

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–March 2025

Our Next Meeting: April 19, 2025; Hybrid – **"Ships in a Bottle"** by John Boeck

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March

What a turnout Saturday morning. We had two guests: Roger Baughman & Charles Tosi, both from the Columbus area. In addition to our guests, we had an additional 8 in the conference room and 7 on-line.







Roger had to leave early and your editor was a little slow getting his camera set up. We're learning!

Our skipper, reviewed the meeting schedule for 2025 and had our two guests introduce themselves. We had a short discussion about the road trip scheduled for July, and based upon the comments, it looks like the July trip will be replaced by a regular meeting with Cliff Mitchell presenting: "History of Ships during World War II."

Julie shared her research presentation on "Anchors" as well as a three-page handout of ship model anchor merchants. It is sent with the newsletter as an attachment to the email. My summary of her excellent presentation and research are included below. Since we are modelers and enjoy a challenge, you will find on page 6, under the heading "*Tip of the Month*" Julie's slides for fabricating your own anchors.

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

If you have not gotten your Covid, Flu and/or RSV shots, please do. Stay safe.

Till next month. Your editor.

Reminders & Announcements

Modeling Events

48th Annual Midwestern Model Ships & Boat

The Wisconsin Maritime Museum will host, a Nautical Research Guild Associated Competition, May

16 – 18, 2025 at the museum located at Manitowoc, Wis, on the shores of Lake Michigan.

Be part of the Midwest's longest-running model contest and showcase your work alongside talented modelers from the Rockies east!

Model receipt and setup will be Friday May 16 and early Saturday morning. Models will be on display to the public on Saturday and Sunday, May 17 & 18.

New this year, they are bringing back the Friday afternoon field trip to Rogers Street Fishing Village and Washington House at Two Rivers, WI. On Saturday, May 17, enjoy a special dinner and program on "Vanishing Vessels: Recent Shipwreck Discoveries in Lake Michigan."

Award presentation will be Sunday. Registration is open through May 1, 2025. <u>https://www.wisconsinmaritime.org/explore/midwestern</u> -model-ship-contest/

If you are interested in attending, I suggest carpooling. It is an 8+ hour trip through Chicago and Milwaukee, unless you take the ferry, *Badger*, from Muskegon to Manitowoc, and then it is longer.

Rigging Class

Struggling with or new to rigging a ship model, here is a possible solution, and it is in beautiful Maine, on the shores of the Atlantic.

Bluejacket Ship Crafters: will be holding a rigging class, May 18-22, 2025. <u>IT IS A CLASS FOR NOVICES.</u> They don't assume you know anything about rigging a ship model. All tools and materials are provided with the class fee of \$500. You get a hull to



work on,

all the sticks and dowels, glue, blocks, deadeyes, threads, wire, beeswax, sandpaper and the following tools:

Excel hobby knife and blades, 2 Pin Vises, Assortment of drill bits, tweezers, needle nose pliers, flush cutters, clamps, cuticle scissors (best for clipping rigging), and probably some other things Nic may have forgot.

Classes will be at the Fireside Inn in Belfast, ME, 4 miles from BlueJacket on Route 1. For hotel reservations, phone # 207-338-2090. You should ask for the BlueJacket corporate rate. There is a pool, sauna and Jacuzzi, plus all rooms have an excellent view of Penobscot Bay. If you are the camping type, Searsport Shores is nearby.

To register, contact BlueJacket at https://www.bluejacketinc.com/contact-us/

2025 Photographic Ship Model Competition

The Nautical Research Guild has announced their 2025 Photographic Ship Model Competition. The

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last NRG model photo competition was in 2021, where your editor won a Gold for his model of a skipjack.

All photos and supporting documentation requested will be submitted on-line. Entrants will also receive a written review of their model. Gold, Silver and Bronze medals will be awarded for the First, Second and Third place models in three categories: Novice, Apprentice and Master. A "Best of Show" medal will be awarded to the best "Gold medal" winner.

The competition is open to regular members in good standing of the Nautical Research Guild. If you are not currently a member, join the Guild and enter the Competition.

The entry fee will be \$30 per model entered. <u>Entries can be submitted starting on Monday June 16,</u> <u>2025. Entries must be submitted before or</u> by Thursday, July 31, 2025.

Winners will be announced at the Annual Member's Meeting. Details for how to enter will be available soon.

Sea History Activity

LST-325 Ship Memorial: The LST-325, will commence summer hours April 1, 2025. The LST is docked on the Ohio River at Evansville, Ind. Her annual cruise is scheduled for September 3 – October 2, 2025, and she will stop at Muscatine, IA, Alton, IL, Cape Girardeau, MO before returning to Evansville, IND, October 01.

2025 Art of the Sea: "Sea History" will hold an online juried exhibition & sale, June 1 to July 1, 2025. https://www.seahistory.org/artofthesea2025.

Historic Naval Ships Assoc: September 24-27, 2025, the 12th Maritime Heritage Conference will be held at Buffalo, NY

Presentation:

Fixtures: Anchors

The presentation for the March 2025 meeting was "Anchors" by Julie Holloway.

