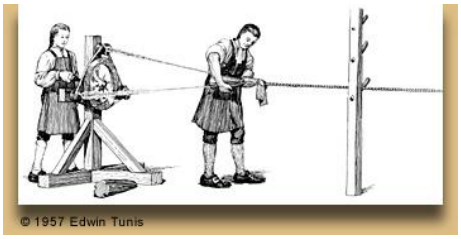


While one man cranks the spinner, the one holding the "top" walks backwards as the rope is twisted. From Edwin Tunis, *The Young United States, 1783 to 1830* (New York: World Publishing Co., 1969), 82. Used by permission of the estate of Edwin Tunis

Ropewalk

The Newsletter for
Shipwrights of Central Ohio
April 2020

Next Meeting: June 20, 2020
"Small Boat Making" – Mike Dowler

Table of Contents

May Newsletter

Due to the COVID-19 virus, our April & May 2020 scheduled meeting were canceled by the Westerville Public Library. They have now canceled all meetings scheduled in meeting room A & B as well as the conference room through July 2020. We check weekly for changes and also expect that the library will contact us if they open their meeting rooms earlier.

I urge all of you to take care of yourself and your families, those seniors who live close to you who may need errands run or someone to just call them, and use your time to get back in the shop building. Just think, you get to spend more hours a day and more days a week working on your ship model without an excuse not to.

Our world is changing and it is scary out there, so be careful.

May Meeting

Saturday morning dawned with a rolling fog and a clear sky. Looked like it would be a beautiful day for a drive. Instead, I went down to my study in the basement and joined a Zoom meeting. I was early, but Bob (our zoom Master), though out on the west coast, had already opened the meeting and was ready to greet as we signed in. We ended with 11 signed on. All healthy, and in their places (shops. studies and Bob looked like he was in a car museum. It was good to get together and share our ship modeling skills.

Business

Zoom

Bob Mains share some rules on chats, sharing and the pauses that happen when we talk os not talk. In those pauses, when we think the speaker is done and start communicating, we may be stepping on what the original speaker was saying, so listen. Our meeting went a little over three hours and the time, to me, seem to go very quickly.

For you who will be sharing Power Point (PPT) presentations in the future, here are some guidelines:

- First, download the Zoom App to your devise. When you click on the App, the screen will ask if you want to join a meeting., click on that and enter the meeting ID, hit enter. It will ask you for the password, enter it and hit enter.
- Open you PPT presentation, video, photo and click the *Share* button.
- In the sharing window that opens click on Microsoft PowerPoint to select it.
  - If your presentation includes narration, sound, or video: Check the *Share*

computer sound box. If your computer prompts you to install the Zoom audio device, do it. Click on the *Share* button.

- In PowerPoint: Switch to Slide Show mode. Give your presentation/sharing. When done, click Zoom's *Stop Share* button

For Android phones and Tablets:

- Sign in to Zoom.
- Open a new window and open Power Point.
  - Open the PPT presentation and start the slide show.
- Toggle back to Zoom (use tabs)
- Click Share, Screen
- All participants should now see your PPT presentation.
- When finished, click Stop Share.

We also need to remember, that when we are sharing our ship models, etc. if we click on the share button, the image everyone else will see on their screens will be their screen size.

Road Trip

Our scheduled fall road trip to the National Museum of the Great Lakes, Toledo, Ohio looks like it will be the third Saturday of September (OSU vs Buffalo). Of those on Zoom, eight were interest in going. If you are interested, and had not been part of the Zoom meeting, send a note to the editor at shipwright@wowway.com and I will pass it on to Alan Phelps.

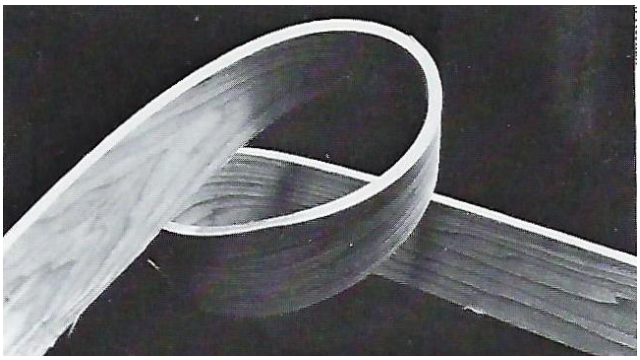
Alan will be contacting the museum to verify dates and any restrictions we need to know about. At this time the museum is closed due to COVID-19. Alan will keep us posted.

Presentation:

Our technical presentation was on "Bending Wood". We started with a review of the science of bending wood. Wood is comprised of two materials: cellulose (the fibrous structure of wood) & lignin (a complex organic material that holds the wood fibers (cellulose) together). Softening the lignin with heat will allow the cellulose fibers to slide past each other, bending the wood, and as the lignin cools and hardens, it holds the shape of the new form.

Straight grain hardwoods are best for bending. Woods such as: fruitwoods (apple, pear and cherry), basswood, sugar pine, holly and eastern white pine. Also: birch, alder, aspen, poplar, walnut, and mahogany. A good softwood for bending is cedar. As a caution, always test the bendability of different woods before committing them to your model.

Ammonia is not recommended for use in bending because of its effect upon the wood. Ammonia destroys the wood structure, discolors the wood and could impair the ability of adhesives or paint to adhere to the wood. Huff Wesler, Univ. of Wisconsin Art Dept., experimented with wood plasticized by immersion in gaseous anhydrous ammonia and found that wood can be readily coaxed into fantastic forms.



In the above photo, the wood used is ¼' thick, hickory, soaked for 45-minutes under 130 psi.

There are multiple methods that can be used for bending wood. Some better than others, depending on thickness of the wood. They are:

DRY: If the wood used is thin and somewhat flexible, dry bending may be the answer. The thin thickness allows for gentle bending without cracking. The wood should be gently bent, glued and clamped to fixed edges that have already been installed.

