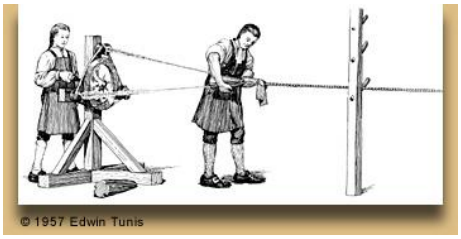


While one man cranks the spinner, the one holding the "top" walks backwards as the rope is twisted. From Edwin Tunis, *The Young United States, 1783 to 1830* (New York: World Publishing Co., 1969). Used by permission of the estate of Edwin Tunis.

Ropewalk

The Newsletter for
Shipwrights of Ohio – June 2024

Next Meeting: July 20, 2024;
*"*Air Brushing*"* by Lee Kimmins

Table of Contents

June

Our June meeting was canceled due to the library display and a "Intro to Ship Modeling" workshop that was held on Saturday, June 22nd.

We also have two schedule changes for this year:
First, the July and August presentation topic are swapped:

July – Air Brushing
Aug. – Scratch Building

Second, the December. Meeting has been moved forward one week and will be held on Saturday, December 14th.

The December presentation topic, "Building Small Boats" needs a presenter. Checking through my files, dating back to 1995, I have ten articles about building small boats, some including detailed steps to build a small boat. Who wants to take on the subject? Let me know.

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.

Shipwrights of Ohio - Activities

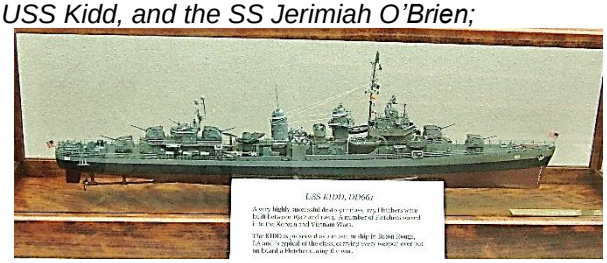
Westerville Public Library Model Display

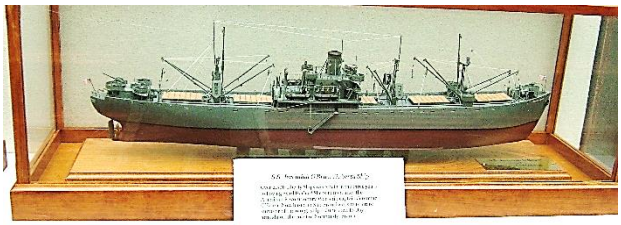
The Shipwrights of Ohio had reserved the display cases in the main hallway at the Westerville Public Library for the month of June. The purpose was to showcase our ship models and possibly increase enrollment. Our last display, was held in 2018.

The view above looks down the main hall from the entrance, with the display cases on either side.

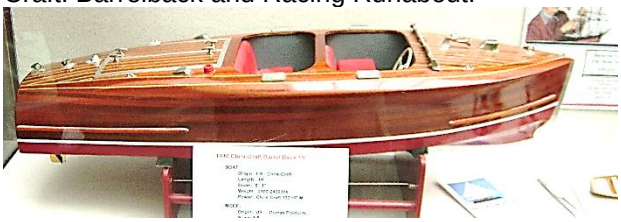
The set up for the display was on Saturday, June 1, 2024. In the two long cases (Long Case: 72" x 12.75" x 12.75" (length x height x depth x length) were:

Cliff Mitchells: contributed (below)the: WW II, Navy: *USS Kidd, and the SS Jerimiah O’Brien;*



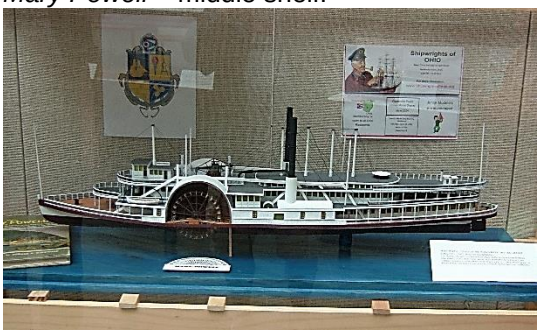


Alan Phelps: contributed the radio control: Chris Craft: Barrelback and Racing Runabout.

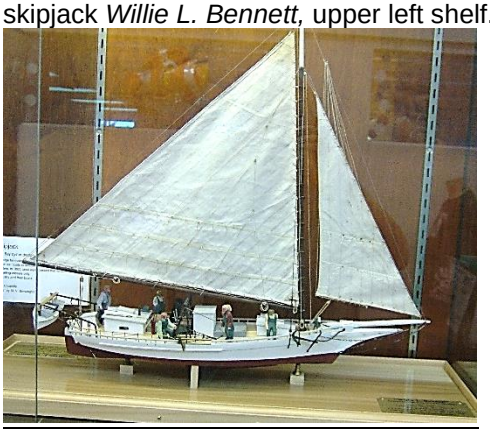


The Tall Case: 57.5” x 19” x 76.5” (length x depth x height:

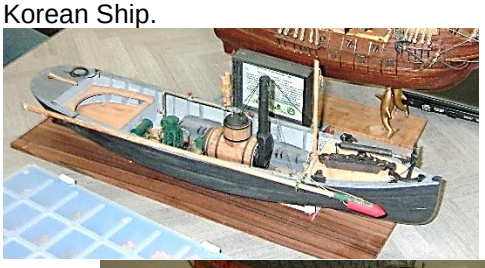
Lee Kimmins: contributed the sidewheel steamer *Mary Powell* – middle shelf.



Bill Nyberg contributed the Chesapeake Bay skipjack *Willie L. Bennett,* upper left shelf.



John Boeck contributed: Pickett boat; Chesapeake Bay – Crabber; sailing ship *San Francisco;* 1500’s Korean Ship.



Bob Mains contributed his model of a Viking ship

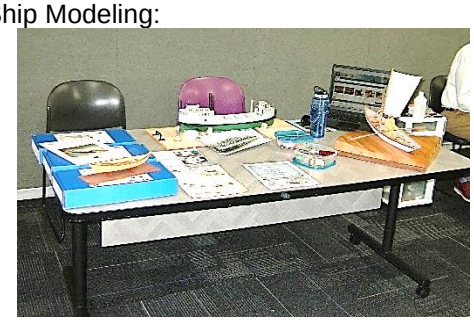
Westerville Public Library Workshop

On Saturday, June 22, 2024, we held a workshop “Intro to Ship Modeling” at the Westerville Public Library, in classroom B, from noon to 4 PM.

