur Island, Thunder Bay, Lake Huron. No lives lost.

Neptune: James A. Day, at Oshkosh, WI, built a wooden propeller for the bulk "brick & stone" freight trade between Oshkosh, WI and the east shore of Lake Winnebago. Owned by J. A. Day & Co., she was enrolled at Milwaukee in April 1873. Her measures were recorded as: 135.0' x 28.0' x 8.0'; 232.82 grt; and she was issued official number 130023. She was noted as a "River & bay steamer.' Her master for the 1873 season was Captain Herman Hitz.

In August 1873, ownership of the propeller *Neptune* was changed to Green Bay Iron Co., Green Bay, WI.

In May 1877, her ownership was changed to M. R. Hunt, De Pere, WI.

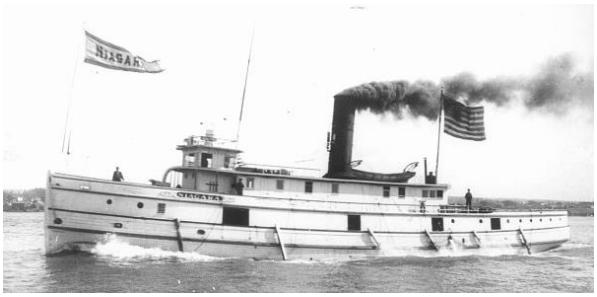
The following month, June 1877, ownership of the *Neptune* was changed to National Furnace Co., Green Bay, WI. The propeller *Neptune* was rebuilt by A.L. Johnson, Green Bay, and enrolled new in June 1880, as *W.L. Brown,* (U80767) with measurements of: 140' x 28' x 13'; 336.10 grt, 224.58 net; she was powered by two high pressure non-condensing engines. She would carry iron ore from Escanaba to Green Bay.

The final enrollment of the propeller *Neptune* was surrendered at Milwaukee, and endorsed "broken up", September 30, 1880.

Master of the propeller for the 1885 season was Captain Joseph Moody. In November 1885, the propeller *W. L. Brown* struck the south pier while entering Ludington, MI harbor and stove in her stern. She was run ashore to prevent her sinking. Her captain, Joseph Moody left the vessel as soon as she struck and disappeared.

During winter layup, 1885/86, the *W. L. Brown* received new boilers. Master of the *W. L. Brown* for the 1886 season, was Captain F. W. Stafford. In October 1886, bound from Escanaba, MI for De Pere, WI, laden with a cargo of iron ore, the *W. L. Brown* sprang a leak and foundered during a gale, just north of Sturgeon Bay in about seventy-six feet of water, about one mile off Peshtigo Reef, Green Bay, Lake Michigan. Property loss $24,500. No lives lost.

The propeller *W. L. Brown's* machinery and boilers were recovered during the summer of 1887.



Niagara: Campbell & Owen, Detroit, with S. R. Kirby as master carpenter, built a wooden towboat for their use. The tug *Niagara* was enrolled at Detroit, May 1872 and assigned official number 18714, and her measures recorded as: 130.0' x 24.58' x 8.58'; 276.87 grt, 183.05 net. She was built for towing work on the Detroit and St. Clair Rivers. The tug *Niagara* was powered by a high-pressure engine, 27" bore x 33" stroke, built by Dry Dock Engine Works, Detroit, 1872. Steam was generated by a firebox boiler, 5.5' x 17', built by Dry Dock Engine Works, Detroit.

Ownership of the tug *Niagara* was changed, in April 1879, to Henry Esselstyn, et al, Detroit. Later that year, she went into Mills & Co. Buffalo dry dock for repairs to a leak. For the 1880 season, the tug *Niagara* towed the barges *Montcalm, Montblanc, Montmorency, Republic* and *Monticello* in the Marquette, MI ore trade. October 1884, the river tug *Niagara* was disabled on Lake Huron. Repaired.

In January 1887, ownership of the tug *Niagara* was changed to Benjamin Boutell, Bay City, MI. In May of that year, the tug *Niagara* was

struck by lightning on Lake Huron. Passengers and crew were severely shocked. In September of that year, she went ashore on Charity Island, Lake Huron, due to heavy smoke & fog from a forest fire. The tug *Niagara* was rebuilt in 1889; 130’ x 24.8’ x 12', 276 grt, 183 net; and received a scotch boiler, 13’ x 13', 110 pounds steam, built by Thomas McGregor, Detroit, MI. in 1890, the tug *Niagara* was re-engine with a fore & aft compound engine, 24”, 44” bore x 36" stroke, 560 horsepower, built by Frontier Iron Works, Detroit, MI.