CRIMPING: Works by pinching or compressing the wood fibers. Indenting the wood along the inside of the curve, effectively shortens the inside of the plank thus causing the curve. The curve you get depends upon how far apart you put your crimps. The downside of crimping is that the wood fiber, when crimped, spreads out wider on the crimp to accommodate the reshaping. Micro-Mark offers a crimping tool that has one jaw ground to a triangular edge and the other is flat.

DRY HEAT: For thicker wood, heat softens the lignin, making the wood pliable. This method requires a form. Place your wood in the form then heat it by moving your heat source over several time until the wood takes on the shape of your form. A soldering iron with a wide tip or an electric plank bender from Micro-Mark can provide your heat source.

HOT WATER: The heat from the water that the wood has soaked in makes the wood pliable. Soak the wood in hot water for a couple of minutes then twist and clamp the wood till it cools and dries. There should be little or no spring back.

In planking a hull, soak in hot water, glue to the frame, clamp and let dry. I planked my model of the *Hannah* using this method. The planks were 6" thick x 12" wide x 20' long at ¼' scale or 1/8' x ¼" x 5". Soak, heat, glue, clamp, treenail. Repeat.

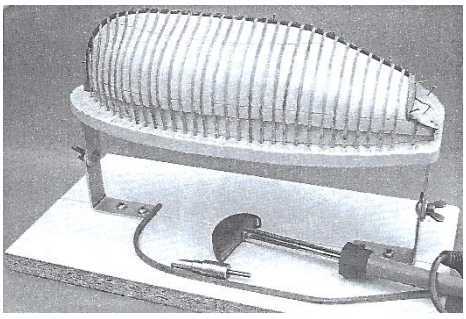
STEAM: steam accelerates the softening of the lignin over the hot water method. With a steam chest, you have the ability to handle larger objects. For ship modelers, your steam choice can be a simple steam iron and some forms.

CAUTION: Do not use your spouses steam iron. Not a good idea.

The steaming process is simple, while the form that is used takes preplanning and some experimenting prior to beginning. This pre-planning provides you the knowledge what the wood will do after it has been steamed, placed in the form and allowed to cool. This method is for steam bending using a form for one piece of wood at a time.

BENDING OVER A FORM: There are two uses of bending over a form. The first was discussed above under steam. The second uses a form to build a complete model such as a small boat.

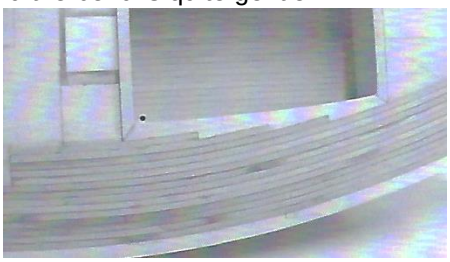
The Kammerlander method, developed by Gebhard Kammerlander in Germany, uses a plaster mold with holes in the base for ribs and a soldering iron with special heads. The wood is soaked in hot water, inserted into a hole in the base, then the hot soldering iron head is applied to the piece to bend it over the form, drying the wood, with the other end inserted into a base hole on the other side.



If you are interested in this method, there are a number of articles in "Ship in Scale" or search on https://gk-modellbau.de/

KERF: Kerf bending is usually done when the part, after it is bent, will be covered and the kerfs not seen. The process involves sawing repetitive cuts in the wood to allow the piece to be more flexible when bent. The deeper the saw kerfs, the easier the part will bend. The closer together the saw kerfs, the tighter the bend can be. You need to experiment with scrape wood to get a feel for the number of kerfs to be cut for the curve you need.

EDGE BENDING: Usually we bend wood in its thinner direction, but sometimes you need to bend a wood piece across its width. The wood, when bent across its width, will tend to buckle on the inside of the curve unless the ratio between the width and thickness is less than about three to one and the bend is quite gentle.



In the above photo, the wood deck planking shown is 1/8" wide x 1/16th" thick and were pre-bent to their shape using steam and a form.

LAMINATION: if you are dealing with very tight bends of heavy/complex parts, then the solution is gluing thin laminations together using a pre-designed and fabricated form. The process usually requires both soaking in hot water and steaming of each lamination around a form and then clamping to maintain the form. Each lamination is bent like the first then glued and clamped to the previous layer. The number of laminations required depends on the application and, generally there is little or no spring back with three or more layers.

SOURCE: The following are the sources for the above "Bending Wood" presentation:

- Bending Wood for Ship Models by Henry Rumm, Nov. 2006
- Thoughts on Bending Wood by Steve Wheeler, NRJ, Vol. 64, No. 4, Winter 2019
- Plank Bending by Martin Wallen, Model Ship World, April 4, 2011
- Steam Bending Booklet Part #1, 2, 3, & 4, Lee Valley & Veritas, Nov. 7, 2006
- Fine Woodworking on Bending Wood, The Taunton Press. January 1985

Ships on Deck:

Here is what your fellow craftsman have been doing.

Vintage Circus Cars

John Boeck

Not maritime related, but nicely done.




Queen Anne Barge

Mike Dowler

Mike has been spending the last few weeks working on the inboard details including the thwarts and inboard planking and has just completed getting the decorative frames and friezes in place. This involved lots of painting which seemed to have come out very nice. Many coats of thinned paint with a very fine sanding with a light touch at coat 10 or so has made the color really stand out. I still have the rudder, thole pins, sweeps, all of the carvings and a few more little things to do.

America

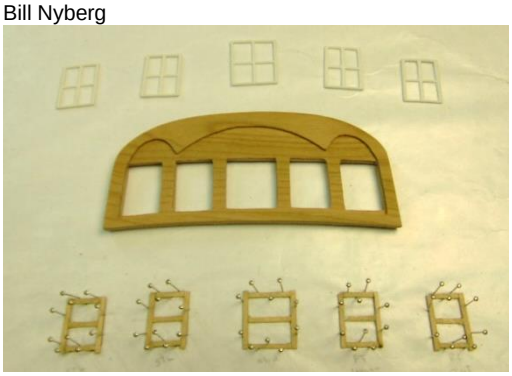
Bob Mains

Bob, is working on masts and spars for his *America*.

He also shared that his *America* is waiting for him at home after he tires with family and California weather. Life is tough!