In her introduction to this subject, she provided two definitions for "Anchor":

- "a heavy device that is attached to a boat or ship by a rope or chain which is dropped into a body of water to secure a boat or ship in place."
- "a person or thing that provides strength and support"

A ship's anchor is the least complex part of the ship's ground system that secures the ship.

The purpose of an anchor is: A ship is a sort of "bridge" that connects either cargo or people from one: location to another; the vessel is a temporary floating, intermediate link between those two shorelines. Before the construction of ports, ships in the "age of sail" had to anchor offshore, with cargo and people being ferried to land in smaller boats.

If required to wait to get a berth to embark or discharge cargo and passengers. The seabed must be of good composition to hold the anchor. Space is required between vessels to accommodate 360° of ship rotation around the anchor due to changes in wind and tide.

The first anchors were heavy stones and they have evolved to a combination of weight and the ability to dig into the seabed.

The components of todays anchor are:



Ring/shackle: Attaches anchor to the chain Shank: The long center part of the anchor running between the ring and the crown

<u>Stock</u>: A long bar attached to the shank but at 90° to the direction of the arms and flukes. The stock forces the anchor to turn so one of the two flukes is poised to dig into the ocean floor (self-canting)

<u>Crown</u>: The rounded lower section of the anchor where the shank is secured

Fluke/Palm: Extensions of the crown at 90° to the stock that build up resistance as they bury in to the seabed Bill: The tip of a fluke

She then listed 44 terms of other anchor terminology, including:

1, Anchor hawse: the anchor is fully stowed in the Hawse hole. (below left)



2, Anchor 'a' cock bill (cock-a bill): The anchor hangs vertically from the hawse pipe with the *flukes turned into the ship's side*, ready to be dropped.



She then took us through the history of anchor design, from prehistoric anchors



through 19th C metal anchors and their evolution. Ships of sail had multiple anchors. They were:

- Starboard Bower bow
- Port Bower bow

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- Sheet (starboard, large back-up) starboard mid-ship
- Stream (port, lighter back-up) port mid-ship
- Ketch (used for warping-no stock)
- Grapnel (smallest, for boats-no stock)

We then went through how an anchor was raised: To raise an anchor, a messenger cable was tied to the anchor rope with nippers and then around the capstan, which when turned, threw in the messenger cable and anchor rope or chain which was fed into the anchor storage while the messenger rotated around the capstan. Ships boys untied and retied the nippers between the messenger and the anchor cable as it went into the hold.

Hoving the Anchor



Julia also covered "catting an anchor", fishing an anchor, and the change to anchoring as ships evolved from sail to modern ships. We also spent time on windlass and capstans and their differences.

Anchor sizes, vary and are based upon size of the ship:

To determine the size of an anchor for a ship model: primarily consider the scale of the model, the boat's design and era, and the intended anchoring conditions. A general rule of thumb is the anchor should be roughly 1/10th the weight of the ship, while also factoring in the anchor type and the material used. Consult reference images of real ships and their anchors for accurate proportioning.

Julia, also provided research on who and what ship model vendors provided in the way of anchors. *Attached with this newsletter, as a separate 3-page*

attachment listing model anchor merchants and what type anchors they supply.

To wrap up the subject, she covered fabricating model anchors in wood, metal and styrene, photoetching and using CAD/CAM to 3D design and print anchors. Her slides can be found on page 6 under the title: "Tip of the Month".

In Summary:

- Anchor design and size should be carefully researched for any specific ship
- Decide if ship will be shown underway or anchored - will determine rigging and stowage

- Many types of anchors are possible to purchase in varying sizes
- Bespoke anchors can be fabricated using several methods.

Ships on Deck

The intro photos for each ship shown after the title are for reference to what the model may look like when finished.

Sprague

By Lee Kimmins



The *Sprague* was the largest steam sternwheel towboat ever built for inland river service. The boat was launched in 1901 and went into service in 1902. She operated until March 5, 1948, when she was decommissioned at Memphis





HMS Endurance

By Mike Knapp



A present from his children, this is a LEGO kit. March 17, 2025



HMS Erebus by John Boeck



HMS Erebus was a bomb vessel designed by Henry Peake and constructed by the Royal Navy in 1826. The 372-ton ship was armed with two mortars – one 13" and the other 10" – and 10 guns. Her hull measured 105 feet in length by 28 feet in the beam.

In November 1840 – captained by James Clark Ross – Erebus departed for Antarctica in company with *HMS Terror*. In January 1841, the crews of both ships landed on Victoria Land, and named areas of the landscape after British politicians, scientists, and acquaintances. Mount Erebus, on Ross Island, was named after one ship and Mount Terror after the *HMS Terror.*



Armed Virginia Sloop - 1768 by Bill Nyberg



The Armed Virginia sloop – 1768, is an 8-gun, single mast, fast sailing vessel, related to a Bermuda sloop. There is little historical information available. The photo above is from the Smithsonian Institute. Her measurtes were: 53' 7" overall, 16' beam, 7'11" draft.



The hull as left, in January 2021, is shown above. Scale is 1:32 (3/8' = 1').