Our objective was to: introduce ship modeling to the general public. We had five subject tables setup:

1 - Club Information: *Shipwrights of Ohio:*

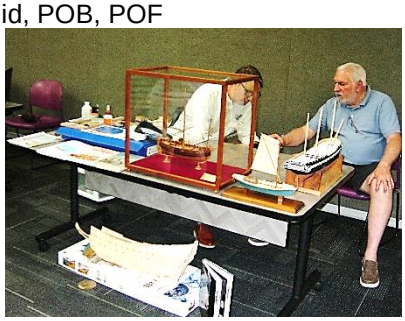
2 - New to Ship Modeling:



3 – Radio Control

4 – Plastic Kits & 3-D Printing

5 – Tall Ships: Solid, POB, POF



I wish I could say we had enormous crowds, but that didn’t happen. Still haven’t figured out how to get the word out to the public, in todays technology and on-line shopping world. We did have 4-moms, 3-dads and 11 young people under the age of 10.

Back to the drawing board.

Up Coming Events

If you are traveling this summer and in the area for these NRG sponsored events. Plan to include one or more of the following:

IPMS National Convention
July 17-20, 2024
Madison, WI

ModelCon 6
Battleship New Jersey
August 3, 2024
Canden, NJ

Ships on Deck

Drilling Platform

Cliff Mitchell

Cliff, took some time off from working on the *Sphinx* and instead built a diorama of a pile driver loading supplies next to a wharf.



HMS Pegasus

Jason Smith

The Pegasus is coming along slowly. The foremast yards are attached and the parrels on. I kind of, can see the light at the end of this long tunnel. It is amazing how much more of a "ship" this looked like once I attached the yards. Just have to do the surrounding rope work with their attendant belaying points. Making lots of rope hanks.


Friendship Sloop

B. Nyberg

A folk-art model built in the early 1950's. The model appeared to be shaped and rigged from plans from Chapelle's "American Sailing Craft" (pg. 39). The builder, grandfather, lived in New England, and carved the hull and rigged the model in the 1950's. Gifted to the older brother of the present owner. The model has a metal keel, and in asking the present owner if the model had ever been sailed, his response was yes.

Other Notes: "Stuff", Tugs & Things

Nautical Terms

Nautical Terms Wikipedia

Collier: A bulk cargo ship designed to carry coal, especially such a ship in naval use to supply coal to coal-fired warships.

Come About: To tack; To maneuver the bow of a sailing vessel across the wind so that the wind changes from one side of the vessel to the other.

Come To: To stop a sailing vessel, especially by turning into the wind.

Communication Tube: *Also* ***speaking tube*** *or* ***voice tube.*** An air-filled tube, usually armored, allowing speech between the conning tower and the below-decks control spaces on a warship.

Companionway: A raised and windowed hatchway in a ship's deck, with a ladder leading below and the hooded entrance-hatch to the main cabins.

Conn: To direct a ship or submarine from a position of command. While performing this duty, an officer is said to *have the conn*.

Consort: An unpowered Great Lakes vessel, usually a fully loaded schooner barge, or steamer barge, towed by a larger steamer that would often tow more than one barge. The consort system was used in the Great Lakes from the 1860s to around 1920.

Container Ship: A cargo ship that carries all of her cargo in truck-size intermodal containers.

Convoy: A group of ships traveling together for mutual support and protection.

Shipwreck:

By Ellen Wexler, *Smithsonian* magazine's assistant digital editor, humanities.

More than three millennia ago, a sinking merchant vessel settled about 5,900 feet beneath

the surface of the Mediterranean Sea. Its hundreds of storage jars, called Canaanite amphorae, spilled into heaps on the seafloor.

Archaeologists recently recovered two of those jars, which are thought to date to between 1400 and 1300 B.C.E., during the late Bronze Age. According to the Israel Antiquities Authority (IAA), which announced the discovery this week, the wreck is the oldest ever found in the deep sea (the depth at which light starts to dwindle, around 656 feet).

“The discovery of this boat now changes our entire understanding of ancient mariner navigational skills,” Jacob Sharvit, director of maritime archaeology for the IAA, tells the *New York Times*’ Franz Lidz. “It is the very first to be found at such a great distance [from the shore] with no line of sight to any landmass. From this geographical point, only the horizon is visible all around.”

The site is located some 55 miles off Israel’s coast. Sharvit says that without access to navigational technologies, like compasses and astrolabes, ancient sailors would have needed a comprehensive understanding of celestial navigation to travel so far from land.

Tugs: Great Lakes

Erastus Day, 1893

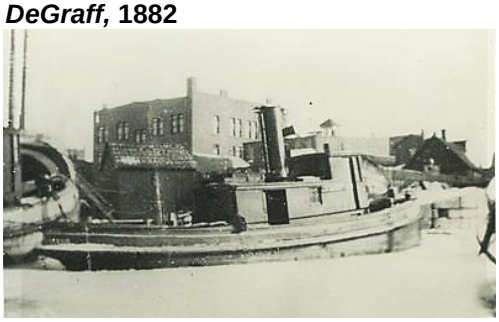
The wooden, steam powered tug was built by Union Dry Dock, Buffalo, NY in 1893 for Hand & Johnson, Buffalo, and assigned official number 136360. She was powered by a high-pressure engine, 24” bore x 24” stroke. She was 70.1’ x 19.5’ x 10.1’. In 1899, she received a new HPNC (high pressure, non=condensing) engine: built by Whitman & Co, Buffalo, 22” x 24”, 350 hp at 100 rpm. Her boiler was 18’ x 16’.

In 1927, the tug *Erastus Day* was abandoned and her enrollment closed.

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

,

J. H. DeGraff, **1882**



The wooden tug *J.H. Degraffe* was built at Tonawanda, NY (builder not listed) was enrolled with measures: 45’ x 12’ x 6’, 15 ton grt, 7 net. She was assigned official number 76297. In 1899, her ownership was changed to A. Hartmen.

In 1903, her ownership was changed Canadian; renamed *Rheata,*C116268, 48’ x 12’ x 6’, 27 grt, 18 net.

In 1907, the tug *Rheata,* caught fire in the harbor at Midland, Ont. and burned to a total loss. ,

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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

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

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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-A

Ada E. Allen: William Allen, Walpole Island, Ontario, built a wooden steambarge for the bulk freight trade on the St. Clair River and Lake St. Clair. She was enrolled at Windsor, Ont, January 16, 1878 and her measures recorded as: 90.0' x 22.0' x 6.3; with tonnage of 107 grt, 68 net. She was powered by a upright high pressure engine, 10" bore x 16" stroke, 45 HP, built by Hyslop & Ronald's, Chatham, Ont. in 1870. At that time she was assigned official number C74066.

In 1874, her ownership was changed to R. L. McGregor, banker, Windsor, Ont.