Armed Virginia Sloop, 1768

Bill Nyberg



The LSS kit came with transom windows in white plastic. White plastic windows against natural wood finished did not look well. I decided to replace the window frames with scratch-built wood frames that blend in with the natural wood finish of the hull. Each frame was backed with a thin sheet of Mica to simulate old fashion glass.

U.S.S. Michigan

Stan Ross

Stan, is making progress on his model of the *U.S.S. Michigan.* She is looking good and everyone seemed to like the simulation of the western basin of Lake Erie he used for a background.

Odds and Ends

“Tips”

This tip was in the May 2020 BlueJacket newsletter. It is from Dick B. of MI. *Attaching a photo of a jig for making ratlines. I expect you guys have evolved the technology way beyond this, but just in case. Tedious, but works fine so far. I'll finish this one then install it on the Bluenose model I'm repairing, then build the other three if it works. If of any value/interest I can send additional photos and description of process.*

Nautical Terms

V-Hull: The shape of a boat or ship in which the contours of the hull come in a straight line to the keel.

Vang:

1. A rope (line) leading from gaff to either side of the deck, used to prevent the gaff from sagging.
2. One of a pair of ropes leading from the deck to the head of a spritsail. It steadies the sprit and can control the sails performance during a tack. The vang fall blocks are mounted slightly afore the main horse while rolling vangs are extra preventers lead forward to keep the sail to leeward in heavy weather

Vanishing angle: The maximum degree of heel after which a vessel becomes unable to return to the ships top-dead-center position.

Veer away: To let go a rope gently

Vessel: Any craft designed for transportation on water, such as a ship, barge or boat.

Viol: A large rope used to unmoor or heave up the anchor.[1]

2020 NRG Conference

The 2020 Nautical Research Guild conference has been canceled due to COVID-19. It will be held in 2021 at Oxnard, CA, October 21 – 23, 2021. The conference will be held in conjunction with the Channel Islands Maritime Museum located in the Channel Islands Harbor, about 50 miles north of Los Angeles.

Other Notes: “Stuff” - Tugs & Things

Mystic Seaport

In these times, when we are at home wondering what we can do and tired of what is offered on TV, I suggest a virtual tour. Mystic Seaport, www.mysticseaport.org, has developed a virtual tour “A Walk through the Watercraft Hall”. Or, how about:

“Measuring Planking Bevels”;
“Tool Sharping”;
“Spiling Demo”;
“Plymouth Cordage Company Ropewalk”;
“Knot tying”;
“Antique Marine Engines”
“A Walk through the Watercraft Hall”

This is but a few of the 40 videos available, to help you understand shipyards, sailing, and the rich history of whaling and the men who went to sea.

Tugs

L.E. Stewart

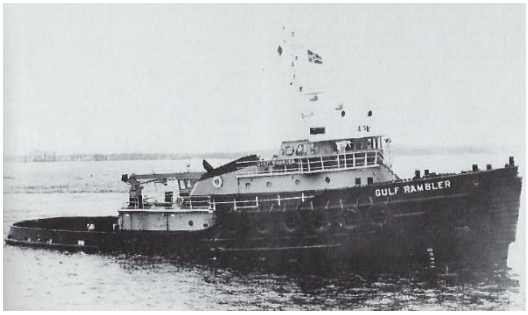
The *L. E. Stewart* is a radical departure from the traditional, conservative tug boat design. She is a direct result of the off-shore oil boom in the mid-1970’s. Built in Amelia, LA in 1975 for the J. Ray McDermott Co., she had measures of 165.2’ x 77.1’ x 13.4’. Her breadth, almost half her length, was due to her twin hulls, in the classic catamaran configuration, to gain stability and maneuverability for deep-water pipe-laying work and servicing of barges and rigs in rough seas.

She was equipped with twin diesels, one in each hull and developed 5700 horsepower. Each of her twin screws had a controllable-pitch propeller for more efficiency. Because her screws were so far apart, she was extremely maneuverable. On her maiden transatlantic passage towing a barge she averages 10.35 knots.

The *L. E. Stewart* did not prove as successful as hoped and spent much of her time tied up to a dock. She was flagged out to the Panamanian flag on October 1979, rename *Jaramac 66* and later *Mac Tide 66* under the Belize flag.

(Original Source: "On the Hawser" by Steven Lang and Peter H. Spectre, 1980)

Gulf Rambler



Built in 1974, by Halter Marine Services, New Orleans, she measured 136’ x 40.1’ x 13.4’, she was also an offshore oil tug. She had a raised forecastle to improve her seakeeping and make her drier on deck, and a hydraulic crane to facilitate handling anchors for drill platforms and barges. Her hull was reinforced to allow her to work in ice.

She was equipped with five steering locations, two, sixteen cylinders diesel engines, generating 5700-horsepower, a twin-screw Kort nozzles and a 500-horsepowet bow thruster. She was scrapped in 2014.

In the above photo, the *Gulf Rambler* flies the Norwegian flag as she works in the North Sea oil fields

(Original Source: "On the Hawser" by Steven Lang and Peter H. Spectre, 1980

Presentation Schedule:

2020

~~Jan 18 - Research~~
~~Feb 15 – Scratch Building~~
~~Mar 21 – Canceled~~
~~Apr 18 – Zoom Training~~
~~May 16 – Bending Wood - Zoom~~
Jun 20 – Small Boat Making - Zoom
Jul 18 – Fairing a Hull/Cooper Plating - Zoom
Aug 15 – Rope Walk
Sep 19 – Road trip
Oct 17 – Soldering
Nov 21 – Open
Dec 19 – Open

Events & Dates to Note:

2020

Lakeside Antique & Classic Wooden Boat
Lakeside Hotel, Lakeside, OH
July 23-25, 2020

Toledo Antique & Classic Boat Show
Promenade Dock, Maumee River, Toledo, OH
Aug 22-23, 2020

2021

IPMS Columbus
47th Anniversary BLIZZCON
Arts Impact Middle School
680 Jack Gibbs Blvd. Columbus 43215
Saturday, February 20, 2021