Other Notes: "Stuff", Tugs & Things

Nautical Terms "S"

Shoal draught: An especially shallow draught on a vessel, making the vessel capable of sailing in unusually shallow water.

Short stay: The relative slackness of an anchor chain; "short stay" means the chain is somewhat slack, and neither vertical nor fully extended.

Shorten: To take in the slack of (a rope). To reduce (sail) by taking it in, e.g. "shorten sail".

Shot across the bow: A shot fired close to and in front of a moving vessel to warn her to stop, often for boarding.

Shroud: A rope or cable serving to support a mast from either side.

Show your true colors: To display your correct flag after approaching an unsuspecting enemy by flying a misleading flag.

Sideboy: One of an even-numbered group of seamen posted in two rows on the quarterdeck when a visiting dignitary boards or leaves the ship, historically to help (or even hoist) him aboard.

Sided: (of a timber in a wooden hull) The identifier of a measurement of a timber in a wooden hull, used, together with moulded, instead of width and thickness which could be ambiguous – length, the third dimension is not ambiguous. Sided identifies the measure across the surface of an individual timber which is at right angles to the moulded direction. Therefore this is the dimension across the top of a keel, the fore and aft face of a frame, or the athwartships face of stem or stern post.

Sidewheel: 1. A side-mounted paddle wheel used for propulsion by a paddle steamer; 2. Propelled by sidewheels (e.g. "sidewheel steamer").

Sidewheeler: A paddle steamer propelled by a pair of paddle wheels, one mounted on each side.

Single-banked: (of the arrangement of oars on a boat) having only one oarsman 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. This contrasts with double-banked, where two oarsmen are seated on each thwart, each of whom operates one oar on their side of the boat. A third arrangement is to have one rower on each thwart working two oars, one on each side of the boat.

Single up: To reduce the number of mooring lines to a minimum immediately prior to getting under way. In a small vessel this would usually be a reduction to a mooring line at just the bow and the stern. In a larger vessel this may be a reduction to headrope, stern rope and two springs.

Sister ship: A ship of the same class as, and therefore virtually identical in design and appearance to, another ship. Sister ships share an identical or nearly identical hull and superstructure layout, similar displacement, and roughly comparable features and equipment. Often, sister ships become more differentiated during their service lives as their equipment (and, in the case of military ships, their armament) are separately altered.

Slip rope: A mooring rope that is intended to be the last to be released when getting under way and is arranged so that it can be released from on-board. An example of this would be a rope that is led from the ship (or boat), through a ring on a mooring buoy, and then back to the ship.

Tip of the Month

Fabricating bespoke model anchors

Materials

- Wood
- Styrene
- Metal
- 3D printed resin

Methods

- · Carving of wood and plastics (styrene)
- Soldering of metals
- · Casting of low fusing alloys
- Photo-etching of metals
- 3D design and/or printing

Fabricatingbespoke model anchors

Material: Wood

- · Overall, fairly easy to work
- Hand carving pear wood is recommended

Method: Carving, carving + glued assembly



from MSW member "Louie da fly"

Fabricatingmodel anchors Material: Styrene (Evergreen stock)

- · Overall, fairly easy to work/assemble, can be weak
- · Can be easily cut to shape, can be used as model for cast piece

Method: Carving, carving + glued assembly



from NRG resource "Making Anchors from Styrene" by Daniel Fischer

Fabricatingmodel anchors

Material: Metal

Brass - Sheet brass, rod, and tubing



https://youtu.be/5NnyB4y4YRI feature=shared



from NRG member "davec"

Methods: cut, cut + soldered assembly

Fabricatingmodel anchors Material: Metal

Methods: casting

Low fusing alloy - Type 280 Sn/Bi alloys preferred (MicroMark). Alloys containing Zn/Pb/Cd are susceptible to "white metal corrosion"



2-part mold (requires mock up)



VENTILATION

Devest Courtesy YouTube channel "Oceanis TV"

Fabricatingmodel anchors

Material: Metals - brass, steel, copper







Methods: photo-etching

etal Photo-cure resist using templates







(Kit available from – MicroMark)

Courtesy YouTube channel "Boulder Creek Railroad"

Fabricating model anchors using CAD/CAM

A process where a digital model, created using computer design software, is turned into a physical three-dimensional object by adding material a layer at a time

•Step 1: Creation/modification of a digital model using computer-aided design software (CAD)

 Step 2: Export the digital model to a specialized 3D printer to produce a threedimensional solid object (CAM)



Fabricatingmodel anchors (Step 1: Design)

Material: 3D designs available (free to download)

- CGTrader.com:Free Navy
- Cults3D.com: Free -Wood stock, Ankla Knox, Admiralty

Method: Bespoke digital design or free download from Internet



Fabricatingmodel anchors (Step 1: Design)

Material: 3D designs available (fee to download - most under \$10)

- CGTrader: For sale Admiralty, Kedge, Plough, Mushroom, Bruce, Danforth, Pool, Stockless, Union, Yamato stern, Byers, Hall
- Cults3D.com: For sale AC14 HHP, Hall, Plough, Bruce, Mushroom, Rostock, Type A, Type B, Type E, Admiralty
 - Method: Purchase from Internet



Fabricatingmodel anchors (Step 2: 3D Printing)

Types of Different Types of Additive CAM (Computer-Aided Manufacture)



Selective Laser Sintering

Fabricatingmodel anchors

Material: Various polymers, depending on type of 3D printer



Tugs: Great Lakes

Estelle - 1874



Built at Watkins, NY as a wooden tug/passenger steamering in 1874. Enrolled, her measures were:69.4' x 13.3' x 5.7': 34.18 grt, 17.09

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net. She was powered by a high pressure 14' x 14' engine. Her official number was: 135114.

