

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.

<u>Ropewalk</u>

The Newsletter for Shipwrights of Ohio – April 2022

Next <u>Zoom</u> Meeting: May 21, 2022 "Jigs & Fixtures"

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April

Saturday, April 16.2022, eight of your fellow shipwrights gathered via Zoom. You would think, that after leading for 18 years that I would know to not plan a meeting during Holy Week. It was good to meet and chat about where we are and what we have been doing.

If you could not make it, I encourage you to set aside the third Saturday of each month to join us and share what you are working on, your questions and concern. Our May meeting is planned for Saturday, May 21st and we plan to run a Hybrid meeting, in-person as well as zoom. Join us.

As I write this on a chilly Easter Sunday, I repeat my monthly advice and urge all of you to take, care of yourself and your families. Look to those you know who may need help or are lonely and need human contact.

Your editor.

Announcement

Model Ships and Boats Contest

The Wisconsin Maritime Museum in Manitowoc, WI will host its 45th annual Midwestern Model Ships and Boats contest on May 13-15, 2022.

Downloadable registration forms are available. Go to:

https://www.wisconsinmaritime.org/event/45thmidwestern-model-ships-boats-contest/

On-line Seminars

Nautical Research Guild

Saturday, April 23, 2022, the Nautical Research Guild will host a webinar: "From Slide Deck to Presentation" by Robin Chenoweth. The seminar is in two parts:

- "How to make a Presentation" will cover setting objectives, visual thinking and building slides"
- Followed by "Using PowerPoint".

The event is free to all NRG Members and NRG Charter Chapter Club members. We are, and so you can join the session and learn how to build a presentation to share with your fellow shipwrights your questions and experiences.

Registration is required. Go to: <u>https://thenrg.org/events/workshops</u>.

Society of Nautical Research

I received a notice from the Society that they had produced new content to go with the anniversary of the sinking of the *Titanic* in April 1912. Checking to see if our webmaster had picked them up, I went to our web site and clicked on the "Video" title, found the Society's connection and clicked on it, ending at their web site. The two *Titanic* podcasts are:

Podcast 1: Titanic's Anchors

Podcast 2: Iconic Ships 15: Carpathia

Check them out as well as the other offerings John provides links to. Thanks John.

Business

May Meeting

The plan is for the club to return to in-person meeting as well as zoom. On May 21st, we will set up at the Westerville Public Library in Classroom B at 9 AM and should be on-line by 9:30. I will bring the cookies. This will be an open discussion on "Jigs & Fixtures" you use in ship modeling.

A note of caution. I send out the Zoom ID/PW in the second club meeting notice and then try to send a repeat notice on Thursday before the meeting. If you have not received the notice, check your "Spam" or "Junk" folder. Even I, the sender, have found the notice in my Spam folder. How, I have no idea, probably done by the internet "trolls".

Library Display

"Our display at the Sunbury Library has been a hit, with just about everyone who comes in seems to stop and marvel at the boats! I've made sure to tell folks about some of the details that you shared with me and they're always impressed at the level of detail and time that went into them. Thanks again for sharing your passion with the library and community!" That was in the note, received by Alan, from Mary Nice, the Adult Services Director at the Sunbury Community Library,

We have been asked by and are responding to Mary, for an exhibition of our ship models again in June. The case available is 48" wide x 56" high x 16" deep.

The library is interested in a display of our models in June to support their theme "Oceans of Possibilities" and would like the models to be tall ships. Consider your completed models and how the model can point the viewer to a series of books, fiction or historical. i.e.: my *Hannah* though a war ship in the Revolutionary War, was a converted Marblehead fishing topsail schooner in real life. So, it would be a historical lead in to colonial times, the Revolutionary War, and the fishing industry in the late 1700's in New England such as "Moby Dick: and the O'Brien, Forrester seafaring series. My skipjack is from the Chesapeake Bay area, also the fishing industry, but it could reference stories about the local business in the late 1800's and early 1900's, and as a lead-in to environmental history, where a solution to a problem in one part of the country can impact another and how pollution can wipe out a species.

Think about your tall ship models and how they can connect to books, etc. Send your model dimensions and the story connection to Alan Phelps: <u>arphelps44@gmail.com</u>

Tall Ship's



Club Road Trip: Saturday, July 9th – Cleveland, OH, downtown on the lake front should be 8-tall ships for your inspection. Presently we know of the following: *Niagara., Pride of Baltimore II, St. Lawrence II, and Neo Trinidad* will be there.

The plan is for those attending to meet midmorning (location to be announced). We encourage car-pooling. The club will cover admission, lunch and, maybe, reimburse mileage expense. Let Bob know if you plan to attend.

Coordinator is Bob Mains: mains1@columbus.rr.com

HMS Falkland

In June, the Firelands Historical Society in Norwalk, Ohio, will have on display, the admiralty models, consisting of the *HMS Falkland* (believed to have been the first warship built in the Americas); *HMS Boston*; and *HMS Serapis*.