October 1896, ownership of the tug *Niagara* was changed Saginaw Bay Towing Company, Bay City, MI.

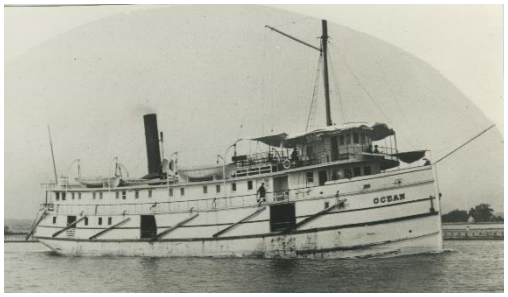
In April 1899, ownership of the tug *Niagara* was changed to Frank Perry Wrecking, Frank Perry & Lewis A. Hall, Sault Saint Marie, MI. Her master for the 1904 season was Captain S.H. Ryers. June 1904, the tug *Niagara* was stranded during a heavy northeast gale on Knife Island, Lake Superior, near Two Harbors, MN. The heavy seas caused the tug to pound on the rocks and she broke in two. No lives lost.

Norman: Frederick J. George, with William Ainsley as master carpenter, built a wooden steambarge at Opinicon Lake, Storrington Twp, on the Rideau River & Canal, eastern Ont., for Fraser & George, John Fraser & Frederick Joseph George. Enrolled at Kingston, Ont. in August 1872, she was sloop rigged with measures: 97.6’ x 23.7’ x 7.1’; 150.72 grt, 111.82 net. Built for the passenger, package freight trade on the Rideau Canal connecting The Ottawa River to Kingston and Lake Ontario.

In September 1872, ownership of the steambarge *Norman* was changed to Isabel Gooderal & George Creighton, Kingston.

In 1874, ownership of the steambarge was changed to include: Isabel Gooderal. Andrew Shanks, & Robert McLoud, Kingston. In November of 1874, the steambarge *Norman* went aground on Amherst Island, Lake Ontario. For the 1875 season, she ran freight between Bay of Quinte and ports on the St. Lawrence River. 1878, the steambarge *Norman* was readmeasured: Tonnage changed to: 153.34 grt, 95.98 net.

In 1880, ownership changed to Rathbun Co., Deseronto, Ont. In October 1881, the steambarge *Norman* went aground on South Manitou Island, lake Michigan. November 1883, bound for Picton, Ont. for winter layup, the steambarge *Norman* caught fire and burned to her water’s edge,



Ocean: S. D. Andrews & Son, Port Dalhousie, Ont.; with S. Andrews, master carpenter, built a wooden propeller for Sylvester Neelon and James Norris, St. Catharines, Ont., to be used in the package freight trade between Toronto and Chicago. Enrolled at St. Catharines, Ont. in April, 1872, her measures were recorded as: 137.0’ x 23.3’ x 11.7’; 683.72 grt, 454.32 net. The propeller *Ocean* was powered by a low- pressure engine, 36" bore x 30" stroke, 100 horsepower, built by G. N. Oille, St. Catharines, Ont. in 1872. Master of the propeller *Ocean* for the 1872 season was Captain Dunn. In April 1872, the propeller *Ocean* arrived at Montreal Transportation Co. wharf, light, to load 400 tons of pig iron and railroad iron for Chicago at $1.20 gold at the dock. In July of 1872, the propeller *Ocean,* entering Kingston harbor, touched on a shoal opposite the wharf of the Canadian Engine and Machinery Works. Master of the vessel for the 1873 to 82 seasons was Captain A. McMaugh.

Ownership of the propeller *Ocean* was changed in July 1874, to Allan R. McDonnell et.al., Port Arthur, Ont. October 1874, she broke her engine on Lake Michigan and required a tow into Chicago for repairs. In November 1874, the *Ocean* sprang a leak while on Lake Erie. August 1880, bound down from Montreal, on the St. Lawrence River in dense fog, the *Ocean* ran aground in Lake St. Louis. Released. In October of that same year, bound up from Montreal for Toronto, the propeller *Ocean,* laden with 250 ton of pig iron, attempted to run across the current at Farrens Point, below Morrisburg, Ont., sheered and ran upon the bank damaging her stern. She swung off and drifted down stream to a wharf where it was found that her fore-foot had been carried away and her garboard streak split. Her pumps were engaged and she made Kingston for repairs. Continuing her journey for Toronto, the propeller *Ocean,* found that she was leaking again, put into Port Hope, Ont. Found that her cargo of pig iron had shifted. She left again for Toronto but found she was leaking badly, engaged her pumps and put a sail under her bottom to stop the leak and returned to Kingston for repairs.