In 1877, the steambarge ownership was changed to Thomas Adair, Southampton, Ont. In May 1879, the steambarge *Ada E. Allen* had her boiler removed and replaced with one that did service in the propeller *Lake Breeze* (C71259) which burned in the fall of 1878. January 1883, the steambarge *Ada E. Allen* was remeasured, and tonnage altered to 170.1 grt, 96.4 net, and her measures recorded as: 90' x 26.8' x 8.6'.

In March 1885, ownership of the steambarge *Ada E. Allen* was changed to Captain John Weston, Detroit. She ran in the stone trade between Detroit and the islands.

The following year, ownership of the steambarge *Ada E. Allen* was changed to J. Atkinson, Pelee Island, Ont. In May 1887 the *Ada E. Allen* damaged her stern bearing and was towed to Cleveland, in a sinking condition, where she was repaired. In September of that same year, the steambarge *Ada E. Allen* caught fire while moored at Heard's Dock, Detroit River, near Amherstburg, Ont. She was cut loose to avoid spreading the fire and drifted to Bois Blanc Island where she burned to total loss. Property loss of the vessel was set at $1,000. No lives lost.

Argyle: Louis Shickluna, St. Catharines, Ont., built for R.C. Graham, of St. Catharine, and George Campbell, Windsor, Ont. a wooden propeller to be used in the bulk freight trade. She had a capacity for 18,000 bushels and would run between Montreal, Que. and Chicago. Her first enrollment was issued at St. Catharines, April 26, 1877 and her measures were recorded as: 135.0' x 23.0' x 7.0'; tonnage was 625.65 grt, 396.91 net. She was powered by a low-pressure condensing engine, 36" bore x 30" stroke; 380 HP, built by G.N. Oille, St. Catharines. Her master for the 1872 to 1880 seasons was Captain H. McLaughlin. In August 1872, the propeller *Argyle* went ashore at Grenadier Island, 20 miles below Kingston, Ont., Lake Ontario. She was released and repaired. The following month, the *Argyle,* when passing the end of the Grand Trunk wharf, Kingston, bound out, she grounded on a sunken crib work. Released.

In 1877, ownership of the propeller *Argyle* was changed to J. E. Graham, St. Catharine, Ont. In November 1880, laden with freight, the *Argyle,* became blocked by ice in the Beauharnois Canal and had to remained through the winter before being freed. Her master for the 1881 season was Captain George Malcolmson.

In 1884, her ownership was changed to R. McLellan. Her master for the 1884-86 seasons was Captain James McMaugh. In May of that year, the propeller *Argyle,* laden with supplies for the Canadian Pacific Railway, sank on the north shore in Michipicoten Bay, Lake Superior. She was raised with her hull damaged. Damage was assessed at $7,000 to her hull with cargo damages set at $4,000.

In November 1885, her ownership was changed to Montreal Transportation Co. and her registration transferred to Montreal, Que. She was issued official number C90537 at enrollment. During winter layup, 1885/86, she was rebuilt, as a steambarge by John Gaskin, Kingston and received a steel arch to prevent hogging. She was registered anew in April 1886, as *Glengarry* (C90537) with measures: 170.0' x 26.0' x 11.2'; 509.0 grt, 215.0 net. Master of the propeller *Glengarry* for the 1886 to 1892 seasons was Captain James McMaugh with John Dodd, in 1886, and William Miller for 1887-88 as chief engineers. In winter layup of 1888, the steambarge *Glengarry* received a new steeple engine, 21", 36" bore x 30" stroke. 380 HP, built by G. N. Oille, St. Catharine, Ont. and a fire box boiler 10' x 14', 108 pounds steam. In June 1892, laden with 21,000 bushels of wheat, the steambarge *Glengarry* caught fire and burned to the water's edge at Kingston, Ont. One life lost. The steambarge was rebuilt for towing during winter layup 1892. Her master for the 1893-96 seasons was Captain James W. Mawdesley with Charles McSorley as chief engineer. Between 1898 and 1903, her masters were: Captain Albert Major (1898-99); Captain Gordon Kean (1899-1900);

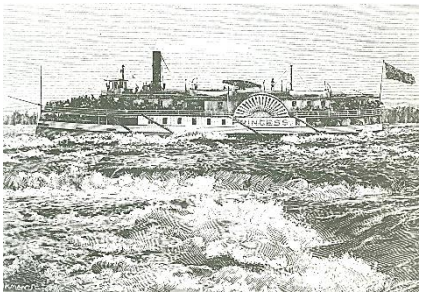
Captain George Richard Wood (1901); Captain John W. Wood (1902); and Captain E. Grouix (1903). Her chief engineers were with Alex Barton (1899); Charles Napper (1900); I. Boyd (1901-02); and Joseph Dawson (1903).

In 1907, ownership of the steambarge *Glengarry* was changed to A. Lomer, Montreal, Que.

The following year, her ownership was changed to J. Richardson & Sons, Kingston, Ont. She had a shared master for the 1908 – 11 seasons with Captain C. Robineau and Captain A. Robineau. Her chief engineer during this period was A. Legendre. In 1912, bound from Kingston to Montreal, the steambarge *Glengarry,* laden with 20,000 bushels of wheat, struck the bridge pier while passing through the Lachine Canal at Montreal on the St. Lawrence River and stove a hole in her side and sank. She was raised and converted to a schooner barge at Sorel, Oue.

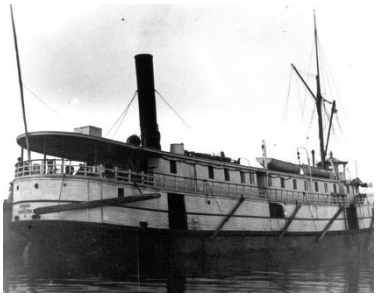
March 04, 1913, the final enrollment of the steam barge *Glengarry* was surrendered at Montreal, Que. and endorsed "rebuilt and converted into a sailing barge".

In 1917, the schooner barge *Glengarry* was broken up.



Atlas: P. Girard, Carillon, Que, built a wooden sidewheel steamer for Shepherd, et al, Montreal. She was enrolled at Montreal, and her measures recorded as: 141.90' x 22.40' x 7.80'; 580 grt. She was powered by a Walking Beam engine, 32" bore x 96" stroke, built by G. Brush, Montreal, in 1853. The engine was salvaged from the original 1854 *Atlas.* She was built as an Ottawa River night boat on the original bottom of the *Atlas* (1854) and operated between Montreal and Carillon, Que. (Carillon, is located at the foot of the Long-Sault rapids on the Ottawa River.)