Miami Valley Woodcarving Show
Christ United Methodist Church
700 Marshall Rd., Middletown, Ohio 45044
March 7 & 8, 2020

66th "Weak Signals" R/C Model Show
Seagate Convention Ctr.
401 Jefferson Ave. Toledo, OH
April 02-04, 2020

31st North American Model Engineering Expo.
Yack Arena
Wyandotte, MI
April 23-24, 2021

44th Midwestern Model & Boat Show,
Wisconsin Maritime Museum, Manitowoc, WI
May 14 – 16, 2021

Constant Scale R/C Run – Carmel, Ind.
Indianapolis Admirals reflecting pond
Carmel, IN
May 15 & 16, 2021

NRG Conference
Channel Islands Maritime Museum
Oxnard, CA
Oct. 21-23, 2021

Editor: Bill Nyberg
President and editor
Shipwrights of Central Ohio
Shipwright@wowway.com

Shipwrights of Central Ohio
Officers & Staff
President – Bill Nyberg…….614-370-5895
Vice Pres. – Alan Phelps……..614-890-6164
Treasurer – Lee Kimmins…….614-378-9344
Editor – Bill Nyberg…….. 614-370-5895
Photographer – Alan Phelps .. 614-890-6164
Web Master – Bill Nyberg…….614-370-5895
Zoom Master – Bob Mains……614-306-6866

Web Site: www.shipwrightsofohio.com

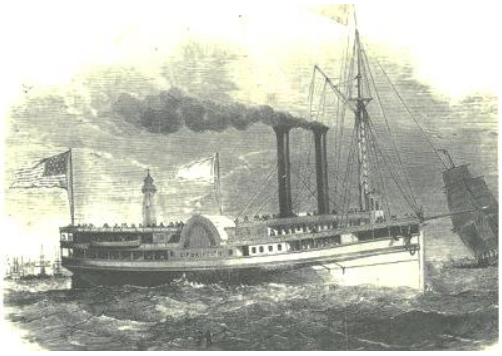
Email: shipwright@wowway.com

Wooden Steamers

1848 – Part II

Because of the number of vessels built in 1848, the description of the ships has been broken into three reports.

Ships Built in 1848

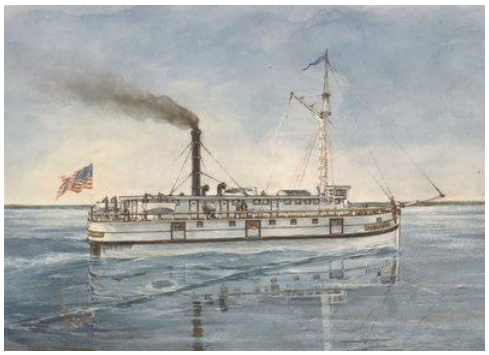


G.P. Griffith: Enrolled at Buffalo, NY, April 18, 1848 as a wooden sidewheel steamer, the *G. P. Griffith* had been built by David R. Stebbins, Maumee, OH for Sears & Griffith, Buffalo, NY; and S. P. Newell, Monroe, MI and had measures of: 193.3' x 28.1' x 11.3' with a tonnage (old style) of 587 41/95. She was powered by crosshead engine with a 30" bore and a 108" stroke. The engine was built by Cuyahoga Steam Engine Works, Ohio City, OH. The *G. P. Griffith* had been built for the passenger, package freight trade on Lake Erie and ran Buffalo, NY to Sandusky and Toledo, OH. Her master for the 1848-49 season was Captain A. T. Kingman with D. R. Stebbins as first engineer for the 1848-50 season. October 1849, the steamer *G. P. Griffith* and the Canadian schooner *California* (C-1849) collided near Cleveland, OH, Lake Erie. The schooner drifted ashore near Euclid Creek.

The ownership of the steamer *G. P. Griffith* was changed in 1850 to C. C. Roby, Perrysburg, OH and Mr. Studdiford, Monroe, MI. Her master for the 1850 season was Captain C. C. Roby. June 17, 1850, while bound up from Buffalo, NY for Toledo, OH with about 330 immigrants and their luggage and a crew of 26, when off the mouth of the Chagrin River, 20 miles east of Cleveland, OH, the steamer *G. P. Griffith* caught fire and was run ashore, stranding on a bar 40 rods (220 yards) from shore. The wind blew the fire towards the bow where the passengers had taken refuge, forcing all of them to enter the water. 250 to 325 lives were lost. The hull burned to the waterline. The following July, two scows engaged in raising the *Griffith's* hull were capsized in a squall. One man drowned.

John Hollister: Out at the west end of Lake Erie, W. V. Kingsbury & D. F. Cook, Perrysburg, OH built a wooden sidewheel steamer for H. F. Hollister, Perrysburg, OH. First enrolled at the Miami District in 1849, she was listed with a 75-horsepower engine, built by Hendricks, Detroit, MI in 1848 and that she would operate in the passenger, package freight trade between Detroit, MI and Toledo, OH. Her measures as listed were 132.0' x 20.0' x 8' 8" and the tonnage (old style) of 218 90/95. Her master for the 1848-49 season was Captain S. Dustin. January 1849, the *John Hollister* caught fire and burned on Lake Erie. She was rebuilt and in 1852 her master is listed as Captain Trowell.

Ownership of the steamer *John Hollister* was changed to G. Wilkes, Buffalo, NY, who rebuilt her as a screw propeller at Buffalo, NY. her register was transferred Canadian and she was enrolled as the screw propeller *Oxford* in 1853. The *Oxford* was used on the Grand River as a freight boat in 1853 & 54. In October 1854, the propeller *Oxford* was damaged by fire at Cayuga, Ont., Grand River and repaired. Her master for the 1855 season was Captain W. H. Smith. November 1855, bound down, from Collingwood. Ont for Chatham, Ont., the propeller *Oxford* went ashore on Fishing Island in Smith Bay, Manitoulin Island, Georgian Bay where she had taken refuge during a gale. The vessel was pounded to a total loss. No lives lost.