On Saturday, June 4th, 2022, the Firelands Historical Society will dedicate a display to Robert Bruckshaw and his museum quality (all three models mention above were originally on display in the Smithsonian Museum, Washington, DC.) ship models. All three, are admiralty models, and have had traveled a circuitous route to be returned to Buckshaw's hometown and donated to the historical society.

The Shipwrights of Ohio were requested to, and have completed repairs to the HMS *Falkland*. Built at 1:48 scale, Bruckshaw used plans from Greenwich, UK and the Smithsonian plus the R. C. Andersons book "The Rigging of Ships in the Days of the Spritsail Topmast, 1600 – 1720". The photos

below were taken at the Firelands Research Center at Norwalk, OH.

The Shipwrights of Ohio have been invited to attend the dedication. Those who worked on the *Falkland* are: Darrell Markijohn, Robert Mains, Bill Nyberg, and Alan Phelps. Thank you.

HMS Serapis



HMS Boston



HMS Falkland



Mark your calendar for June 4, 2022 and join us as we share this dedication with the community and family.

Presentation:

The April presentation was "Mast & Yard Making".

Whether you are making masts or yards, the process is similar

- Determine the dimensions and taper of the mast or yard.
- Cut/form the taper
- Sand/finish the mast or yard

There are a number of good reference books on this subject. It appears to me, that most of the current books on the subject, refer back to the tables found in Steel's 1794 edition of "Elements of Mastmaking, Sailmaking and Rigging". The visual displays below are from Mondfeld's "Historic Ship Models".

So let us start with a review of the finer points of a mast or yard.

Wooden ships – mast diameters are given at seven points along its length.



Heel, Partners, 1st Quarter, 2nd Quarter, 3rd Quarter, Hounds and Head.

The Partner is the point where the mast projects through the main deck. This provides the basic diameter from which all other diameters are calculated

- Heel 6/7 of the partner
- Partner the point where the mast projects through the main deck. Provides the basic diameter from which all other diameters are calculated – 61/61
- 1st Q 60/61 of the partner,
- 2nd Q 14/15 of the partner,
- 3rd Q 6/7 of the partner,
- Hounds $-\frac{3}{4}$ of the partner,
- Head 5/8 of the partner,

The mast length is given in four lengths.

- Measured Length full length from hell tenon to mast cap tenon
- Hounded Length from heel tenon to hound point – bottom of bibb
- Head bottom of bibb to top of mast cap tenon

• Housing – Base of the mast tenon to the Partner (top of deck surface)

Yards design has not changed for 1,000's of years.



- Small Yards single length of wood
- Longer Yards assembled & lashed together
- Yards assembled from square-section timbers introduced between 1400 1550.
- Jackstay:
 - 1820 1840 Made of hemp rope
 - 1830 1860 Made of wire rope
 - 1845 1900 double jackstay made of metal rod
- Footropes:
 - Strong ropes about 30 inches below the yard
 - Lower Yards 3-inch circumference
 - Came into use:
 - 1640 lower yards
 - 1680 Topsail yards
 - 1700 Remaining yards

Yard Dimensions:



April 18, 2022

Center of yard is 31/31

- Yard is divided into 8 parts
 - 30/31 at first 1/8 from center
 - o 7/8 at second 1/8 from center
 - o 7/10 at third 1/8 from center
- 3/7 at fourth (or end) 1/8 from center

Boom, Gaff, Lateen yards:





Top to Bottom –Boom, Gaff, Lateen yard. Below: Jaws,

- Boom: divided into eight parts
 - Length measures from end of boom to end of boom in jaws
 - Thickness on boom is at 4/8's from either end
 - Tapers to 2/3 at either end
- Gaff: divided in four parts
 - Length measures from end of gaff to end on gaff in jaws
 - Thickness on gaff is from jaw 41/41 and tapers to 5/9 at end
- Lateen Yard divided into eight parts
 - Length measures from end of yard to end of yard
 - Thickness on yard is at 4/8's from either end
- Tapers to 2/3 at one end and ½ at the other Lateen Yards evolved from the Mediterranean and were adopted in Northern Europe in 15th C. They are

not symmetrical around its thickest point - oval shape.

So, how do you make them? You could use a lathe, but I prefer doing this by hand.



- Start with straight grain, square stock
- Lightly mark with a pencil or scribe the whole length what you will cut away
- Plane or scrape the four corners down to your marks, resulting in an octagonal piece, correctly tapered all the way.
- Plane the eight corners to a 16th sided taper.
- Scrape the 16 corners to 32.
- Finish by hand with progressively finer sandpaper



Reduce opposite sides down to your lines. Redraw the mast outline on the sanded side. Sand (curve) the other two faces down to size.



After sanding you have a squared stock. Redraw lines using a "Tic" sheet for spacing of the eight sides of the mast. The outer Spacings identify material to be removed.



Form sides using a rasp. Next step is to form a 16sided mast by using a fine, flat file. Marking the lines would cause more errors than it's worth. Begin filing the edges of the eight sides to 32 sides and with little effort the mast becomes very close to a tapered circular section. Sand to finish.