In 1873, the sidewheel steamer *Atlas* was rebuilt by A. Cantin, Montreal, and renamed *Princess.* In 1881, she was converted to a "market boat" (making all stops) and operated between Montreal and Ottawa. In 1886, the sidewheel steamer *Princess* was licensed to carry up to 443 passengers. In 1899, she was rebuilt and her enrollment tonnage was changed to: 579 grt, 331 net. Masters of the sidewheel steamer *Princess* were: Captain W. F. Halcro (1907-10), and Captain E. Gauthier (1912-13) with chief engineers: Ferdinand Piche (1907-09, 1912-13) and Narcisse Marchand (1910). In the 1913 season, the steamer *Princess* was laid up at Carillon, Que., Saint Lawrence River. In the winter 1913/14, the steamer *Princess* had her upper works damaged by fire and she was abandoned at Carillon. She went to pieces in the Spring of 1914, mostly due to the force of ice moving out in the spring.



Canada: A. M. Robertson, Hamilton, Ont., built a wooden propeller for the passenger, package freight trade. Her recorded measures were: 142.83' x 23.75' x 13.00'; 267-unit tons. She was owned by; J. B. Fairgrieve, H. Fairgrieve, D. Butters; T. Harond all from Hamilton, Ont. The propeller *Canada* was powered by a Fore & Aft Compound engine; 20", 40" bore x 34" stroke, built by F.G. Beckett, Hamilton. The engine was designed by J. B. Fairgrieve. Both cylinders were used when the vessel was in the open lake, but when in confined waters, only the low-pressure cylinder was used and the high-pressure cylinder became a steam chest. The propeller *Canada,* whose construction cost $36,000, was launched from Zealand's Wharf, Hamilton, June 5, 1872. She would run between Montreal and Chicago from 1872–1878 with passengers and up to 18,500 bushels as cargo. Her master for the 1872 – 77 seasons was Captain J. B. Fairgrieve.

In September 1872, the propeller *Canada* broke her machinery near Montreal, while on the St. Lawrence River. In May 1873, laden with 19,599 bushels of corn, the propeller *Canada* sprang a leak and was run ashore at Turtle Island, near Munroe, MI on Lake Erie. 16,500 bushels of corn were damaged. The vessel was released and taken to Toledo for repairs. She was remeasured in 1875 and her tonnage was listed as: 353 grt, 267 net. She was issued official number C100392. In 1875, the propeller *Canada* formed a daily line between Montreal, Toronto, Hamilton and St. Catharines. Her masters were Captain David Allen Kiah (1877-80 and Captain John McGiffin (1881-87).

In May 1882, the propeller *Canada,* while managed by the New England Transportation Company, ran aground at White Cloud Island, Ont.

on Georgian Bay. In June 1883, up-bound, laden with general merchandise for Chicago, the propeller *Canada* sank near Rockport, Ont. on the St. Lawrence River. She was raised and towed to Kingston, Ont. for repairs. In August 1887, up-bound from Sault Ste for Duluth, MN, the propeller *Canada,* laden with a cargo of sundries, went ashore at Corbay Point, Ont., Lake Superior. Property loss was set at $2,000.

Ownership of the propeller *Canada* was changed to John Nesbit, Sarnia, Ont. in February 1892. She was used tow coal barges from Toledo, to Point Edward, Ont. on the Lake Huron/St. Clair River. In October of that year, the propeller *Canada* caught fire at Port Huron and was gutted. She was declared a total loss and abandoned by her owner.

The hulk of the propeller *Canada* was salvaged, her machinery removed, and she was rebuilt up from the water's edge as a schooner barge. In July 1893, she was registered U.S. as the *Schelde;* owner: Thomas Murphy, Detroit, MI; issued official number: US116578; with measures recorded as: 140.0' x 26.0' x 11.8'; 338.14 grt, 329.69 net. Her master for the 1893 season was Captain George A. Symes.

January 1896, ownership of the schooner *Schelde* was changed to Jane E. Leonard, Port Huron. She was renamed *Eureka* and her registration transferred to Port Huron.

March 1897, ownership of the schooner *Eureka* was changed to Captain George Bennet who sailed her for a part of the season.

In September 1897, ownership of the schooner *Eureka* was changed to George W. Allen.

The following month, ownership of the schooner *Eureka* was changed to Elizabeth Rogan, Port Huron. In August 1899, bound up for Nipigon, Ont., laden with pulp wood for the Sulfite Fibre Works, and under tow of the Canadian steamer *Ontario* (C71211) on Lake Superior in heavy fog, the *Ontario* went aground near Rossport, Ont. A tug rescued the *Eureka.* September 1900, the schooner *Eureka* sank at Jenkinson's coal dock at Port Huron. She was lightered of her coal, pumped out and refloated. In 1901, she was converted to a steambarge, fitted with a high=pressure, non-condensing engine, 24" bore x 28" stroke, built by Pusey, Jones & Company, Wilmington, Delaware. Her master for the 1901 season was Captain Henry Hughes. November 1901, bound down from Tawas, MI for Lorain, OH, laden with lumber, the steambarge *Eureka* became waterlogged after her steam pump broke and she foundered in a gale between Tawas City and Port Huron on Lake Huron. Her crew abandoned ship to a raft and drifted north to Kincardine, Ont. where they came ashore. One life lost.

China: A wooden propeller was built in 1872 by William Power & Co., Kingston, for John Proctor & Francis Peterson, Hamilton, Ont. (Western Express Line) to be used in the bulk freight trade. Enrolled at Kingston, April 27, 1872, her measures were: 129.70' x 25.30' x 11.60'; 354.58-unit tons and she had a capacity for 18,000 bushels. Her master for the 1872 season was Captain Francis Patterson. In October 1872, bound up, the propeller *China,* laden with passengers, 300 tons pig iron and general merchandise, caught fire 12 miles west of Kingston, Ont. and burned to the water's edge before sinking. The fire was believed to have started behind the boiler. The passengers and crew were taken off at the bow by the Canadian sidewheel steamer *America* (C-1841). No lives lost. Loss of vessel and cargo valued at $34,000.

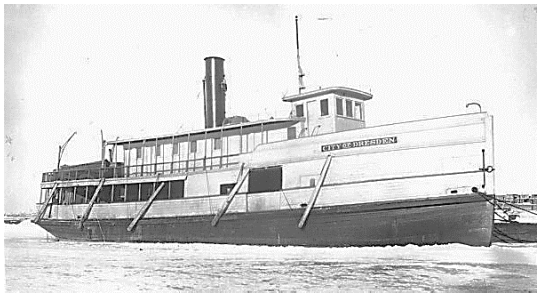
City of Chatham: Hyslop & Ronald, at Chatham, Ont., built a wooden propeller, to be used in the passenger, package freight trade, for the Chatham and Montreal Railroad, J. McKay, Hamilton, Ont. owner. Her measures were: 136.0' x 26.0' x 12.0'; with tonnage: 361 grt, 267 net. She was powered by a high-pressure non-condensing engine, 24" bore x 27" stroke, 250 horse power, built by Hyslop & Ronald in 1871. During the 1872 season, the *City of Chatham* ran between Montreal and Great Lakes ports carrying the equivalent of 18,200 bushels of freight.