Ownership of the propeller *Ocean* was changed in 1884, to Graham, Van Horne & Company, Port Arthur, Ont. The Ocean ran Duluth to Michipicoten, Ont. with the propeller *Prussia*

(C75638). In 1884, she was rebuilt and received her official number: C88633; 137' x 24', 684 grt.

Ownership of the propeller *Ocean* was changed in March 1886, to Sylvester Neelon, St. Catherines. She ran Lake Head to Montreal. She was licensed for 150 passengers. In August 1887, while in the canal basin at St. Catharines, loading cargo, there was a collision with the tug *Polonio.* Damage loss was slight.

Ownership of the propeller *Ocean* was changed in April 1890, William Alfred Geddes, et al. Toronto. She ran between Hamilton, Ont., Toronto, and Montreal. July 1891, the propeller *Ocean* went ashore at Port Union, Ont., Lake Ontario. She was lightered, released and towed into Frenchman's Bay to be examined by a diver for damage. Her port bow was found to be badly damaged and her cargo mostly destroyed by water. She was towed to Port Dalhousie dry dock for repairs. Master of the propeller *Ocean* for the 1892 season was Captain John P. Towers; for the 1893 season, Captain Hiram Vaughan; and for the 1893 to 96 seasons, Captain John F. Trowell. Up bound, in June 1894, the propeller *Ocean* sank in a collision with the barge *Kent* (C77711) near Sister Island, St. Lawrence River. Two lives lost. Later that month, the *Ocean* was raised, refloated and repaired at Deseronto, Ont. At that time, she also received a scotch boiler, 10'6" x 11', 107 pounds steam, built by J. Inglis & Co., Toronto. In May 1897, bound down from St. Catharines, Ont., the propeller *Ocean,* laden with passengers and freight, ran aground in the rapids outside Morrisburg, Ont. St. Lawrence River. Released. In August 1898, the propeller *Ocean,* while running the rapids at Point Iroquois, Ont., St. Lawrence River, went aground. Released.

Ownership of the propeller *Ocean* was changed in 1900, to Wentworth Navigation Co., Toronto, Ont. In November 1904, while moored at Muir's drydock, Port Dalhousie, Ont., the *Ocean* caught fire and burned to a total loss. The hulk of the propeller *Ocean* had her machinery removed and she was converted to a barge at Merritton, Ont. for Battle & Co's. cement works, Thorold, Ont. The barge was registered and renamed *Helena* (C116874) in 1905. Her measures were recorded as: 135.3' x 26.2' x 8.0', 218 grt.

Final disposition: "Unknown".

Oconto: George S. Rand, at Manitowoc, WI, built a wooden propeller Goodrich Transportation Co. of Manitowoc. Built for the passenger, package freight trade on the west shore of Lake Michigan at a cost of $42,204. She was enrolled at Milwaukee in May 1872 and was issued official number U19369. Her measures recorded were: 143.0' x 32.0' x 10.10'; 505.35 grt, 447.60 net. The *Oconto* was powered by a two-cylinder, high pressure engine, 16", 16" bore x 20" stroke built by Jackson & Wiley, Detroit, MI in 1864 and originally installed in the passenger steamer *Skylark* (U22554). Her master for the 1880 season was Captain F. W. Stafford with Raymond Flint as chief engineer.

Litigation lasted for six years against the Goodrich Transportation Co. when in 1874, the steamer *Oconto* was blamed for a fire, which supposedly started by sparks from her stack, that burned a two block wide stretch of riverfront at Green Bay, WI. Fifty-nine homes, a school, churches, stores, a bank, and a vinegar factory were destroyed. Goodrich Company was declared the winner of the suit in September 1880.