Hounds & heel: First file the hounds to octagonal, but without the taper, and then come back and gently file the taper, working from the lower end up. This is the one portion of my process that takes some finesse. Clean up the upper edge of the hounds with a chisel or a fine file

Your square stock has to have a straight grain and not be warped. Pick stock that will not warp – Straight grain, no knots etc.: i.e., Sticka Spruce, Maple (Hard), Lime Wood, Boxwood. The stock needs to be uniform thickness and may require a sanding machine. You may want to glue together layered pieces, placed in opposite direction to offset tendency to curl/warp.

As far as tools, I use two small finger planes and a draw knife.



They are clockwise: 25 mm. Luthiers' Finger Plane by IBEX; draw knife 7/8" cutting surface; Xacto finger plane 11/16" cutting surface (Not sure if still available – My dad's from 80 years ago)

The other tool is a jig to hold the mast of yard for tapering.



Two pieces of wood, longer than your mast about a 1" wide by $\frac{1}{4}$ " thick. Cut an edge on each at 45-degree angle. Glue both on to another board so that chamfered edges meet. Bottom board can be same length or longer. Cut and glue a square stop at the end you are planning towards.

Ships on Deck:

The following is an update on what your fellow shipwrights have been working on. As you can see, the progress covers from finishing prior work, restoration, to new builds. Thanks to all who submitted their progress and questions.

Mary Powell

Lee Kimmins





Complete, except for decal and case

Bluenose - Restoration

Cliff Mitchell



After sealing the hull with Dullcoat spray and installing the rudder I have been working on deck fittings.

Red Jacket

Stan Ross



Main mast installed, halyards, sheets, clewlines and lifts on, starting lower shrouds, then stays, and braces next.

Margaret Olwill

Bill Nyberg



Upper and lower cabins built. Pilot hose walls laid out Waiting on an interior ladder at 1/8 scale to arrive so that the captain has access to the pilot house from his cabin.

Thanks to Lee, Cliff & Stan who contributed their photos and progress reports this month.

For the rest of you, I encourage each of you to share photos of your works in progress, what you have completed in the past, and what you plan to work on in the future. Send it to your editor in jpeg format with a short write up.

Other Notes: "Stuff", Tugs & Things

Nautical Terms

Dock: In American usage, a fixed structure attached to shore to which a vessel is secured when in port. In British usage, the body of water between two piers or wharves that accommodates vessels tied up at the piers or wharves. To tie up along a pier or wharf.

Dockyard; A facility where ships or boats are built and repaired.

Dog: Device to secure doors and hatches. Typically used for watertight openings, but can apply elsewhere. "Dogging the hatches" is a common phrase.

Dog Watch: A short watch period, generally half the usual time (e.g., a two-hour watch rather than a four-hour one). Such watches might be included in order to rotate the system over different days for fairness, or to allow both watches to eat their meals at approximately normal times. **Doldrums:** The equatorial trough, with special reference to the light and variable nature of the winds generally encountered there.

Dolly winch: A small winch mounted on the windlass, used as an alternative to the brails winch when that is obstructed in some way (e.g., by deck cargo).

Dolphin striker: A spar protruding vertically beneath a bowsprit, usually attached to the bowsprit cap, used to provide a mechanically advantageous run for the

martingale stay, and other ropes of a ship's rigging. **Donkey engine**: A small auxiliary engine used either to start a larger engine or independently, e.g., for pumping water on steamships.

Dory: A shallow-draft, lightweight boat, about 5 to 7 meters (16 to 23 ft) long, with high sides, a flat bottom, and sharp bows. Traditionally used as fishing boats, both in coastal waters and in the open sea.

Double-banked: (of the arrangement of oars on a boat) having two oarsmen seated on each thwart, each of whom operates one oar on their side of the boat. This contrasts with single-banked, where only one oarsman is seated on each thwart operating one oar on one side of the boat, with the oars alternating between port and starboard along the length of the boat. A third arrangement is to have one rower on each thwart working two oars, one on each side of the boat.

Double-shotted: The practice of loading smoothbore cannon with two cannonballs.

Doubling the angle on the bow: A technique for establishing the distance from a point on land, such as a headland that is being passed. This is a type of running bearing which requires no plotting on the chart. The ship is sailed on a constant course and speed. The distance shown on the log is noted when the relative bearing of a fixed point is taken, and the increase in that bearing is watched until it is twice the original bearing, and the log is read again. The distance travelled between the two bearings is the distance of the ship from the fixed point when the second bearing was taken. Allowances for tidal streams may or may not be allowed for, depending on the accuracy required.

Downbound: Travel downstream, with a following current. Eastward travel in the Great Lakes region (terminology used by the Saint Lawrence Seaway Development Corporation).

Downhaul: A line used to control either a mobile spar, or the shape of a sail. A downhaul can also be used to retrieve a sail back on deck.

Glossary of Nautical Terms Wikipedia

Tugs *America*



Built in 1897 at the Union Dry Dock, Buffalo, as a steel, propeller, for the Erie Tug Line, Erie, PA., and assigned official number 107302. She was powered by a fore & aft engine: 16 & 32 x 28", 490 hp engine @ 150 rpm; built H.G. Trout, Buffalo, 1897; firebox boiler 10' x 13', 150# steam, 1 water-tight bulkhead. She measured $80.2' \times 21' \times 12.3'$, with a tonnage of 123 grt.