Indiana: Built in Vermilion, OH by F. M. Keating with Burton S. Goodsell as master carpenter, the *Indiana* was a wooden propeller to be operated in the package freight trade under the management of the New York & Erie Railroad Line running from Buffalo & Dunkirk, NY for upper Lake Erie ports. Her first enrollment was issued at Sandusky, OH, May 13, 1848, listing her owners as Alva Bradley, Cleveland, OH; Virgil Squire; Theodore O. Chapman; (Erie Company, Cleveland, OH); M. S. Hawley, Buffalo, NY and her measures as: 144.5' x 23' x 10.8' with

tonnage (old style) listed as 349 34/95. April 1851, the *Indiana* collided with the schooner *Cambria* on Lake Erie, carrying away the bowsprit of the schooner.

March 1852, the ownership of the propeller *Indiana* was changed to Captain Lucius S. Pratt, 2/3 shares, Buffalo, NY; Hiram Niles, 1/3 shares, Buffalo, NY. Her master for the 1852 season was Captain Lucius H. Pratt.

Ownership of the propeller *Indiana* was changed to Samuel F. Pratt, Buffalo, NY in 1853. Her master for the 1853 season was Captain Franklin Cameron.

April 1854, the ownership of the *Indiana* was changed to Watson A. Fox, 1/4, Buffalo, NY; William A. Shepard, 1/4, Buffalo, NY (held by the W.A. Fox & Co, Buffalo, NY); and Captain Francis Perew, 1/2, Buffalo, NY. Captain Francis Perew was master of the *Indiana* for the 1854 and 55 seasons. April 1854, the *Indiana* struck a pier at Cleveland, OH and was badly damaged. Property loss set at $1,500. November of that year the *Indiana* went on the rocks in St. Mary's River. Bound from Buffalo, NY to Cleveland, OH in September 1856, the *Indiana,* laden with a cargo of flour, went ashore in fog, near Point Abino, Ont on Lake Erie. October of the following year, while entering the harbor at Cleveland, OH, the *Indiana,* struck the west pier and was damaged. Property loss was set at $500. During the winter 1857 layup, propeller *Indiana* was rebuilt. She would be operated by the People's Line out of Cleveland, OH. Her master for the 1858 season was Captain William H. McNelley. Up bound, in June 1858, the *Indiana* went aground in the St. Clair River. Later that month, down bound from Marquette, MI, on Lake Superior, the *Indiana,* laden with iron ore, broke her stuffing box, which split her stern post; she filled and foundered 40 miles above Whitefish Point, MI and 10 miles from shore. Declared a total loss valued at $10,100. No lives lost.

The sinking of the *Indiana* with her cargo was reported the first cargo of Lake Superior iron ore ever lost; Her machinery & gear were recovered between 1978 and 1983. Her engine is now at the Smithsonian and is reportedly the oldest marine engine existing that was built in North America.

Lord Elgin: Augustin Cantin, Montreal, would build four sidewheel steamers during 1848, the *Free Trader,* the *Ottawa*, the *St. Helene* and the *Lord Elgin,* the smallest of the four at 51.5-unit tons, had measures of 155' x 23' x 8.4'. She was a wooden sidewheel steamer, built for the passenger, package freight trade on Upper St. Lawrence River & Lake Ontario. She was powered by a vertical beam engine, builder unknown. At her first enrollment which was issued at Montreal, P.Q. July 27, 1848, her owners were listed as John Kennedy & Paul Masson, Montreal, Que. Her master for the 1849 season was Captain Farlinger.

In 1850, ownership of the steamer *Lord Elgin* was changed to McPherson, Crane & Co. & Hooker & Holton Co. as joint owners. Her masters for the 1851 season were Captain Ed Sterns and Captain O'Connor. In October 1851, the *Lord Elgin* broke her walking beam near Brockville, Ont., St. Lawrence River with pieces falling through the dining room roof.

January 1852, her ownership was changed to Michel Wilson Browne, Hamilton, Ont. Her master for the 1852-53 seasons was Captain A. Farlinger. November 1853, the steamer *Lord Elgin* broke her machinery on the St. Lawrence River. Masters of the steamer *Lord Elgin* for the 1854 season was Captain Miloy and Captain Ed Sterns for the 1855 season. The steamer was renamed the *Montreal* in 1855 then renamed back to *Lord Elgin* in 1856. Masters of the *Lord Elgin* in 1856 was Captain Moodie and Captain Young with Captain Allen as master for the 1857 season.

In 1860, the ownership of the steamer *Lord Elgin* was changed to the Ontario & St. Lawrence Steamboat Co., with the steamboat home ported at Ogdensburg, NY. The steamer was rebuilt during winter layup 1863 and valued at $9,000.

Early in 1863, her ownership was changed to American Steamboat Co. and she was home ported at Oswego, NY.

In 1873, her ownership was changed to Canadian Island Steam Navigation Co. The Lord Elgin's enrollment was closed in February 09, 1874 and endorsed "broken up in 1873".

Franklin Moore: On the shore of Swan Creek, in Newport, MI, Eber Ward built a wooden sidewheel steamer for a group of investors, including himself and John Gallagher both of Newport plus Franklin Moore and George Foote of Detroit, MI. The steamer had measures of 132' 3" x 19' x 7' 11" and a tonnage (old style) of 192 26/95. At her enrollment at Detroit, April 28, 1848 it was noted the she was powered by a vertical beam engine built by Detroit Iron Co. and that she would be used in the passenger, package freight trade. Master for the 1849 season was Captain S. Gallagher.

Ownership of the steamer *Franklin Moore* was changed to Joseph Raymond's et al, Detroit, MI, February 1852. Her master for the 1853 season was Captain Winegar.

From 1853 through 1858, the steamer *Franklin Moore* went through a series of owners starting with John & Louis J. Day, Green Bay, WI in September 1853; Alfred Guthrie et al, Chicago, IL in May 1854 who would use her as a towboat on the Detroit River; Luther L. Slyfield, St. Clair, MI I September 1855; Elon W. Hudson, Detroit, MI in March 1856 and in the same month to William Wylde, Detroit, MI; to Byron Whitaker et al, Detroit, MI in March 1857 and to John Clancy, Detroit, MI in September 1857; and then to Henry D. Terry, Detroit, MI in April 1858.