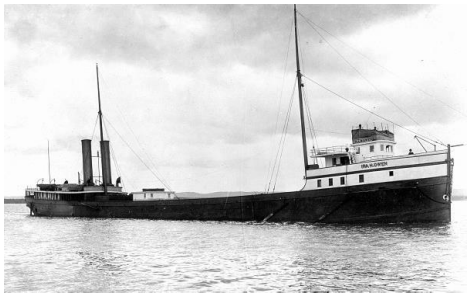
Ownership of the steamer *Oconto* was changed in August 1883, to George S. Colwell, Harrisonville, MI. for $17,500. She was placed on the Cleveland to Saginaw, MI run. Her master for the 1883-85 seasons, was Captain G. W. McGregor with Henry Johnson as chief engineer for the 1882 & 83 seasons. In 1884, the steamer *Oconto* underwent a complete overhaul at Detroit, receiving a new boiler and compound engine. April 1884, bound down, the steamer *Oconto,* laden with lumber and lath, stranded in the Saint Clair River. She was released without damage. In December of that same year, the *Oconto,* bound down from Alpena, MI laden with lumber, was damaged by ice at Saint Clair Flats, Lake St. Clair. Damage loss set at $200. In January 1885, while at winter quarters at the foot of McDougall Ave, Detroit, the *Oconto* caught fire and was damaged. Loss set at $600. Repaired.

In May 1885, ownership of the steamer *Oconto* was changed to R. VanSlyke and Captain W. McGregor, Detroit.

In December of that same year, the *Oconto,* with twenty-three passengers, freight and cattle, stranded in a squall at Little Charity Island, Saginaw Bay, Lake Huron. One life lost. The steamer

Oconto, stranded on Charity Island, Lake Huron in the winter of 1885. She contended with wind, wave and ice for four months and drifted nearly 20 miles from where she originally stranded, finally sank in Saginaw Bay in 14 feet of water, in April 1886. She was raised by Captain Merryman and the tug *J.H. Reid* and went into the Wolverine Dry Dock for repairs.

Ownership of the steamer *Oconto* was changed to the Grand Trunk RR. On her first trip, July 1886, since her rebuilt, the steamer *Oconto,* laden with a large quantity of freight including silks, cotton, boots and shoes, wire and iron all valued at $300,000, stranded Rock Island Reef, near Fishers Landing, St. Lawrence River and sank in 120 feet water. Declared a total loss. She was declared a "Total Loss".



Ira H. Owen: Linn & Craig at Gibraltar, MI, built a wooden propeller for the Escanaba & Lake Michigan Transportation Co., Marine City, to be used in the bulk freight iron ore trade between Escanaba to Union Steel, Chicago. She was enrolled at Port Huron, August 1872. Her measures recorded were: 164.66' x 31.75' x 9.33': 572.71 grt, 450.79 net. She could carry up to 800 tons of iron ore. The *Ira H. Owen* was assigned official number U100156. She was powered by a steeple compound engine, 16', 27" bore x 32" stroke, 350 horse power, built by S.F. Hodge & Co., Detroit. Her chief engineer for the 1873 to 1880 seasons was M. Conley. In October 1874, the propeller *Ira H. Owen* towing her consort *Jesse Linn* (U75605) went aground on the rocks at Cana Island near Bailey's Harbor, WI, Lake Michigan. In October 1877, the propeller *Ira H. Owen* went aground while entering Port Erie, Lake Erie.

February 1879, ownership of the *Ira H. Owen* was changed to Inter-Ocean Transportation Co. Milwaukee. During winter layup, 1881-82 the *Ira H. Owen* was renamed *Monohansett.* She received a firebox boiler, 9' 8" x 16', 100 pounds steam, built by M. Riter & Co., Buffalo, and her engine was rebuilt as a steeple compound, 16', 27' bore x 32" stroke, 430 horsepower by S. F. Hodge & Co., Detroit. Her enrolled tonnage – 450.79 net. Master of the *Ira H. Owen* for the 1882 season was Captain Joseph E. Max. In May 1883, the propeller *Monohansett* collided with the schooner *Metropolis* (US16414) off Door, WI, Lake Michigan.

In April 1888, ownership of the *Monohansett* was changed to Leander Burdick, 1/3, Toledo; George H. Hadley, 1/3; and Charles Hubbard, 1/3, all from Buffalo. In August 1889, in a gale near Big Point Sable on Lake Superior, towing her consort *Massasoit* (U75605) who broke her iron cable, tearing off a large section of the steamers rear bulwarks. The steamer was damaged in a storm and lost her engine, took on water but was to safely arrive at White Fish Point. Her consort made it safely to Huron Bay. In July 1890, she went aground at Churches near Sault Ste Marie. During 1891, the *Monohansett* went through an extensive rebuild and dry dock work at the James Davidson's Yard, West Bay City, MI.

Early in 1892, ownership of the propeller *Monohansett* was changed to Davidson Transportation Co. Hampton, MI and she became a lumber hooker.