Her ownership changed to the Hand & Johnson Tug Line, Buffalo in 1899 and in 1916 to the Great Lakes Towing Co. Cleveland. Oct 1941, while assisting the freighter *B. F. Jones*, she sank in the Detroit River with 6 lives lost. Raised. In 1953, she was converted to diesel power and appears to still be operating. BGSU University Libraries; Historical Collections of the Lakes & Alpena County George N. Fletcher Public Library; C. Patrick Labadie Collection.

American Eagle



Built at Buffalo by Robert Scott and J. Carrol for Thomas Clark in 1865. She was a wooden, steam propeller with measures of: 57.5' x 16.6' x 7.7' with a tonnage of 46.7 grt. She was assigned official number 570.

She went through a series of owners ending with Dall & Co., Chicago in 1879. In 1885, she sank after striking the wreck of the schooner *Exchange* off Kellys Island, Lake Erie. In June of that year she caught fire and burned off Cleveland. She was rebuilt. In 1891, the *American Eagle* collided with the tug *Alva B* ½ miles off the entrance to Cleveland and sank. Raised, she was cut through by salvagers chains and again sank. Her machinery was salvaged. BGSU University Libraries; Historical Collections of the Great Lakes & Alpena County George N. Fletcher Public Library; C. Patrick Labadie Collection

Stuff

Schooner Summit

I was contacted by James Edmonson, VP of the Trustees of the Dunham Tavern Museum in Cleveland. He was writing about the Dunham Tavern and in his research, he came upon the March 2021 "Ropewalk" where Roderick Calkins name was mentioned with regards to ship building in the Cleveland area. He asked if I had additional information about the schooner *Summit,* which I provided.

Following is his article, included with permission of the Dunham tavern Museum.

The Dunhams build a boat.



Mouth of Cuyahoga River, Cleveland

The Dunhams were.... mariners? Well, no, and, yes. While Rufus and Jane Dunham stayed on the farm, their daughter Loretta's husband Robert Pier and his two brothers-in-law engaged in Lake Erie navigation and commerce. In 1856 Pier and his partners commissioned construction of the schooner *Summit*, and with this vessel they entered into the business of hauling freight across the Great Lakes.

In 1848 Robert and Loretta (Dunham) Pier departed Bellevue, near Sandusky, where Robert operated a hotel, and returned to Cleveland. In the mid to late 1850s they resided at 269 Euclid Avenue, just to the west of Rufus and Jane Dunham's home and tavern. They remained in that locale for the remainder of their lives, becoming an anchor for other Piers and their children, and their families in turn. In 1849 Robert became a retail merchant selling woolen goods and for a while operated a fabric shop at 59 Superior St., offering ribbon, cashmere, and imported French silk. By the mid-1850s, he shifted focus to become a coal merchant. This change led to a novel business venture for the Pier family, drawing them directly into maritime commerce and navigation on the Great Lakes.

In 1856 Robert Pier joined forces with his brother-inlaw William H. Willard, who wed his sister Weltha in 1835, and brother-in-law John Robertson, who married his sister Mary Jane, the wedding taking place in the Willard residence, in 1843. Robertson and Willard were both active in Great Lakes waterborne commerce. Robertson, originally from Ayrshire, Scotland, appears in city directories and census records listed as a "mariner," "seaman," "master," and "ship captain." Willard described himself as "employed in Navigation of Canals, Lakes, Rivers" in the 1840 census, and is described in Cleveland period press as a "forwarding and commission merchant" and is listed as a "ship broker" in the 1860 census. He even held a US patent (35,373) for a screw propeller design. In 1856 they formed a partnership with their brother-in-law Robert Pier and a fourth investor, the iron foundry master Noadiah P. Bowler, to commission construction of the schooner Summit at the Whiskey Island yard of shipwright Roderick Calkins (1817-77), later remembered for "some of finest vessels that ever left this port."

Notice of the launch of the *Summit* appeared in the pages of the *Plain Dealer* in April 1856. That account described it as a two-masted wooden fore-and-aft schooner (with sails set along the line of the keel, rather than perpendicular to it as on a square-rigged vessel) designed for carrying freight, measured 126 ft in length, with a beam of 26 ft., a hull depth of 10 ft., and listed over 300 tons carrying capacity. Captained by Robertson, with a crew of 8 or 9, this schooner bore coal, iron ore, and wheat to the port of Cleveland, and shipped industrial products from the city from the time of its launch in 1856 through its sale by the partners in 1872.

Cargo manifest for the schooner *Summit*, Captained by John Robertson, 1857.

In 1863 Robert Pier became gravely ill, but he did manage to record a brief will bequeathing his share in the *Summit* - the most substantial asset in his estate to Loretta. Robert died just over two weeks later, but Loretta would not be able to realize the value of her share for quite some time. The surviving partners

kept the schooner as a going concern for almost another decade; the *Summit* remained in their hands plying the waters of the Great Lakes until sold in 1872 for \$10,000 (over \$200,000 in present day value). Under new ownership, the *Summit* foundered at Au Sable Point, Michigan, on Lake Huron in September 1872. Carrying a load of iron ore, it stranded and a storm wrecked the craft, with the loss of two lives, including a woman cook. Such comprised the risk and peril in Great Lakes navigation by sail of the period.