In the fall of 1858, the steamer *Franklin Moore* was partially sunk at the Great Western Railroad dock, Windsor, Ont. The steamer was not pumped out and raised until the June of 1859.

Her ownership was changed to Elon W. Hudson, Detroit, MI in that same month. She was rebuilt and refitted in 1861.

In April 1862 her ownership of the steamer *Franklin Moore* was changed to William H. Barse & George Jerome, Detroit, MI and in September of that year she was damaged by fire at Algonac, MI.

In June 1863, the ownership of the *Franklin Moore* was changed to David Gallagher & Aloney Rust, Newport, MI. In September 1864, the *Franklin Moore* was converted to a barge and her machinery installed in the *Wave* (US26645). Her enrollment was updated to: 122' x 19' x 7'; tons (Old Style) 192.27. In 1873, the barge *Franklin Moore* was out of registry.

Montezuma: Luther and Sanford Moses, Cleveland, OH built for Hiram Niles & Co., Buffalo, NY, with James C. Gibson & John R. Wheeler as investors, a wooden propeller with measures 149' 4" x 23' x 9' 10" and a tonnage (old style) of 332 63/95. Her engine came from the Cuyahoga Works, Cleveland and she was enrolled at Buffalo, NY April 29, 1848, destined for the package freight trade. Master of the propeller for the 1848 season was Captain H. Warner. While entering the port of Buffalo during a gale on Lake Erie, the *Montezuma* was damaged in October 1849. Her master for the 1852 season was Captain Davis. Laden with corn, June 1852, the propeller *Montezuma,* sprang a leak during a gale and became water-logged on Lake Erie and had to jettisoned her deck load. Her cargo was water damaged with an estimated damage loss of $8,000. The following year in July, down bound from Toledo, OH for Tonawanda, NY, the *Montezuma* broke her machinery and put into Buffalo, NY for repairs.

Ownership of the *Montezuma* was changed to Asher Rosseter in 1854 and her master for that year was Captain Soper. May of that year, the *Montezuma* sprang a leak in heavy seas on Lake Michigan and had to put back to Chicago, IL for repairs. Her property loss was set at $7,000. November of that year, down bound from Chicago to Buffalo, NY, the *Montezuma* damaged her boilers and put into Milwaukee for repairs.

In June 1855, her ownership shares were transferred for the propeller *Montezuma* from Asher Rosseter to other investors. July 1856, while on the Chicago River the *Montezuma* and schooner *Charmer* (US-1856) collided.

For the next two years the ownership of the *Montezuma* was changed to G. B. Andrew, Chicago, IL in July 1857; to John B. King, Chicago, IL in November; in April 1858 to John T. & Edward M. Edwards, St. Joseph, MI and then to Nelson W. Napier, St. Joseph, MI in the same year. Her master for the 1858-59 seasons was Captain Nelson Napier. In November 1860, the propeller *Montezuma* was dismantled and her engine was placed into the propeller *Lady Franklin* (US14827).

Monticello: Col. D. Russell, Painesville, OH, of the Geauga Iron Co. had L. D. Custin, Fairport, OH to build a wooden propeller for the passenger, package freight trade. Her measures were: 151'9" x 20'4" x 10'2" with a tonnage (old style) of 364 8/95. Enrolled at Cleveland, OH in 1884, she was powered by two-high pressure engines with cylinders of 18" bore and a stroke of 34: built by J. D. Sheppard & Co., Buffalo, NY. She was built for the passenger, package freight trade. Her master for the 1848 season was Captain Parker.

In February 1850, the ownership of the propeller *Monticello* was changed to Geauga Insurance Co; agent P. P. Sanford, Painesville, OH. In October of that year the *Monticello* struck and sank the schooner *Northwestern* (US – 1847) off Point Aux Barques, MI, Lake Huron.

Her ownership was changed to Hiram Niles & Lucius Pratt, Buffalo, NY in October 1850 and then in April 1851 ownership was changed to Sheldon McKnight, Detroit, MI. Her master for the 1851 season was Captain John Wilson. During May and June of that year, the *Monticello* was transferred over the portage at the Sault and launched into Lake Superior. August 1851, bound down, the *Monticello* collided and sank the up bound propeller *Manhattan* off Whitefish Point, MI, Lake Superior. A month later, the *Monticello,* laden with copper ore and passengers began to leak during a storm on Lake Superior midway between Ontonagon, MI and Eagle Harbor, MI, on the Keweenaw Peninsula, and was run into

shallow water where she sank and later broke up. No lives lost.

Julius D. Morton: A.C. Keating built a wooden sidewheel steamer for the passenger, package freight trade at Munroe, MI, with measures: 167'5" x 26'4' x 11'3" and a tonnage (old style) of 472 90/95. The *Julius D. Morton* was launched August 1848, and her original owner was William M. Van Brunt from Munroe, MI. Her master for the 1849 season was Captain Roby. October of that year, the *Julius D. Morton* was chartered by Ward to run Lake Michigan in connection with the Central Railroad Line.

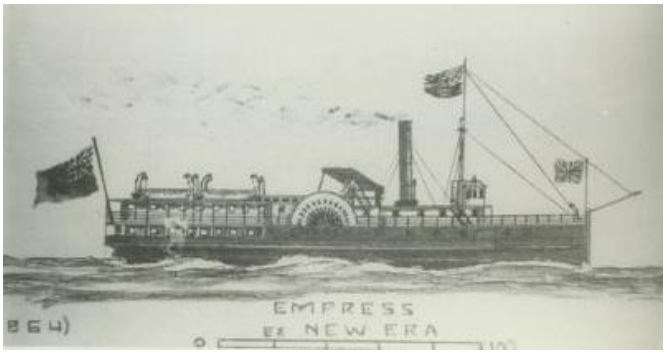
September 1850, her ownership was changed to J. B. Clark, Detroit, MI. In September 1851, while in a storm off Point Au Pelee, Ont, Lake Erie, she shipped a sea which carried away her gangway, some freight and one of her deck hands. March 1852, the *Julius D. Morton* with 300 passengers aboard became stuck in ice in the Detroit River. May of that year, she collided with the schooner *Armada* (US364) in the harbor at Fairport, OH. In September of 1853, she went ashore near Thunder Bay, Lake Huron.