In April 1893, her ownership was transferred to James Davidson, Bay City, MI. She was under the command of Captain Richard Bifield for the 1899 season, with Andrew J. Wilson and John Haller as chief engineers. In September 1894, her machinery was disabled at Sault Ste Marie. In November of that same year, the *Monohansett* went aground in Lake Erie. Released. Later in that same month, she was iced in at Sault Ste Marie. Then in June of 1897, the propeller *Monohansett* struck and sank the tug *C. W. Wells* (US126224) at Ballaras(?).

Ownership of the propeller *Monohansett* was transferred in march 1899, to Davidson Steamship Co., Duluth, MN.

In April 1900, ownership of the propeller *Monohansett* was changed to Ohio Cooperage Transportation Co. Willoughby, OH. She was homeported at Fairport, Ohio and was used in hauling coal to northern mining ports. Masters of the propeller *Monohansett* were Captain D. A. Kendall for the 1901-06 season with Edward Averill in 1901; E. T. Everill in 1902; A. W. Carlisle in 1903-05 and Robbins in 1906 as chief engineers. Her master for the 1907 season was Captain Joseph R. Inches with James Dibble as chief engineer. In late November 1907, The Ohio Cooperage Transportation Co. sent *Monohansett* and her crew of 12 to deliver 900 tons of coal from Cleveland to Collingwood, Ontario. On Saturday the 22nd, *Monohansett* was about to round Thunder Bay Island near Alpena, Michigan, when a fierce gale started blowing. Captain Joseph Inches sought shelter 2 miles off the lee shore of Thunder Bay Island. As the captain waited for the inclement weather to pass, a crewmember sounded the fire alarm shortly after 10 o'clock in the evening. A

lantern had tipped over in the engine room. Flames quickly engulfed *Monohansett’s* seasoned timbers. Fortunately, the US Coast Guard maintained a lifesaving station on Thunder Bay Island. Captain Inches signaled Captain Persons and his life-savers, who managed to get all of the crew off safely. As the *Monohansett* was an old boat and well-seasoned she went rapidly before the blaze and was soon a venerable furnace. Captain Persons sent a mayday call to Captain Peppler, who managed the tug Ralph in Alpena. Ralph arrived on the scene about midnight. By that time, the fire had penetrated the cargo hold. Extinguishing a coal fire was extremely difficult in a wooden vessel. Hoses could be used to pump water into the hold until the last ember was drowned, but too much water could cause the vessel to sink. The decision was made to tow the vessel towards Thunder Bay Island and beach it against the shore. Unfortunately, the fire was not completely out. That afternoon it reignited in the cargo hold, destroying the vessel to the waterline.

Notes:

Black River, Ohio: Drains Medina County, emptying into Lake Erie at Lorain, OH.

Cargo-carrying capacity in cubic feet, another method of volumetric measurement. The capacity in cubic feet is then divided by 100 cubic feet of capacity per gross ton, resulting in a tonnage expressed in tons.

Freshet: a great rise or overflowing of a stream caused by heavy rains or melted snow.

Mail Steamer: Chartered by the Canadian government to carry the mail between ports.

Navigation: The reader may wonder what, with so few vessels on the lakes, why steamers could not avoid each other. Two main reasons, the visibility during storms and the vessels did not carry any lights so you came upon a vessel you could not determine if the vessel was approaching or departing from you.

Old Style Tonnage: The formula is: Tonnage= ((length - (beam x 3/5)) x Beam x Beam/2)/94

where: *Length* is the length, in feet, from the stem to the sternpost; Beam is the maximum beam, in feet.

The Builder's Old Measurement formula remained in effect until the advent of steam propulsion. Steamships required a different method of estimating tonnage, because the ratio of length to beam was larger and a significant volume of internal space was used for boilers and machinery.

In 1849, the Moorsom System was created in Great Britain. The Moorsom system calculates the tonnage or cargo capacity of sailing ships as a basis for assessing harbour and other vessel fees.

Up to 1848, most freight was shipped, on steamers or propellers, as package freight. This meant that coal, grain, apples, and produce had been placed in a container or sack and carried aboard on the back of a laborer. Bulk freight in the form of lumber would have been loaded on barges and schooners and towed by a steam driven ship. In 1848, Joseph Arnold built at Port Huron, MI, a the steambarge *Petrel* (found in the third section) for the bulk freight trade answering a need to move bulk coal to the northern communities and iron ore, lumber, and grain south to the growing cities in the East.