This episode of Dunham family history may come as a revelation to some. The interpretive narrative that museum visitors hear rightly revolves around the home and tavern, and the surrounding agrarian locale of East Cleveland township that Rufus and Jane Dunham knew so well. Discussion of transportation has focused on stagecoach lines and travelers that the Dunham tavern served, which waned dramatically with the coming of railroads. In the midst of these changes, Dunham family members joined the ranks of merchants and ship captains on the Great Lakes in dramatic fashion. By building the schooner *Summit*, they embraced a dynamic future for Cleveland, rather than cling to a nostalgically simpler and fast receding past.

James M. Edmonson, Dunham Tavern Museum trustee. Dunham Tavern Museum 6709 Euclid Ave.

Cleveland, OH 44103 http://dunhamtavern.org/

Presentation Schedule:

<u>2022</u>

Jan 15 – Canceled Feb 19 – Planking a deck Mar 19 – Deck house from scratch Apr 16 – Mast and Yard Making May 21 – Jigs & Fixtures - discussion Jun 18 – Flags Jul 16 – Tall Ships: Cleveland Aug 20 – Cannons and Accessories Sep 17 – History: Marietta, ship building Oct 15 – Finishing: natural & paint Nov 19 – Rigging: Standing Dec 17 – Rigging: Running

Events & Dates to Note:

2022 Tentative Schedule

Columbus Woodworking Show January 21-23, 2022

IPMS Columbus BLIZZCON 2022 Saturday, February 19, 2022

Miami Valley Woodcarving Show March 6 & 7, 2022

45th Midwestern Model & Boat Show, Wisconsin Maritime Museum, Manitowoc, WI May 13-15, 2022

Tall Ships - Cleveland Cleveland lake front. July 7 – 10, 2022

Lakeside Antique & Classic Wooden Boat Lakeside Hotel, Lakeside, OH July 17, 2022

Tall Ships - Erie Erie, PA lake front. August 25-28, 2022

NRG Conference Oct. 2022

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

April	18,	2022
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<u>Cargo Hold</u>

www.shipwrightsofohio.com/cargo hold/

Here you will find how to order Challenge Coins, as shown above, and 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 with out Shipwrights of Ohio logo.

There are currently two logo styles available:

- Full Club logo with Motto, for digital print use on the back-side 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 Written by William E. Nyberg

<u>1859</u>

Akron: Quayle & Martin, at Cleveland, built a wooden propeller for Philo Chamberlin & John H. Crawford, of the Northern Transportation Co., Cleveland. She was enrolled at Cleveland in 1859. and her measures recorded as: 135.0' x 22.7' x 11.3', with a tonnage (old style) of 367 15/95. No information was recorded about her engine. The Akron was built for the passenger, package freight trade and ran between Ogdensburg, NY and Chicago, Milwaukee and intermediate ports on Lake Michigan and the Straits in conjunction with the Ogdensburg Railroad. In May 1860, the propeller Akron and the schooner Challenge collided on Lake Michigan off Waukegan, IL. The Akron was undamaged while the schooner experienced losses to her hull \$100 and cargo \$200. September 1861, the Akron, laden with corn, went ashore on Long Point, Lake Ontario. In August 1863, she struck a rock in the St. Lawrence River

Her master for the 1866 season was Captain John Brown. The propeller *Akron* was assigned official number 394.

In October 1866, Captain John Brown, during an interview with the Oswego Advertiser & Times. defined a "fair sort of a load" as sixty-one full passengers, twenty-five horses, thirty wagons, and some other freight matters. In July 1867, while off Port Stanley, Ont., Lake Erie, the propeller was in a collision with the schooner Acontias (US1394), out of Detroit, MI. August 1871, the propeller, laden with a cargo of flour and corn, while moored to the west side of the Ogdensburg and Lake Champlain Railroad Co.'s elevator, awaiting unloading, was discovered to be on fire. The fire, between decks and in the hold, required that the vessel to be flooded by sinking to douse the flames. After the fire was extinguished, the vessel was raised and towed to Oswego, NY where the damaged cargo was discharged. The cargo loss was set at \$3,700 and damage loss to the vessel at \$3,000.

Her master for the 1872-73 seasons was Captain W. O. Gardner. The June 24, 1872 issue of the Kingston Daily News announced that the propeller *Akron* delivered to the Jones and Miller wharf, Kingston, Ont., 10,000 bushels of corn from Toledo, OH. In September 1873, the *Akron*, under charter to the Vermont Central Railroad, and enroute from Ogdensburg, NY to Chicago with 50 passengers aboard and heavily laden with general merchandise, caught fire and burned to the water's edge, while at Collins dock, about five miles above Alexandria Bay, NY, St. Lawrence River. No lives lost.

City of Buffalo: David Bell, Buffalo, built a wooden propeller canal boat of 128 tons (old style). Bell was also her owner. Her dimensions are unknown as is her propulsion. She was launched in 1859 and enrolled that same year.