In July 1887, her ownership was changed to Captain Bishop, and she ran between Duluth, MN and West Superior.

In March 1889, her ownership was changed to F.A. Bishop & John Hanson, Duluth and she ran excursions on Lake Superior near Duluth. In July 1893, she collided with the ferry *N.H. Bruno* (U130388) between Connor's and Rice Point in the Duluth-Superior Harbor.

In June 1898, her ownership was changed to Mary A. Ryan, Duluth. April 1903 she was dry docked for overhauling.

No final disposition noted.

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

Excelsior - 1892

O'Grady and Maher, built a wooden towboat at Buffalo in 1892. She was enrolled at Buffalo in October of that year and her measures were: 72.5' x 19.2' x 10.5', 73.24 grt, 36.62 net. She was powered by a high pressure engine, 24" x 28", 375 hp, 140 rpm, built by Sutton Brothers, Buffalo. Her official number was 136325.

Her ownership was changed in 1895, to Walter H. Singer, Duluth.

In 1897 she was owned by White Line Towing Co.

In 1899, her ownership reverted back to Walter H. Singer, Duluth. In Sertember of that year, she was owned by A.B. Wolvin, Duluth.

In 1915, she was abandoned and dismantled. She was brought to Toledo, OH and used as a storehouse in the Toledod harbor.

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

Presentation Schedule:

2025 – Schedule Tentative

- Jan 18 Scale Comparison Thread to Actual Rope Lines
- Feb 15 History of Ships WW 2 (to be rescheduled)
- Mar 15 Fixtures: Anchors
- Apr 19 Ships in a Bottle
- May 17 Planking a Wooden-hulled Ship
- June 21 Photo Etching Brass Parts
- July 4-7 Tall Ships Cleveland
- July 19 Road Trip: Wharter Carving Museum
- Aug 16 Jigs & Fixtures ship modeling
- Sep 20 Bending Wood
- Oct 18 Lofting & Reading Ships Plans
- Nov 15 Power & Hand Tools in Ship Modeling
- Dec 20 Card Modeling

Events & Dates to Note:

2025 Tentative Schedule

Columbus Woodworking Show Ohio Expo Center January 17-19, 2025

IPMS Columbus BLIZZCON 2025 Makoy Center, Hilliard, OH Saturday, February 22, 2025

Miami Valley Woodcarving Show Christ United Methodist Church Middletown, OH March 1-2, 2025

46th Midwestern Model & Boat Show, Wisconsin Maritime Museum, Manitowoc, WI May 16-18, 2025

Bluejacket Rigging Class Fireside Inn, Belfast, ME https://www.bluejacketinc.com May 18-22, 2025

2025 Photographic Ship Model Competition NRG Sponsored Registration opens June 16, 2025 \$30 entry fee Entries must be submitted by July 31, 2025 Winners will be announced at Annual Members Meeting

Great Lakes Tall Ship Festival, Cleveland July 4–7.2025

Lakeside Antique & Classic Wooden Boat Lakeside Hotel, Lakeside, OH July 20, 2025

Columbus Air Show U.S. Navy "Blue Angles" Rickenbacker International Airport August 22-24, 2025

Ohio River Sternwheel Festival Riverfront Park, Marietta, OH September 5-7, 2025

Shipwrights of Ohio 2025 Officers & Staff President – Bob Mains........614-306-6866 Vice Pres. – Cliff Mitchell614-890-6164 Communications – Bill Nyberg..614-370-5895 Recruitment – Jeff Northup740-585-0383 Treasurer – Lee Kimmins.......614-378-9344 Web Master – John Boeck.......937-620-0258 Zoom Master – Steven Keller.. 513-280-2210 Web Site: www.shipwrightsofohio.com Email: shipwright@breezelineohio.net

"The Art of Wood" – woodcarvers show Sauder Village, Archbold, OH October 24 & 25, 2025

Miniature Society Show & Sale St, John's Evangelical Lutheran Church Grove City, Oh November 15, 2025

> Editor: Wiliam Nyberg Shipwrights of Ohio Shipwright@breezelineohio.net

Cargo Hold

www.shipwrightsofohio.com/cargo hold/

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

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

There are currently two logo styles available:

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

Wooden Steamers on the Great Lakes

Researched & Written By William E. Nyberg

The Gilded Age was a period in the United States from 1873 to the early 1890s, and was marked by rapid economic growth, political corruption, and social inequality:

- Economic growth: The US became the world's leading producer of coal, oil, steel, and food, and saw a huge increase in the importance of the factory system, railroads, mining, and finance.
- Political corruption: The Gilded Age was marked by widespread political corruption, with wealthy industrialists and bankers holding the most political power. Tammany politicians in New York used fraud, violence, and intimidation to win elections.
- Social inequality: The Gilded Age saw the rise of two distinct classes, separated by a gulf of wealth and circumstance. Women faced a sexual double standard and inequalities in marriage, with limited access to divorce and few long-term career options.
- The Gilded Age name: The term comes from the 1873 novel "The Gilded Age" by Mark Twain and Charles Dudley Warner, which satirically depicted the era's corruption and political figures.
- The Panic of 1873 was blamed for setting off the economic depression that lasted from 1873 to 1879. This period was called the Great Depression, until the even greater depression of 1893 received that label, which it held until the even greater contraction in the 1930s—now known as the Great Depression.
- Other events during the period were: The US seized the Philippines, Puerto Rico, and Cuba after the Spanish-American War.

Supporting the economic growth was the change from wooden vessels on the Great Lakes to larger iron and then steel vessels. To transfer the growing needs of the steel mills and the transfer of grain crops to populated areas, Great Lakes ships needed to be structurally stronger to support the increase cargo weight, Longer vessels were required to support the larger cargos and this required stronger hulls to prevent "hogging" which impacted wooden ships structural keels.

The first two iron hulled vessels were bult on the Great Lakes in 1844, The *Colonel Albert* for the U.S. Army, at Buffalo, NY; and the *USS Michigan*, for the U.S. Navy, at Erie, PA. The first steel vessel was the propeller, *William Chisholm* built by Globe Iron Works at Cleveland, OH in 1884. <u>1874-C</u>

Ontario: Simpson & Chisholm, at Chatham, Ont., built a wooden propeller, for the Northwest Transportation Co. ("Beatty Line"), Sarnia, Ont. her first enrollment at Sarnia, Ont, January 6, 1874, with her measures recorded as: 181.0' x 35.0' x 12.0'; 1338.19 grt, 909.97 net. She was powered by two high-pressure engines on the same shaft, 34" bore x 36" stroke, 750 horsepower, built by G. N. Oille, St. Catharines, Ont. in 1874. The vessel was assigned official number C71211 and had been built for the passenger, package freight trade and ran between Sarnia, Ont. and Lake Superior. Her master for the 1874 season was Captain Anderson. In August 1874, the propeller Ontario broke her wheel off Bruce Peninsula, Ont., Lake Huron. Loss set at \$400. Her master for the 1880 season was Captain Troy Lauchlan, with Captain Maclean Morrison for the 1882 season and Captain James McNaugh for the 1883 season. In October 1883, bound from Sarnia, Ont. for Duluth, MN, the propeller Ontario, laden with 300 tons of freight and 100 deck and 40+ cabin passengers, went hard aground in heavy fog, eight miles southwest of Port Elgin, Ont., on Lake Huron. She rested on a rock and clay bottom with nine feet of water in her hold. She was released and dry docked at Detroit for repairs. For the 1884 season, Robert Chestnut Jr. was chief engineer. During winter layup of 1885, the propeller Ontario received a fore & aft compound engine, 30", 52" bore x 36" stroke, 475 horsepower, 75 rpm, built by Oille Brothers Works, St. Catharines, Ont. and two firebox boilers, 8.5' x 16', 72 pounds steam from the same company. For the 1886 season she was licensed for 300 passengers. In May of 1886, the propeller Ontario stranded on Green Island Shoal off Mississauga, Ont. Lake Ontario. Released. The following month, the propeller Ontario went aground on Vert Island, Nipigon Bay, Lake Superior. Released. In June of the following year, she broke her machinery at Sault Ste. Marie, and was towed to Sarnia for repairs. Her master for the 1888 season was Captain R. Delaney with John Davidson as chief engineer. In March 1890, the propeller Ontario was retired from the Sarnia & Duluth route.

Ownership of the propeller *Ontario* was changed, in November 1898, to John Cornwall and David McDonald et al, Port Huron, MI who had her rebuilt as a bulk carrier for the lumber trade: 655 grt. In

August 1899, bound for Nipigon, Ont. with the schooner barges *Wawanosh* and *Eureka* to load pulp, the propeller *Ontario* went aground in heavy fog on Battle Island, near Rossport, Ont., Lake Superior. She was destroyed by wave action during a summer snowstorm.

The enrollment register for the propeller *Ontario* was closed. The wreck of the propeller was located in 1977.