Ownership of the propeller *City of Chatham* was changed in 1873, to Tait & Co., Bowmanville, Ont. They added passenger accommodations to the propeller *City of Chatham* at Zealand's Wharf, Kingston, Ont. during winter layup 1872/73. She was added to the "Lake and River Navigation Co's. line in 1873. In June of that year, bound up, from Montreal, the propeller *City of Chatham,* having off loaded her cargo at McKay's Wharf, Hamilton, Ont. and while loading 700 barrels of flour, a fire broke out from her engine room and the flames quickly enveloped the ship. The vessel drifted off to near Dundurn Castle, where it burned to the water's edge. No lives were lost and the hull and cargo loss was set at $32,000.

The remains of the *City of Chatham* were salvaged by Calvin & Breck's and bought by A. M. Robertson, Hamilton, Ont. He rebuilt her and in May 1875, enrolled her at Hamilton, Ont. as the propeller *Zealand*. Her measures at enrollment were: 131.7' x 24.0' x 13.8'; 410.74 grt, 284.38 net. She was issued official number C71152. During winter layup of 1874/75, while moored at Zealand's Dock, Hamilton, Ont., she caught fire from the fires on the propellers *Bristol* (C-1862) and *R. W. Standley* (C-1872), and was badly damaged. The *Bristol* and

Standley, both burned to the water's edge. Damage loss to the *Zealand* was set at $1,000. Her master for the 1875 – 1880 seasons was Captain Edward Zealand with Thomas Dewly as chief engineer. In June 1877, the propeller *Zealand* was readmeasured and her enrollment updated to: 651.4 grt, 402.69 net. November 1880, downbound, Toronto to Montreal, laden with 14,000 bushels of wheat and 2,000 barrels of flour, the propeller *Zealand,* foundered during a gale with the loss of all hands (16). During the gale, her seams opened, when off Long Point, South of Prince Edward Bay, Ont., Lake Ontario.

The enrollment for the propeller *Zealand* was surrendered November 1880 and endorsed "Foundered.

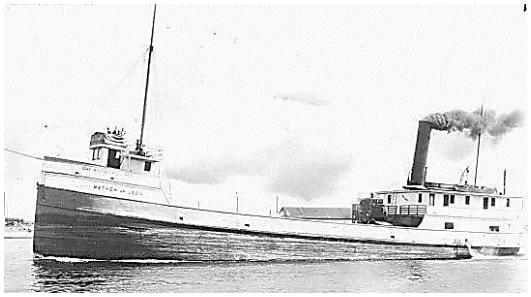


City of Dresden: Henry Jenkins, Walkerville, Ont., built for J. Watson & Captain Weston, both from Windsor, Ont., a wooden propeller that was enrolled at Windsor, May 23, 1872, and her measures recorded as: 93.0' x 21.0' x 8.9'. She was powered by an engine originally installed in the passenger steamer *Alex Watson* (1870), 18 horse power, builder unknown. The *City of Dresden* was built for passenger trade and ran between Detroit, Wallaceburg & Dresden; and at times provided regular service to Amherstburg & Pelee Island. In October 1873, while crossing the Detroit River, the *City of Dresden* was struck midship by the steam barge *B. W. Jenness* (US2608) staving in her port side and shaking up her crew and passengers. Both vessels continued their journey, with the *City of Dresden* making port where she was repaired. In November 1874, the *City of Dresden* went ashore at Belle Island, Detroit River incurring a hull loss of $200. She was readmeasured in July 1877, and her tonnage recorded as: 193.87 grt, 123.85 net. Her masters between 1879 to 1884 were: Captain Robert N. Bailey, 1879-80; Captain J. Laframboise, 1881; Captain Nelson J. Wigle, 1882-83; and Captain John Weston, 1884.

In 1886, ownership of the propeller *City of Dresden* was changed to N. J. Wigle, Kingsville, Ont. (on the north shore of Lake Erie). In 1894, the *City of Dresden* was re-engined with a fore & aft engine, 15", 28" bore x 18" stroke, 200 horse power built by Doty Engine Works, Toronto, Ont. She also received a firebox boiler (1) 7' x 14' @ 127 pounds steam.

In 1895, ownership of the propeller *City of Dresden* was changed to C. D. Shurley, Kingsville, Ont. She was rebuilt in 1915 and assigned official number: C126197, and her tonnage recorded as:132.0 grt.

In 1917, ownership of the *City of Dresden* was changed to McQueen Tug & Transit; J. S. McQueen, Amherstburg, Ont. Her master for the 1919 to 1922 seasons was Captain J. S. McQueen with chief engineers: Peregrine W. McQueen in 1919, and William P. McQueen, 1920-22. In November 1922, the *City of Dresden,* laden with illegal liquor, was driven into the shallows during a storm, near Port Rowan, Ont., north side of Long Point, Lake Eire. One life lost.



Fayette: Quayle & Martin, Cleveland, built a wooden, propeller, steambarge for the Jackson Iron Co., Cleveland. At her initial enrollment at Cleveland in June 1872, her measures were recorded as: 141.2' x 27.75' x 10.66': with a tonnage listed as: 322.22 grt, 243.40 net. She was powered by a high-pressure engine, 20", 20" bore x 22" stroke, 285 horsepower, built by Cuyahoga Iron Works, Cleveland. The steambarge was built for the bulk freight trade, and would carry iron ore from Escanaba, MI on the Upper Peninsula (UP) across Lake Michigan to Frankfort, MI on the Lower Peninsula (LP). At her enrollment, she was issued official number 120024.

In May 1873, her ownership was transferred to Frankfort Iron Co., Detroit. November 1873, bound up from Detroit for Fayette, MI (on the UP), the steambarge *Fayette* went ashore near Hammond Bay, Lake Huron.

June 1874, ownership of the steambarge *Fayette* was transferred to: Frankfort Furnace Co., Detroit. In July 1878, the steambarge *Fayette,* laden with lumber, took fire while laying at Peck's lumber yard, Manistee, MI. The fire, supposed to have originated from slabs piled near the boiler, almost wholly destroyed the steambarge. She was towed to Chicago to be repaired.

In April 1881, shares in the ownership of the steambarge *Fayette* was transferred to: T.S.

Ruddock, 3/8, Chicago; Charles H. Palmeter, 3/8, Chicago; et al.