Her enrollment was updated in October 1861 because of new owners. The *City of Buffalo*, is listed as chartered to the Union Army's Quartermaster Department Dec 17, 1862 – March 17, 1863 and again August 8, 1864 – June 17, 1865. After the Civil War ended, she was assigned official number 4991. In October 1871, the *City of Buffalo* was converted to a barge. She was last documented in 1893.

Not much is recorded about the vessel. Listed as a canal boat, she was probably used on the Niagara River and Erie Canal transporting freight and passengers.

Bonnie Boat: Joseph M. Keating, Huron, OH, built a wooden, sidewheel steamer for B. F. Smith, Sandusky, OH. She was launched in October 1859 and had measures: 110.6' x 18.4' x 6.9' and a tonnage (old style) of 132. She was equipped with a Crosshead engine, 22" bore x 60" stroke, built by Camp & Johnson. The engine was originally installed in the sidewheel steamer *Fremont* (US – 1851). Her boiler was built by Neil Moore, Sandusky, OH. The *Bonnie Boat* was built for the passenger, package freight trade on Sandusky Bay.

In 1865, the steamer *Bonnie Boat* was sold Canadian to G. McAulay, Quebec, Que. and registered as *Bonnie Maggie* (C51653) with measurements: 111 x 18 x 7; 203 tons.

May 1866, her ownership of the steamer *Bonnie Maggie* was changed to George Rumball of Rumball & Parsons, Goderich, Ont. She was used on Lake Huron connecting with the Great Western Railroad at Sarnia, Ont. and the ports of Southampton, Ont. and Saginaw, MI.

1867, her ownership was changed to J. Detlor, Goderich, Ont.

In 1868, ownership of the *Bonnie Maggie* was changed to J. G. Thompson, Penetanguishene, Ont. Her master for the 1868 – 69 season was Captain J. G. Thompson. October 1869, bound from Goderich, Ont for Southampton, with five passengers and general merchandise, the steamer *Bonnie Maggie*,

while entering Southampton harbor in a gale, broke her rudder chain, and drifted past the north pier into the breakers, where she was driven ashore, and bound by the storm. No lives lost. Declared a total loss



Detroit: August 22, 1859, the wooden sidewheel steamer Detroit was enrolled at Buffalo. Built by Bidwell & Mason, Buffalo, her recorded measures were: 239.0' x 34.3' x 13.2' and a tonnage (old style) of 1039.3. her original owner was the Detroit and Milwaukee Railway Co., Julius Morris, Agent. The Detroit was powered by a vertical beam, low pressure engine with a 60" bore x 144" stroke, rated at 1050 horsepower, and built by Shepard Iron Works, with a tubular boiler 23' 6" x 10', both built in Buffalo. She was built for the passenger, package freight trade, connecting the Western Terminus of the Detroit and Milwaukee Railroad, at Grand Haven, MI, with Milwaukee, WI. Her estimated cost was between \$250,000 and \$300,000. She had a capacity for 40,000 bushels and 200 passengers. Her master for the 1859 season was Captain Dennis H. McBride with John Stark as first engineer.

August 28, 1859, her ownership was changed to the Lake Michigan Transit Co. of Milwaukee. During the winter layup of 1859/1860, she had thirty staterooms added for accommodations for passengers.

Ownership of the steamer *Detroit* was changed to Detroit & Milwaukee Railroad Co., Detroit, MI in 1864. September 1865, the *Detroit* was readmeasured at Detroit and her enrollment updated to: 240' x 58' x 12.4'; 880 grt. She was assigned official number 6198 at that time.

In 1870, her ownership was changed to James M. Ballentine, Detroit, MI. He had the steamer *Detroit* reduced to a schooner barge by Campbell & Owen, Detroit, and readmeasured and her enrollment updated in April of that year to: 240' x 34.7' x 12.4'; 723 grt, 675 net. In May 1871, Campbell & Owen converted the schooner barge *Detroit* to a propeller using the engine from the steamer *Hunter* (US11139). Her enrollment tonnage was updated to: 699 grt, 675 net. In September 1872, bound from April 18, 2022 Saginaw, MI for Chicago with schooner *Hunter* (US11139) in tow, both laden with a cargo of lumber, the propeller *Detroit* sprang a leak and caught fire during a gale off Hartsville, MI. Lake Huron. The fire was extinguished and both vessels drifted ashore between Greenbush and Hartsville, MI, becoming total losses.

The *Detroit's* final enrollment was surrendered in March 1873 and endorsed "stranded". Much of *Detroit's* machinery and gear was recovered by June 1875.



Michigan: The Grand Trunk Railway, Point Edward, Ont, had Robert Steed, Sarnia, Ont. build a wooden propeller for the passenger trade between Sarnia, Ont. & Green Bay, WI, connecting with the Grand Trunk Railway. Her measures were: 152.9' x 26.8' x 9.2' with a tonnage (old style) of 275. She was powered by a non-condensing high pressure engine, 30" bore x 30" stroke, rated at 300 horsepower and was built by Bartley & Gilbert, Montreal, Que.