John Owen: Built at Detroit Dry Dock Co., Detroit, for John Owen, also from Detroit, a wooden tug, to be used for bulk freight towing service on the Detroit River, at a cost of \$40,000. She was enrolled at Detroit, June 1874, and her measures were recorded as: 136.16' x 25.16' x 11.66'; 328.34 grt, 245.55 net. She was assigned official number 75608. The John Owen was powered by a Fore & Aft Compound engine, 21", 37" bore x 32" stroke, 370 horse power, built by Christie & McGrath, Detroit, MI in 1874. Steam was generated by a firebox boiler, 8' 7" x 16', 100 pounds steam, built by McGregor Boiler Works, Detroit, MI in 1874. Her master in 1874 was Captain Philip Young with Robert Armstrong in 1876, and Alexander Morrison as chief engineers. In August 1875, down bound, the tug John Owen used a one inch steel wire rope, instead of the normal 3-inch manila rope, to tow a lumber raft consisting of 2,000,000 feet of timber. The raft was lost during a severe gale but the steel wire rope never parted.

Ownership of the tug *John Owen* was changed in 1887, to S.B. Grummond, Detroit, MI. Master of the tug *John Owen* was Captain Thomas J. Carney for the 1888 & 89 seasons, with Charles H. Phillips as chief engineer in 1892.

In 1895, ownership of the tug *John Owen* was changed to Frank W. Fletcher, Alpena, MI. Master of the tug *John Owen* in 1899, was Captain Thomas Lillis with David Thompson as chief engineer.

In March 1907, the tug *John Owen* was sold Canadian to J. Ganley, Sault Ste, Marie, Ont. (Ganley Tug Line) and enrolled as *Columbus* (C117039), 439 grt. Her chief engineer for the tug *Columbus* in 1909 was Albert Lewis. In September 1910, the tug *Columbus* caught fire and burned at her dock, at Gargantua Harbor, ONT., Lake Superior. She was cut loose and allowed to drift out into the bay, where she sank.

Persian: Quayle & Murphy, at Cleveland, OH, built a wooden propeller for the bulk freight trade. She had a shared ownership of: H.J. Winslow, 9/16 share, Buffalo, NY; R.K. Winslow, 7/16 share, Cleveland, OH. Her measures were: 243.58' x 40.00' x 18.66': 1629 grt. She was powered by two High Pressure engines, 27" bore x 30" stroke, built by Globe Iron Works. Cleveland. Steam was generated by boilers, 18' x 8.5' @160 lbs. steam, made with .5-inch iron. The propeller Persian was designed to carry 1,400 tons of ore or about 75,000 bushels of wheat and cost \$125,000 to build. She was assigned official number 150064. Her master for the 1874 season, was Captain S. Rummage with Matthew Thomas as engineer. In November 1874, the propeller *Persian*, laden with grain, sprang a leak on Lake Huron. She was dry docked for repairs, and her damage loss was set at \$600. The following month, the propeller Persian went aground at Toledo, in the Maumee River. She was released and her damage loss was set at \$400. Master of the propeller Persian was Captain Samuel Flint in 1875, with Thomas Davis, 1875, as engineer.

In May 1875, ownership location of the propeller *Persian* was transferred to: H.J. Winslow, 9/16, New York, NY; R.K. Winslow, 7/16, Cleveland, OH. Her master for the 1875 season, was Captain Samuel Flint with Thomas Davis as engineer. August 1875, bound down from Chicago for Buffalo, laden with 50,000 bushels of corn and 15,700 bushels of wheat, the propeller *Persian* caught fire and sank eight miles southeast of Long Point, Lake Erie in 25 - 30 fathoms of water. No lives lost.

Final documentation was surrendered at Buffalo, NY, September 30, 1875 and endorsed as "wrecked".

Quebec: Duncan Chisholm & John Simpson, Chatham, Ont, built a wooden propeller, sister ship to the *Ontario*, C71211, for the Northwestern Transportation Line, Thorold, Ont.; James H, Henry & William Beatty, owners. Enrolled at Sarnia, Ont. in August 1874, her recorded measures were: 193.00' x 34.07' x 13.04'; 1403.91 grt, 954.66 net. The *Quebec*

was assigned official number C71212. She was equipped with a double condensing engine with two cylinders: 34", 34" bore x 36" stroke, 750 horsepower (combined), built by G. N. Oille, St. Catharines, Ont. in 1874. She also was equipped with a firebox boiler, 8' x 15'8", 75 pounds steam, built by G. N. Oille, St. Catharines, Ont. in 1874. The propeller Quebec was built for passenger, package freight trade, and ran between Sarnia, Ont. and Lake Superior. Master of the propeller Quebec in 1874 was Captain E. Anderson with Thomas Pettigrene as chief engineer. In June 1875, the propeller Quebec went aground in Waswaugoning Bay, WI, Lake Superior. Released. In October 1878, bound up for Lake Superior in a snow storm, the propeller Quebec, laden with 150 tons of freight, went ashore on Magnetic Shoals, near Cockburn Island, Lake Huron. The tugs E. M. Peck and Mystic, sent from the Sault to assist in releasing the propeller Quebec, also went aground. The tug Mocking Bird and the Canadian wrecker Prince Alfred were also sent to assist the Quebec and the tugs. The tugs Mocking Bird, Prince Alfred, Cushing, Dispatch and the propeller Ontario finally were able to pull the Quebec off, with the loss of her wheel, rudder and shoe in November 1878. The Quebec was towed to Sarnia for repairs. In May 1879, the propeller Quebec arrived from Duluth at Kingston with 11,000 bushels of Manitoba wheat, 600 barrels flour, twenty-two tons of silver ore from Silver Inlet and about 50 passengers. In May 1881, the propeller Quebec ran hard ashore on the Chicora reef, Bear Lake, Lake Huron. Released. Her master for the 1883 season was Captain Moore. In November of 1883, during a heavy snowstorm on Lake Huron, the propeller Quebec, trying to make Southampton, Ont. harbor, went aground and was scuttled to prevent her being pounding to pieces.