By 1848, some ships built in that year, continued to operate beyond the “War of Rebellion” and may be listed with two different tonnage ratings. Most ships built on the Great Lakes were rated as Tonnage (Old Style). This dates back to the 1600’s and comes to the U.S. from our cousins.

Tonnage (Old Style): The British took the length measurement from the outside of the stem to the outside of the sternpost; the Americans measured from inside the posts. The British measured breadth from outside the planks, whereas the American measured the breadth from inside the planks. Lastly, the British divided by 94, whereas the Americans divided by 95. The upshot was that American calculations gave a lower number than the British. For instance, when the British measured the captured *USS President* (a three-masted heavy frigate), their calculations gave her a burthen of 1533$^{7}/_{94}$ tons, whereas the American calculations gave the burthen as 1444 tons. The British measure yields values about 6% greater than the American. The US system was in use from 1789 until 1864, when a modified version of the Moorsom System was adopted (see below).

Unit Ton - The unit of measure often used in specifying the size of a ship. There are three completely unrelated definitions for the word. One of them refers to weight, while the others refer to volume.

Measurement Ton (M/T) or ***Ship Ton*** Calculated as 40 cubic feet of cargo space. Example, a vessel having capacity of 10,000 M/T has a bale cubic of 400,000 cubic ft.

Register Ton - A measurement of cargo carrying capacity in cubic feet. One register ton is equivalent to 100 cubic feet of cargo space.

Weight Ton (W/T) - Calculated as a long ton (2,240 pounds)

In 1849, a Royal Commission was formed in England with the secretary of the commission as George Moorsom, and the resulting tonnage admeasurement system was called the "Moorsom System". The idea of this system is that the fees charged to vessels should be directly proportional to their potential earning capacity, i.e., the space occupied by passengers or cargo. A vessel is measured at a series of sections throughout its length, the transverse area determined at each section, and the areas integrated to determine the volume. The total internal volume was then divided by 100 to determine the vessel's "tonnage", since at that time, 100 cubic feet was determined to be the appropriate factor so that vessels would maintain approximately equal tonnages under the new and old regulations. There were two tonnages determined under the Moorsom System: "gross" and "net" tonnage. Gross tonnage reflected the entire measured volume of the vessel less certain "exempted" spaces, initially spaces used only for the crew or for navigation of the vessel, and spaces in the superstructure not used for cargo. Net tonnage was equal to gross tonnage less a deduction for the machinery space, reflecting the earning capability of the vessel.

A measurement of the cargo-carrying capacity of merchant vessels depends not on weight, but on the volume available for carrying cargo. The basic units of measure are the *Register Ton*, equivalent to 100 cubic feet, and the *Measurement Ton*, equivalent to 40 cubic feet. The calculation of tonnage is complicated by many technical factors.

The current system of measurement for ships includes:

Gross Tons (**GRT**) - The entire internal cubic capacity of the ship expressed in tons of 100 cubic feet to the ton, except certain spaces which are exempted such as: peak and other tanks for water ballast, open forecastle bridge and poop, access of hatchways, certain light and air spaces, domes of skylights, condenser, anchor gear, steering gear, wheel house, galley and cabin for passengers.

Net Tons (**NT**)- Obtained from the gross tonnage by deducting crew and navigating spaces and allowances for propulsion machinery.

P.Q.: Province of Quebec

Packet Freight: almost every imaginable item of merchandise – bags of onions, grain, etc., processed foods, bags of coal, stoves, furniture, which can be packed and moved by manpower from dock to hold and reverse.

Patriot War: A conflict along the Canada – U.S. border where bands of raiders attacked the British colony of Upper Canada more than a dozen times between December 1837 and December 1838. This so-called war was not a conflict between nations; it was a war of ideas fought by like-minded people against British forces

Ship Inventory: Will include the names of wooden steamers that will not be identified in the manuscript. The research project that the information was gathered for included all wooden steamers built on the Great Lakes or St. Lawrence River and operated on the Great Lakes with a gross tonnage at or over 100 tons.

Up-bound: Going against the current – St. Lawrence River to Lake Superior. (Lake Michigan – steaming north)

Down-bound: Going with the current – Lake Superior to the Saint Lawrence River. (Lake Michigan – steaming south)

(Original Source: "Wooden Steamers on the Great Lakes” – Great Lakes Historical Society; Bowling Green State University – Historical Collection; Thunder Bay National Marine Sanctuary Collection; Maritime History of the Great Lakes; and the scanned newspaper collection of the Marine Museum of the Great Lakes, Kingston, Ont. and 746 additional documented sources.)