May 1861, the propeller *Michigan* was chartered by James Cousin and entered into the towing business on the St. Clair River. Her master for the 1862 season was Captain Couzzens with Calwell as chief engineer.

Ownership of the *Michigan* was changed in August 1862, to John Pridgeon & W.K. Muir, Detroit. She stayed in Canadian registry, and was used in the towing trade. Her master for the 1866 season was Captain Fraser.

In July 1866, ownership of the *Michigan* was changed to the Minister of Marine & Fisheries, Ottawa, Ont. She was rebuilt at Goderich, Ont. by Henry Marlton Her measures were: 154' x 27'; 257 tons. She was commissioned as survey gunboat #29 *H.M.S. Prince Alfred* on July 30, 1866. During the Fenian Crises (1866-70), the *H.M.S. Prince Alfred* patrolled the St. Clair River & Lake Huron. Her master of the gunboat was Lieutenant Heron, R.N. The gunboat *H.M.S. Prince Alfred* was ordered to patrol the Niagara River, opposite Fort Erie. (1868) Masters of the gunboat *H.M.S. Prince Alfred* were Captain James R. Innes (1868-70) and Captain G. H. Wyatt (1872) In November 1871, the gunboat *H.M.S. Prince Alfred* towed the schooner *Gold Hunter* off the rocks near Manitoulin Island. While towing the schooner to Owen Sound, the schooner capsized during a gale and was cut loose by the captain of the *Prince Albert*. The schooner righted herself and was driven ashore at Cabot's Head.

In 1876, ownership of the gunboat *H.M.S. Prince Alfred* was changed to J. Nesbit, Moretown, Ont. She was rebuilt. Her measures were: 153' x 29'; 288 tons, and she was issued official number C74063.

In August 1877, ownership of the propeller *Prince Alfred* was changed to Canadian Towing & Wrecking Co., Windsor, Ont. and she was converted to a wrecker tug. Her first enrollment was issued at Windsor, Ont., August 22, 1877. Her master for the 1878 – 80 seasons was Captain Andrew Port. In May 1878, while lying at her dock at Windsor, the *Prince Alfred* quietly sank in 80 feet of water. She was raised, repaired and cleaned up and back in service by June of that year. In September 1882, the *Prince Alfred* went aground near Walkerville, on the Canadian side of the Detroit River, while in the process of raising the tug *Mocking Bird.*

Ownership of the *Prince Alfred* was transferred to the International Wrecking & Transportation Co. in May 1883. She was repaired and received a new steeple compound engine: 22", 40" bore x 27" stroke and had her boilers repaired. She was renamed *Michigan* with her master for the 1883 season as Captain James Laframboise. In September of that year, the tug was seized by the Canadian Government for an outstanding repair bill on her machinery.

In 1884, her ownership was changed to Laughlin McCallum, Windsor, Ont. Her engine was removed and placed in the wooden towboat *William Pringle* (C80176). The hull of the tug *Michigan* was converted into a lighter. In 1885, the lighter was condemned and placed in a bone yard. In 1905, the hulk of the lighter *Michigan* sank at Sandwich (Windsor, Ont.), was deemed a menace to navigation and destroyed.

Milwaukee: Bidwell & Mason, Buffalo, built for Julius Morris, Buffalo, a wooden, sidewheel steamer that when enrolled at Buffalo in August 1859, had recorded measures: 239' x 34' 4" x 12' 2" and a tonnage (old style) of 1039 31/95. She was powered by a vertical beam, 60" bore x 144" stroke, rated at 100 horsepower and built by Shepard Iron Works, Buffalo. She was equipped with tubular boilers (2) 23.5' x 10' built by Shepard Iron Works. Her sidewheels measured 34'. The Milwaukee was built for the passenger, package freight service between Milwaukee, WI and Grand Haven, MI, the terminus of the Detroit and Milwaukee Railway. The passenger boat was intended to run year-round. Master of the steamer Milwaukee in 1859 was Captain W.S. Cross with Thomas Fitzpatrick as first engineer.

In August 1859, ownership of the steamer Milwaukee was transferred to the Lake Michigan Transit Co., Milwaukee, WI. November 1859, bound for Milwaukee, the steamer Milwaukee, went ashore outside Grand Haven, MI, in strong winds, on an exposed beach, when her rudder chain became fouled. She was released fourteen days later and taken to Chicago for repairs at the drydock of Miles & Doolittle, on the North Branch of the Chicago River. In March of 1861, she underwent improvements for passenger accommodations at Shearer & Brothers, Detroit, MI. Her master was Captain James F. Trowell for the 1862 – 66 seasons. May 1862, she struck the north pier coming into the Milwaukee harbor, tearing away two of the guard knees of her larboard wheelhouse.

Her ownership was transferred to the Milwaukee and Grand Haven Line in 1864. September of 1865, the *Milwaukee* was readmeasured at Detroit, MI: 240' x 58' x 12.5'; 880.58 grt and assigned official number 16619. In November 1866, the steamer *Milwaukee* collided with the propeller *Lac La Belle* (U15803) on the Saint Clair River. The propeller *Lac La Belle* sank with a loss of two lives. In October 1868, the steamer *Milwaukee*, laden with 40 passengers and seventy tons of freight, stranded on the bar outside Grand Haven, MI, when a furious storm arose on Lake Michigan. The *Milwaukee* broke up in storm two days later and became a total loss. No lives lost.