In July 1885, the propeller Quebec, laden with seven carloads of freight, mostly flour, struck a rock at Devil's Gap, North passage (Bruce Mines Passage), Sault Ste, Marie. She lightered off her freight before the wind changed and blew her off the rocks where she sank, stern first in 120 feet of water, Raised, Property loss estimated at \$65,000. Her stem was twisted and the timbers were in bad shape so the vessel was turned over to Captain S. A. Murphy as payment for raising her. In 1886, the propeller Quebec, under tow by the Canadian tug International, enroute from Collingwood, Ont. to Detroit, MI, went ashore at Presque Isle, Lake Huron in thick weather. The US tug Gladiator was dispatched to release her and then she was taken to Union Dry Dock, Buffalo, for rebuilding. The propeller Quebec was rebuilt as a bulk freight steamer: 186' x 35.2' x 12.4': 1003.19 grt. 777.57 net: she was enrolled at Chicago, in September 1886, as F. E. Spinner, US120654.

The propeller *F. E. Spinner* was auction to William J. Murphy, Lake Transit Line, Chicago, IL for \$35,000. Her master, for the 1887 season, for the propeller *F. E. Spinner* was Captain D. Nicholson with Louis McLaughlin as chief engineer. December 1887, the propeller *F. E. Spinner*, while in winter quarters at Detroit, caught fire from a stove and was damaged to the extent of \$250.

In 1889, ownership of the propeller *F. E. Spinner* was changed to Adams & Farwell Transportation Co., Detroit, MI. Her master for the 1889 season was Captain D. J. Duncanson with Thomas K. Kelly as chief engineer. In September 1890, the propeller *F. E. Spinner* broke her wheel, sinking in 125 feet of water in the Canadian Channel, St. Mary's River. She was raised and repaired. Her master for the 1894-96 seasons, was Captain James Laframboise, with Thomas K. Kelly, for the 1889-93 season, John Johnson in 1894 and A.R. Crook in 1896, as chief engineers.

In 1899, ownership of the propeller F. E. Spinner was changed to David J. Ransem. He had her converted into a lumber barge at Davidson's Yard, West Bay City, MI: 186' x 35' x 12.4': 622.6 grt. 460.9 net. Master, for the 1900 season, of the propeller F. E. Spinner were Captain J. H. Madden. In October 1900, bound down the propeller F. E. Spinner, laden with lumber, was sunk by collision with the U.S. propeller H. D. Coffinberry (U95285) in the St. Mary's River, settling in seventeen feet of water. Raised and repaired at Burger & Burger, Manitowoc, WI. Master of the propeller F. E. Spinner for the 1901 season, was Captain W.E. Franklin. The propeller F. E. Spinner had her engine rebuilt at Montague Iron Works, MI; and received a new scotch boiler, 13' x 12', 140 pounds steam, built by Manitowoc Steam Boiler Works.

Ownership of the propeller F. E. Spinner was changed, in December 1901, to Captain John C. Smith & Lawrence Dempset, Manistee, MI. Her master for the 1902 season was Captain John A. Stulllebeam with J. Phillips as chief engineer. In July 1902, the propeller F. E. Spinner was renamed Helen C. (120654). Masters of the propeller Helen C:. for the 1904-06 season was Captain John H. Madden; with Captain Peter G. Young for the 1907-11 seasons, with B. Winkler in 1904: Richard Winkler in 1905-06; Henry Broutons in the 1907-08; and F. Layman in1909, and John Charmock for the 1910-13 seasons, as chief engineers. In August 1908, the propeller Helen C., laden with lumber, went ashore near Cheboygan, MI, Lake Huron, Released. In October 1910, the propeller Helen C., laden with over 1,000,000 feet of lumber, went ashore on Vessel Point, North Manitou Island, Lake Michigan. She was lightered to be released and was badly damaged from the pounding on the rocks. Her master for the 1912 & 13 seasons was Captain John Eble.

Ownership of the propeller *Helen C.* was changed, in February 1914, to Captain William C. Ziem, William T. Hoey and H. Claire Masters (Western Cedar & Lumber Co.), Alpena, MI. Master of the propeller *Helen C*, for the 1914 & 15 season, was Captain William C. Ziem with Horace B. Carter as chief engineer.

In June 1915, ownership of the propeller *Helen C*. was changed to W. C. Brown et al, Plymouth, MI. The master of the propeller *Helen C*. for the 1917 – 21 seasons was Captain A. Papineau with Charles F. Jubenville as chief engineer.