In April 1882, shares in the ownership of the steambarge *Fayette* were transferred to: T.S. Ruddock, 5/9, Chicago; Charles H. Palmeter, 2/9, Chicago; L.W. Nuttall, 2/9, Manistee, MI.

In April 1887, shares in the ownership of the steambarge *Fayette* were transferred to: W.H. Horn, 3/4, Chicago; William Disher, 1/4, Chicago. Master of the steambarge *Fayette,* for the 1888 to 1897 season was Captain William Disher with J. H. Gilbo as chief engineer.

In April 1889, shares in the ownership of the steambarge *Fayette* were transferred to: W.H. Horn, Cedar & Lumber Co., 3/4, Chicago; William Disher, 1/4, Chicago

In November 1893, shares in the ownership of the steambarge *Fayette* were transferred to: W.H. Horn, Cedar & Lumber Co.

In April 1899, shares in the ownership of the steambarge *Fayette* were transferred to: James Sanford, ¼; Mathew Wilson, 1/4; Donald McMillan, 1/4; Dennis McMillan, ¼; all from Muskegon, MI. During winter layup of 1899/1900, the steambarge *Fayette* was rebuilt at Muskegon, MI and fitted with a new keelson, 3,000 feet of new decking, and received a new boiler. Her enrollment was transferred to Grand Haven, MI and she was renamed to *Mathew Wilson* in April 1900.

In April 1904, shares in the ownership of the steambarge *Mathew Wilson* were transferred to: Mathew Wilson, 1/3; Donald McMillan, 1/3; and Dennis McMillan, 1/3; all from Muskegon, MI. Her chief engineer for the 1907-14 seasons was Dennis McMillan.

In September 1907, shares in the ownership of the steambarge *Mathew Wilson* were transferred to: Mathew Wilson, 1/3; Eleanor McMillan, 1/3; and Dennis McMillan, 1/3; all from Muskegon, MI.

In April 1913, shares in the ownership of the steambarge *Mathew Wilson* were transferred to: Brunswick-Baulk-Collander Co., 1/2; William H. Wilson, 7/18; Nellie Linderman, 2/18; all from Muskegon, MI. Master of the steambarge *Mathew Wilson* for the 1914 – 1916 seasons was Captain Thomas McCambridge with Clyde Boyle as chief engineer.

In February 1917, ownership of the steambarge *Mathew Wilson* was changed to Kreetan Lumber Co. Her chief engineer for the 1924 season was William Anderson.

September 1932, the steambarge *Mathew Wilson* was sold for dismantling.

Final enrollment for the steambarge *Mathew Wilson* was surrendered in 1933 and endorsed "abandoned".

Glasgow: On April 24, 1872, the wooden, propeller steambarge *Glasgow* was enrolled at Detroit. Built by Alvin A. Turner, Trenton, MI, for David C, Whitney, Jr., Detroit MI, et al. Her measures recorded were, 138.5' x 26.0' x 11.33'; tonnage – 303.84 grt, 226.79 net. She was powered by a low-pressure engine, 42" bore x 32" stroke, 400 horse power, built by Detroit Dry Dock Co., Detroit, MI. She was issued official number US85199. The steambarge *Glasgow* was built for the bulk freight, lumber trade. Her master for the 1873 season was Captain Peter July. In November 1874, the steambarge *Glasgow* went ashore on Morgan's Point, Ont., Lake Erie. She was released and her property loss was set at $100. John N. Phillips was chief engineer on the steambarge *Glasgow* for the 1879 – 82 seasons. In September 1883, the steambarge *Glasgow* became disabled about ten miles off the Port Colborne, Ont, on Lake Erie, when her crank wheel broke. She was towed into Port Colborne for repairs. In November of that same year, with a gale out of the west blowing, the steambarge *Glasgow* and her three consorts, steaming north/south on the Detroit River, ran aground on the foot of Fighting Island. All were released. In August of 1884, caught in a severe squall east of Marquette, the steambarge *Glasgow* ran under the lee of Grand Island, Lake Superior and went aground. Before she could be released, 70 tons of coal had to be jettisoned.

Ownership of the steambarge *Glasgow* was changed in February 1886, to William H. Sharp, 1/2; Thomas F. Madden, 1/2, both from Bay City, MI. In October 1889, the steambarge *Glasgow,* with four barges, *A.W. Wright, Antelope, Taylor, Wend the Wave,* all in tow on Lake Erie, were driven hard ashore on Point Pelee, Ont. during a gale. Her bottom was torn out, and she was not worth the cost of saving. Ownership was given up to the underwriters. Her machinery was recovered and brought to Detroit.

Final enrolment certificate for the steambarge *Glasgow* was surrendered at Port Huron, February 15, 1890, and endorsed "wrecked".

G. P. Heath: A. McMillan, with George Madison, as master carpenter, both of Saugatuck, MI, built a

wooden steambarge for G. P. Heath, Saugatuck, to be used in the bulk freight ore trade, that would run between Saugatuck and Chicago. She was enrolled at Grand Haven, MI, August 10, 1872, and her recorded measures were: 96.9' x 17.0' x 6.4'; 72.56 grt. She was powered by two high pressure engines, 12' bore x 12" stroke, driving two screws. At enrollment she was issued official number 85216. Her master for the 1872 to 1883 seasons was Captain R. C. Brittain. In October 1872, the steambarge *G. P. Heath* had her deck load of lumber shifted while on Lake Michigan and lost a portion of the load.

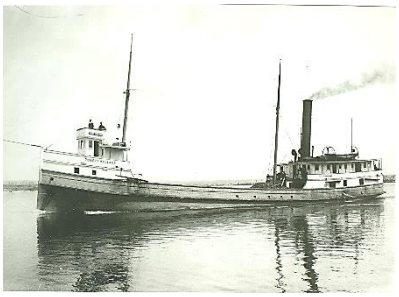
April 1876, ownership of the steambarge *G. P. Heath* was changed to R. C. Brittain, Saugatuck. In June 1877, while steaming on Lake Michigan, the steambarge *G. P. Heath* caught fire. The crew responded quickly and extinguished the flames. In September of 1878, the steambarge *G. P. Heath* was damaged during a gale on Lake Michigan. In April 1879, the steambarge *G. P. Heath* went ashore at Saugatuck during a spring storm and was completely covered in ice. In 1880, the *G. P. Heath* was rebuilt and readmeasured: 94.8' x 21.3' x 8.1'; 135.46 grt. Her engine was replaced with one 18" bore x 18" stroke, single screw.