Sea Bird: E. B. Ward, Newport (Marine City), MI with Robert Conwell as master carpenter, built a wooden sidewheel steamer for a group of investors consisting of: Emily Ward, 5/8; David Gallagher, 1/8 both from Newport, and Charles G. Blodgett, ¼ from Detroit. She was intended for the passenger & package freight trade between Cleveland and Buffalo. Enrolled at Detroit, May 16, 1859, her recorded measures were: 191' 6" x 27' 9" x 12' 6" and her tonnage (old style) at 638 42/95. She was powered by a vertical beam, low pressure engine, 44" bore x 120" stroke, builder unknown. Master of the steamer *Sea Bird* for the 1859 – 1863 seasons was Captain C. C. Blodgett.

While bound from Cleveland to Buffalo in May 1859, with a load of passengers and freight, the steamer *Sea Bird* had her machinery broke on Lake Erie. She was repaired at Buffalo, NY. Two months later, her machinery broke on Lake Erie, off Conneaut, OH. She was towed in to Conneaut for repairs. In May 1860, she was readmeasured and her enrollment at Detroit updated to: 190.5 x 26.58 x 11; 535.55 grt. On a lower lake to Lake Superior run in November 1862, the steamer *Sea Bird* broke a cylinder head off Whitefish Point, Lake Superior and has to be towed to Detroit for repairs. She laid up that winter at Detroit.

During the winter 1862, ownership shares for the steamer *Sea Bird* were transferred to Emily Ward, David Gallagher and Florence Brindle. In October 1862, while steaming on Lake Michigan she again broke her machinery. She anchored at Manitou until picked up and towed to Chicago for repairs. Her damage loss was set at \$600 for her hull and \$280 for her cargo.

In March 1863, ownership of the steamer Sea Bird was changed to Captain Albert E. Goodrich, Chicago, for \$40,000 and she was placed on the Chicago, IL to Lake Superior run. In December 1863, the steamer while bound between ports on the west shore of Lake Michigan, went ashore during a gale at White Fish Bay. She was released and repaired with her hull damage loss set at \$12,000. In September 1865, the steamer Sea Bird was readmeasured at Chicago and her enrollment updated: 190.66' x 27.42' x 10.75'; 444.01 grt. She was assigned official number 22368. In August of the following year, while bound from Chicago to Milwaukee, the steamer broke her machinery. Property loss was set at \$1,000. April 1868, while bound from Milwaukee for Chicago with 105 passengers aboard, the steamer *Sea Bird* caught fire when a porter emptied a scuttle full of stove embers to windward, near Waukegan, IL. Sparks set the decks ablaze and the ship was consumed quickly and burned to a total loss. One hundred two lives were lost. There were three survivors.

West: Augustin Cantin, at Montreal, Que. built a wooden propeller for the R. S. Miller & Company, Toronto. She was enrolled at Montreal in November 1859, and her measures recorded as: 133.7' x 23.3' x 11.0'; unit tons 214 2846/3500. She was assigned hull number C46456. She was powered by a high-pressure engine, 25" bore x 30" stroke, builder unknown. The *West* was built for the package freight trade and ran Montreal - Lake Erie. She had a capacity for four thousand barrels. In April 1860, she was chartered by Henderson, Holcomb Co. a forwarding company and placed on the Lake Ontario Line with the steamers *Wellington* (C-1856), *Hercules* (C-1856) and *Brantford* (C-1851).

In 1861, her ownership was changed to Holcomb, Cowan Co. a forwarding company, and ran between Montreal and Chicago. In 1862, she received a new boiler which would burn either wood or coal. In December of that year, she became disabled at Presque Isle on Lake Erie. The temperature dropped and she became wedged in ice. June 1863, bound up from Montreal, the propeller *West* had her rudder disabled while going through the canal on the St. Lawrence River.

In 1864 her ownership was changed to J. H. Henderson, Montreal, P.Q. Her master for the 1864 season was Captain McGrath. In September of that year, the propeller West developed a slow leak that damaged part of her cargo. She was hauled out on the Marine Railway at Kingston, where it was found that shaft packing was loose allowing water to seep in. Repaired. In November 1864, the propeller West and the sidewheel steamer Osprey (C46254) ran the Halifax to Quebec route on the St. Lawrence River. December of that year, the propeller West left Quebec for Halifax, downbound, she wrecked at Littler Matane Bay on the south shore of the St. Lawrence River, Gaspe Peninsula. Declared a total loss. Her enrollment was closed at Montreal, March 8, 1866.

Some Notes:

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

<u>Cargo-carrying capacity</u> 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.

<u>Mail Steamer:</u> Chartered by the Canadian government to carry the mail between ports.

<u>Navigation:</u> 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 <u>tonnage</u> 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 15337/₉₄ 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

<u>Packet Freight</u>: 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.

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

<u>Down-bound:</u> 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.)