Her ownership was changed to O. M. Hyde & William Dana, Detroit, MI in December 1853.They had her upper deck removed and she was converted to work as a towboat on the St. Clair Flats by April 1854.

From September of 1854 through January of 1855, the ownership of the towboat *Julius D. Morton* changed three times; Steven Coville, Huron, OH in September 1854; L. Pierce, Algonac, MI in November 1854; and then to
Chester Kimball, Algonac, MI in January 1855. Operating as a towboat, the *Julius D. Morton* collided with the barque *B. S. Sheppard* (US-1854) near the Flats, Lake St. Clair July 1856 and with the schooner *Euphemia* (US-1852) on the St. Clair River in October 1858. For the 1859-61 seasons the *Julius D. Morton* was laid up at Detroit, MI and in August 1861 she was rebuilt as a tug at Algonac, MI. In April 1863, the steamer tug *Julius D. Morton* caught fire and burned to the water's edge at Pointe Au Chenes, Algonac, MI, St. Clair River.

August 1863, ownership of the burnt hull of the *Julius D. Morton* was changed to Samuel & Abram Smith, Algonac, MI and in December of that year she was sold to Samuel Russell, Algonac, MI. He has her converted into a barge by William Dana for Mrs. Amelia Dana and enrolled with measures of 164 x 26.5 x 8.8; 254 grt, and was assigned and official number 45091. In April 1867 the barge *Julius D. Morton* received a new cabin and was re-caulked and in 1869 she was rebuilt at Clark Yard, Detroit, MI.

Ownership of the barge *Julius D. Morton* was changed to S. Allen, Cleveland, OH early in 1871 to be used in the lumber trade. In August of that year, down bound on Lake Huron, the barge *Julius D. Morton* became waterlogged but was able to make port. Her master for the 1873 season was Captain Peter J. Fisk. August of 1873, while bound down from Saginaw, MI, laden with lumber the barge *Julius D. Morton,* under tow by the propeller *Sun* (US22281), broke from the tow during rough seas on Lake Erie, and went to pieces sinking 20 miles down the lake from Cleveland, OH. No lives lost.



New Era: At Fowler's Yard, Kingston, Ont., George Thurston, master carpenter, built for O.S. Gildersleeve of Kingston a wooden sidewheel steamer, powered by a vertical beam (Walking Beam) engine, low pressure engine, with a 44" bore and 120" stroke. She had 28-foot diameter wheels and measured: 170' x 23' x 8'6"' and a unit tonnage of 132. Launched May 24,1848, for the passenger, package freight trade and ran on the Canada Mail Line servicing Montreal, Que. and Kingston, Ont. Her master for the 1849-52 seasons was Captain Thomas Maxwell. The *New Era* was chartered in 1849 by John Hamilton and ran in the New Mail Line with the sidewheel steamers *Magnet,* and *City of Toronto* between Kingston and Toronto. August 1849, the *New Era* was laid up for the remainder of the 1849 season due to lack of business. The 1850

season, the steamer *New Era* ran between Montreal and Hamilton, Ont. By August of that year she was again laid up due to lack of business. For the 1851 season she ran between Montreal and Kingston on the Royal Mail River line.

Ownership of the *New Era* was changed in 1852 to John Hamilton, Kingston who had her on a run between Hamilton, Ont and Montreal with stops at Toronto, Queenston and Cape Vincent. Master for the 1853 season was Captain Parker and she ran Kingston, Prescott and Ogdensburg, NY. Early on a Saturday morning in November 1853, fire broke out in a wharf house, was fanned by strong gale winds and threatened the vessels moored on the Kingston waterfront. The sidewheel steamer *New Era,* with the *Canada,* and *Protection* towed schooners and barges away from the fire, saving all but a wood-barge. September 1854, the steamer damaged her machinery, delayed her replacement of the steamer *John Munn* on the Montreal to Quebec run. Master of the steamer *New Era* for the 1854-57 seasons was Captain P.G. Chrysler. October 1856, down-bound on the St. Lawrence River, the *New Era* struck a rock in the Gallops Rapids and sank, a little below Prescott, Ont., on the St. Lawrence River. She was raised and repaired. Master of the steamer for the 1857 season was Captain Maxwell. October 1858 the steamer *New Era* broke a shaft 25 miles above Prescott, Ont. and was towed to her wharf at Kingston for repairs. Her master for the 1859 season was Captain Alton. September 1859, bound from Toronto to Kingston during a storm on Lake Ontario, the *New Era,* attempting to enter harbor, went aground in the Eastern Channel due to low water. Released. (09/23/1859)

She was rebuilt in 1862 by George N. Ault at Portsmouth, Ont. and her enrollment updated with measures: 171.6’ x 23’ x 9’. The *New Era* was renamed *Empress* and registered at Kingston with measures: 386 grt, 262 net. Her ownership was changed to O. Lynch, Beauharnois Navigation Co. Her master for the 1862 season was Captain Cameron.

July 1862, the steamer *Empress* (80 passengers) collided with the iron steamer *Passport* (600 passengers) on Lake Ontario outside Kingston, Ont. Both vessels were damaged with the *Empress* having her stem post and bow planking thoroughly shattered. No Lives lost. August of that same year, the steamer *Empress,* down bound from Upper Canada struck a rock in the Lachine Rapids, taking in water. The captain attempted to get the vessel to Tate's Dry Dock, failing, the steamer settled to the bottom. She was later raised. Her master for the 1864 season was Captain P.G. Chrysler. August 1864, while bound from Kingston for Rochester and Cobourg, half way between "The Ducks" and "Long Point", the *Empress* and steamer *Banshee* (C-1854) collided causing major damage to both vessels. Repaired. The following month the *Empress* went aground near Presqu'ile, Lake Ontario.