In September 1881, ownership of the steambarge *G. P. Heath* was transferred to R. C. Brittain et al, Saugatuck. She was also readmeasured in August 1882, and her tonnage updated: 135.46 grt, 116.69 net. Her master for the 1884 season was Captain O. Parks. August of 1884, in route from Muskegon, MI to Michigan City, IN, the steambarge *G. P. Heath,* laden with lumber, burst her engine cylinder head while off New Buffalo, MI. She was towed to Grand Haven for repairs.

January 1886, ownership of the steambarge *G. P. Heath* was changed to Frank C. Eickmeyer et al, Sheboygan, WI. In April of that same year, the steambarge *G. P. Heath* came ashore at Milwaukee, during fog. She was pulled off by a tug before she sustained any injury.

In March 1887, ownership of the steambarge *G. P. Heath* was changed to Frank Geele et al, Sheboygan. In May of that same year, while bound up, Chicago to Kewaunee, WI, the steambarge *G. P. Heath,* laden with hay, caught fire in her cargo and was consumed by the flames, while off Sheboygan. She headed to Centerville Point and beached about 300 yards off shore. The crew abandoned the ship and all but the wheelsman was saved. One life lost.

Final enrollment for the steambarge *G. P. Heath* was surrendered, May 4, 1887.



Robert Holland: Alex Anderson, Marine City, MI; with John J. Hill, master carpenter, built a wooden steambarge for Henry Buttironi, et al, Marine City, intended for carrying freight and passenger on the run between Saginaw and Cleveland. The first enrollment of the steambarge *Robert Holland* was issued at Port Huron, in June, 1872. Her measures, as recorded, were: 149.50' x 28.16' x 11.66'; with tonnage at 423.0 grt, 339.0 net. She was powered by a high-pressure engine, 27" bore x 32" stroke, built by Dry Dock Engineering, Detroit, in 1872, Her official number was 110043. In October 1872, the steambarge *Robert Holland,* down bound from Chicago, laden with 19,298 bushels of corn, went hard aground on the reef at Pelee Island, Lake Erie.

In March 1876, ownership of the steambarge *Robert Holland* was changed to Star Line of Steamers, Detroit, at a price of $30,000. During winter layup, 1875/76, the steambarge *Robert Holland* received a second deck, upper cabin, new furniture, a new freight hoisting apparatus was added, and she is converted to a package/passenger vessel with measures: 156' x 29' x 11.5'; 553.33 grt, 295.1 net). She would run between Cleveland, and Saginaw, via Goderich, Ont. Master of the steambarge *Robert Holland* during the 1876 season was Captain J.R. Jones with W. Brake as chief engineer.

Ownership of the steambarge *Robert Holland* was recorded on March 14, 1878 as changed Canadian, to Northern Canadian Transit Co. and registered as steambarge *Northern Queen* (C71114). Registration measurements were: 149.06' x 28.00' x 10.08'; 619.13 grt, 318.10 net. For the 1878 season, the steambarge *Northern Queen* ran in the passenger, package freight trade between Collingwood, ONT and Sault Ste. Marie. In September of that year, during smoky weather, the steambarge *Northern Queen* went aground on Topsail Island, Saint Mary's River, ONT. she was released without damage. In November 1881, the steambarge *Northern Queen* collided with the sank the Canadian package freighter *Lake Erie* at Manistee, MI, then struck a sand bar and in-turn sank.

March 1882, ownership of the steambarge *Northern Queen* was changed to Robert Holland, Marine City, MI. He chartered the tug *Winslow* (U26243) to raise and tow the vessel to the Dunford

& Alverson's dry dock at Port Huron for repairs. The vessel came out of dry dock and moved to Marine City for final work in August 1882. She was registered as a steambarge, renamed *Robert Holland* (US110043) and her measures changed: 156' x 30' x 11.33': 423.92 grt, 339.99 net.

February 1885, ownership of the steambarge *Robert Holland* was changed to Charles D. & T. D. Stimson, Muskegon. In 1886, she was reboilered, receiving a firebox boiler, 9' x 14', 130 pounds steam, built by John Mohr & Sons Boiler Works, Chicago. Her engine was steepled, 21", 37" bore x 32" stroke, 400 horsepower, by Detroit Dry Docks Co.

April 1887, ownership of the steambarge *Robert Holland* was changed to Anson A. Bigelow, et al, Chicago. In August 1887, the steambarge *Robert Holland,* towing the schooners *S. M. Stevenson* and *Fannie Neil* (37304)*,* ran on the rocks at Drummond's Island, near the Sault. Released.

April 1895, ownership of the steambarge *Robert Holland* was changed to James Davidson, West Bay City, MI. Her master for the 1887 season was Captain Dorin Elliot with William Winne as chief engineer starting in 1885.

In March 1899, ownership of the steambarge *Robert Holland* was transferred to Davidson Steamship Co., Duluth, MN. Her master for the 1899 season was Captain W.L. Montgomery with J. Wellman as chief engineer.

Ownership of the steambarge *Robert Holland* was changed to Wedworth C. Penoyer, Bay City, MI in April 1900. Her master for the 1900 season was Captain Joseph Lowes.

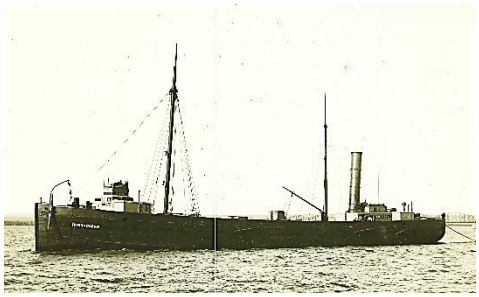
In March 1901, ownership of the steambarge *Robert Holland* was changed to Joseph Shannon, et al, Saginaw, MI. Her masters of the steambarge *Robert Holland* were: Captain J.C. Garey, 1901 & 1902 with J.J. Derry as chief engineer; Captain W.P. Rattray, 1903 & 1904 with L. Van Liew as chief engineer; Captain Jake Oscar for the 1905 season; Captain Joseph Lennon with George B. Kelly as chief engineer for the 1906 season; Captain William Lohr for the 1907 & 1908 seasons; Captain Andrew T. Young with L. Sleno and Michael Welsh as chief engineers for the 1909 to 1911 seasons; Captain J.C. Garey with Robert Worth as chief engineer for the 1912 season; and Captain E.K. Hungerford with C.E. Cuthbert as chief engineer for the 1913 season.

In November 1901, the *Robert Holland* went aground on Scarecrow Island, MI, Lake Huron. Bound down, from Duluth for Buffalo, in June 1906, the steambarge *Robert Holland* had her deck load of lumber shift which caused the steamer to list allowing water to pour into the hold through the hatches causing it to fill and sink in Duluth's harbor, Lake Superior. The captain attributed the accident to the fact that there was little coal in her bunkers and the vessel was top heavy. Cargo was lightered and the vessel was raised by pumping the water out.

April 1914, ownership of the steambarge *Robert Holland* was changed to John C. Garey, Saginaw. Master of the steambarge *Robert Holland* for the 1914 season was Captain Charles E. Carrey with Anthony Worth as chief engineer.

In September of 1914, ownership of the steambarge *Robert Holland* was changed to W. D. Hamilton, Chicago. May 1915, the steambarge *Robert Holland* caught fire and burned to a total loss at Sturgeon Bay, WI, Lake Michigan. There were thirteen persons aboard at the time of the fire. No Lives were lost.

Final enrollment for the steambarge *Robert Holland* was surrendered at Chicago, May 24, 1915.



Inter-Ocean: Detroit Dry Dock Company, Detroit, with Stephen R. Kirby as master carpenter, built a wooden schooner (hull # 00023) for her owners: William F. Merick, ½; John Fowler, ¼; and Henry Esselstyn, 1/4, all from Detroit. She was enrolled at Detroit and her measures were: 213.6' x 36.4' x 11.9'; 1050.40 grt. She was assigned official number 100046. She was built the bulk freight "grain" trade and for the first year was used as a tow barge. In September of that year, she went aground on the St. Clair Flats. During winter layup, 1872/73, the schooner barge *Inter Ocean* was converted to a propeller: 1068 grt, 940 net. She received, two, low pressure engines: 42" bore x 32" stroke, built by Dry Dock Engine Works, # 47, in 1872; plus, a firebox boiler, 9' x 15'1". In August 1878, while bound up on the South Branch of the Chicago River, the propeller *Inter Ocean* collided with the schooner *J.P. Ware* (U12791) damaging the schooners port side.

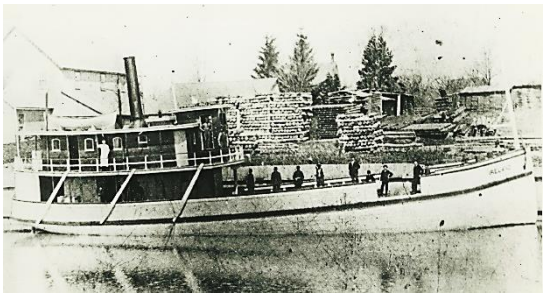
In March 1879, ownership of the propeller *Inter Ocean* was changed to Escanaba & Lake Michigan Transportation Co, St Clair, MI., to be used in the grain trade. In November 1880, the *Inter Ocean* had one engine removed and placed in the *Argonaut* (U29755) when she was converted from a schooner barge to a propeller. In August 1880,

bound for Chicago, with a cargo of coal, the propeller *Inter Ocean* went aground in dense fog on Pyramid Point, MI, Lake Michigan. In 1887, the *Inter Ocean* was re-engine with a steeple compound, 22", 44" bore x 32" stroke, 380 horsepower, built by Dry Dock Engine Works and a firebox boiler, 9' x 15', 110 pounds steam, built by Central Boiler Works. In May 1887, the propeller *Inter Ocean* went aground at Mud Lake, St. Mary's River.

Ownership of the propeller *Inter Ocean* was changed to Henry W. Watson, Buffalo in March 1889. In October 1891, while entering harbor at night, the *Inter Ocean* went ashore off Chicago. In November of 1892, up bound for Chicago, the *Inter Ocean* stranded on South Manitou Island, Lake Michigan. Released. In August 1894, laden with coal, she went aground on Round Island opposite Mackinac Island, MI. In October of that year, down bound, the propeller *Inter Ocean,* with the schooner *Richard Winslow* in tow, both laden with grain, had her wheel become disabled off Sturgeon Bay. Repaired. In June 1897, laden with 65,000 bushels corn, the *Inter Ocean,* collided with the propeller *Iroquois* (U100524) then went aground at Windsor, on the Detroit River.

In August 1903, ownership of the propeller *Inter Ocean* was changed to a consortium of investors, consisting off: Cornelius Mahoney, 1/6; Daniel Mahoney, 1/6; John T. Mahoney, 1/6; John Connelly, 1/6; Michael Connelly, 1/6; and Jeremiah McCarthy, 1/6; all from Buffalo, NY.

Final enrollment certificated for the propeller *Inter Ocean* was surrendered August 30, 1905 and endorsed "abandoned". In June 1906, the abandoned propeller *Inter Ocean,* while lying in the Ohio Basin at Buffalo, for the past year, quietly sank.



W. S. Ireland: J. W. Steinhoff, Wallaceburg, Ontario; with A. McDonald, master carpenter, built a wooden steambarge, for Captain James W. Steinhoff, Wallaceburg. She was launched August 13, 1872 and enrolled at Wallaceburg. Her measures were: 86.5' x 24.17' x 6.75'; 104 tons (old style). She was issued official number C85709. The steambarge *W. S. Ireland* was built for towing, and the passenger, package freight trade on the Thames River. In November 1872, the steambarge *W. S. Ireland* collided with the steambarge *Trader* (US24158) in the St. Clair Flats damaging the *Ireland's* bow.

In 1873, ownership of the steambarge *W. S. Ireland* was changed to McKerral, Wallaceburg.

In March 1882, ownership of the steambarge *W. S. Ireland* was changed to Willard Helmer, et al., Chatham, Ont.

Later in 1882, ownership of the steambarge *W. S. Ireland* was changed to A. H. Dainard, Chatham. The steambarge was rebuilt during winter layup, 1882/83. Her measures were listed as: 87.0' x 24.0' x 7'; 105 grt.

In February 1884, ownership of the steambarge *W. S. Ireland* was changed to Charles Livingston, Dresden, Ont. July 1886, while bound up the river Thames to load a cargo of wood, the steambarge *W. S. Ireland* struck a snag and sank a few miles below Chatham. She was raised and towed to Detroit Dry Dock for repairs and a general overhauling.

Later that year, ownership of the steambarge *W. S. Ireland* was changed to Captain J. Cooper, Chatham, Ont. She was valued at $5,500 and rated B1 for river use.

Ownership of the steambarge *W. S. Ireland* was changed, in 1888, to John Cooper, Wallaceburg, Ont. Her master, for the 1888 season, was Captain Walker with John Decatur as chief engineer. In October of that year, the steambarge *W. S. Ireland* collided with steambarge *Margaret Rawson* out of Saginaw, MI. off Wallaceburg, Ont. on the St. Clair River. Two lives were lost due to drowning. In April 1892, the steambarge *W. S. Ireland* caught fire and was badly burned at the Erie & Huron Railway dock at Wallaceburg. In 1905, the steambarge *W. S. Ireland* was reduced to a barge.

Enrollment of the barge *W. S. Ireland* was closed in 1919 and her name was removed from the register.

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.)