Ownership of the steamer *Empress* was changed in April 1865 to O. Lynch, Beauharnois Navigation Co. and her captain for that season was Captain D. B. Dewitt. March 1868 in layup, lying at Gildersleeve's wharf, Kingston, Ont., the *Empress* caught fire and burned to a total loss.

Ownership of the hulk *Empress* was sold at auction to J. J. Linton for $1,167.50 in May 1868. The hull of the *Empress* was towed to the Garden Island bone yard by D. Calvin and abandoned in October 1870.

Ogontz: Sanford & Moses, Cleveland, OH built for C.W. Marsh et al, Sandusky, OH a wooden propeller with measures: 152’ 7” x 22’ 9 1/2 x 10’ 3 1/2” with a tonnage (old style) 343 37/95. The vessel was named after a leader of a band of Ottawa Indians who camped on the west bank of the Cuyahoga River in the early 1800’s. She was enrolled at Sandusky, OH, May 08, 1848 which listed her engine as built by Edward Reese in 1848 and that she would be used in the passenger, package freight trade. Her master for the 1848 season was Captain Lyman F. Crowl.

The *Ogontz* ownership was changed, October 1849, to and investment group consisting of Smith, Coman & Tench and C. Stiles of Buffalo, NY. April of 1850, her ownership was changed to C. Walker et al, Buffalo, NY and her enrollment transferred to Buffalo, NY. September 1851, 48-hours of high wind forced the *Ogontz* ashore at the mouth of the Milwaukee River. Lake Michigan.

November 1851, her ownership was changed to Jesse S. Norton & Isaac P. Thompson, Toledo, OH and her enrollment was transferred. Master for the 1851 season was Captain Jesse L. Norton. May 1852, while steaming on Lake Erie, the *Ogontz* struck an object that knocked a hole in her hull, damaging her cargo. Property loss for her cargo was set at $1,000.

April 1854, her ownership was changed to William Sutton et al, Buffalo, NY. For the 1854-56 seasons, her master was Captain Wilkinson with Aloysius Fox as chief engineer for 1854. September 1854, while coming up the creek at Buffalo, NY, the propeller *Ogontz* struck and sank the canal boat

Undine. Later that month, while loaded with merchandise, she sprang a leak on Lake Erie, damaging her cargo. She put into Sandusky, OH for repairs. This time the property (cargo) loss was set at $3,000. May of the next year, the propeller went ashore on Cedar Point in Sandusky Bay, Lake Erie. Released.

September 1855, her ownership was changed to A. T. Spencer et al, Chicago, IL and her enrollment transferred to Chicago, IL. In August of that same year, she went aground on East Neebish Island, Ont., St. Mary's River. While steaming on Lake Michigan, the *Ogontz* unshipped her rudder off Waukegan, IL. She required a tow to Chicago for repairs.

April 1858, her ownership of the propeller *Ogontz* was changed to A. E. Goodrich & Samuel A. Bryon, Buffalo, NY for the Northwest Transportation Co.

After 13-years of steaming on the Great Lakes, the ownership of the propeller *Ogontz* was changed to William Crosten and her enrollment was transferred to Milwaukee, WI. Her engine was removed and the *Ogontz* was rebuilt as a bark: one deck, three masts, 153.6 x 26 x 9.9; 373 86/95 tons. Her enrollment was updated August 1861. November 1862, the bark *Ogontz,* laden with fish and lumber, while entering the Chicago harbor struck a sand bar and went to pieces.

Ohio: George W. Jones with L.D. Burnell, master carpenter, built at Black Rock, OH a wooden sidewheel steamer for Isaac L. Hewitt, Cleveland and William A. Adain, Elyria, OH with measures: 197' 7 ½" x 28' 1" x 10' 11" and a tonnage (old style) 583 36/95. She was powered by a high-pressure engine, 29" bore x 9' stroke, 400 horsepower, built by Cuyahoga Steam Furnace Co., Cleveland, OH in 1846. Her boilers were built by Morrison, Cleveland, OH. Initial enrollment was at Cleveland, OH March 15, 1848, and she was intended for the passenger, package freight trade. Master of the steamer *Ohio* for the 1848-49 seasons was Captain Marshall Capron. April 1848, entering Erie Harbor, the steamer *Ohio* went aground when a heavy wind blew the water up the lake. She was released when the wind died down and the water returned.

February 1850, Isaac L. Hewitt became the *Ohio's* sole owner. April 1851, ownership of the steamer was changed to Hiram Niles et al, Buffalo, NY. October of that year, the schooner *Oneida,* laden with lumber, ran into the steamer *Ohio* off Black River Point, OH, Lake Erie. The schooner immediately filled but did not sink due to her cargo. She was towed into Cleveland, OH. The sidewheel steamer *Ohio* was not injured. Master of the steamer for the 1854 season was captain Nickerson. December 1854, the steamer *Ohio*, coming up the river at Cleveland, OH, ran into the schooner *B. F. Wade* (US2148), lying at Hubby, Hughes & Co's dock, breaking the schooners starboard quarter, taffrail and small boat.

Ownership of the steamer *Ohio* was changed the American Transportation Co., Buffalo, in May 1855. In October 1855, the *Ohio* lost her smoke stacks off Fairport, OH, Lake Erie during a gale. Property loss $200. May 1856, the steamer *Ohio* struck a rock near Erie, PA, leaking badly she put into Conneaut, OH to discharge her cargo then returned to Buffalo, NY for repairs. Her property loss to the hull was $600, and to the cargo $200.

October 1858, her ownership was changed to Levi Allen, Buffalo, NY. November 1859, the steamer *Ohio's* boiler blew up and the vessel sank near Long Point, Ont., Lake Erie. Two lives were lost. April 1860, her enrollment documents were surrendered and she was listed as "vessel lost".

July 1860, the hull was sold to J. Leonard, Erie, PA. The hull was raised and towed to Erie, PA to be broken up and burned for her iron.

Some 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.

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 $1533\frac{7}{94}$ 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, that 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.)