In January 1922, ownership of the propeller *Helen C.* was changed Samuel L. May, Detroit, MI. Master of the propeller *Helen C.* for the 1922 season was Captain John Goodrow with M. R. Lewis as chief engineer. In October 1922, the propeller *Helen C.*, laden with coal, foundered off Thunder Bay, MI, Lake Huron, during a storm. No lives lost.

The propeller *Helen C.* was possibly raised, her cargo of coal salvaged, and used as a barge in the construction of the Belle Isle Bridge, Detroit River, and then abandoned at River Rouge.

H. C. Schnoor: L. C. Rogers at Fair Haven, MI, built a wooden steambarge for H.C. Schnoor, 1/2, Fair Haven, MI and F.O. Burrows, 1/2, Cleveland, OH. She had measures of 136.6' x 26.1' x 10.9'; 244.46 grt, 191.91 net. She was powered by an Oscillating engine, 38" bore x 40" stroke, 250 horse power. Steam was generated by a tubular boiler, $4\frac{1}{2}$ x 12', 85 pounds steam, built by Variety Iron Works, Cleveland, OH. The steambarge H.C. Schnoor was built for the package freight trade. She was assigned official number 95386. Master of the steambarge H. C. Schnoor was Captain F. O. Burrows for the 1874-86 seasons with Eugene Passano, for the 1884 season, and John F. Walsh, for the 1884-86 seasons as chief engineers. In September 1875, the steambarge H. C. Schnoor, with the schooner barges Belle Cash (U31348) and J. W. Hanaford (U46229) in tow, went ashore on Long Point, Lake Erie, Released, In June 1877, the H. C. Schnoor went hard aground on middle ground near Sturgeon Bay, WI. Released.

April 1878, ownership of the steambarge *H. C. Schnoor* was changed to F. O. Burrows, Cleveland. Her enrollment tonnage was increased to 414 grt in April 1880. In June 1882, her enrollment tonnage was decreased to 244 grt. In November 1882, the steambarge *H. C. Schnoor* went ashore off Alcona, MI, Lake Huron.

Ownership of the steambarge *H. C. Schnoor* was changed in May 1887 to: W.H. Herbert, 1/3 share;

and J.B. Hart, 1/3 share both from Sandusky, OH; and E.D. Chilson, 1/3 share, Lorain, OH

In October 1887, ownership of the steambarge *H. C. Schnoor* was transferred to W.H. Herbert, J.B. Hart, George A. Esch, and E.H. Marsh, all from Sandusky, OH.

April 1892, ownership of the steambarge *H. C. Schnoor* was transferred to: W.H. Herbert, George A. Esch, and E.H. Marsh, all from Sandusky, OH.

In September 1892, ownership of the steambarge *H. C. Schnoor* was changed to: John Kaercher, ½ share and Henry Lay, ½ share, both from Sandusky, OH.

December 1893, ownership of the steambarge *H. C. Schnoor* was transferred to John Kaercher, Sandusky, OH.

In September 1892, ownership of the steambarge *H. C. Schnoor* was transferred to John Kaercher, Sandusky, OH; and William Duff, Port Clinton, OH.

In April 1896, ownership of the steambarge *H. C. Schnoor* was transferred to Henry Lay, and Carl G. Nielsen, both from Sandusky, OH; and William Duff, Port Clinton, OH.

In April 1897, ownership of the steambarge *H. C. Schnoor* was transferred to Carl G. Nielsen, Sandusky, OH.

In December 1897, ownership of the steambarge *H. C. Schnoor* was changed to Charles L. Wagner, Sandusky, OH.

In April 1898, ownership of the steambarge *H. C. Schnoor* was changed to M. Francis Griffin, Toledo, OH.

In June 1898, ownership of the steambarge *H. C. Schnoor* was changed to Jackson Deneal, Toledo, OH.

In June 1899, ownership of the steambarge *H. C. Schnoor* was changed to Joseph N. Ricard, Toledo, OH.

The steambarge *H. C. Schnoor* was dismantled at Toledo, OH and abandoned in June 1899. Final enrollment was surrendered at Toledo, OH and endorsed "vessel abandoned", June 30, 1899.

Sparta: Thomas Quayle & Sons, at Cleveland, OH, built a wooden propeller for the Cleveland Transportation Co. to be used in the bulk freight trade. Enrolled at Cleveland, May 1874, her measures were: 202.0' x 34.0' x 18.0'; 1017.19 grt, 741.33 net. She was

assigned official number 115242. She was powered by a High-Pressure engine, 32" bore x 36" stroke, 485 horsepower, built by Globe Iron Works, Cleveland, Ohio in 1874. Steam was generated by a firebox boiler, 11' x 16', 95 pounds steam, built by Schofield, Port Huron, MI. Master of the propeller Sparta for the 1874 - 1882 seasons was Captain George Perry McKay with Henry F. McGinnis as chief engineer in 1882. In July 1874, the propeller *Sparta* went aground in South River at Chicago, IL. Damage loss set at \$800. In October 1877, the propeller *Sparta*, arriving from Milwaukee, WI with 40,000 bushels, caught fire in the boiler room while unloading wheat at Buffalo, NY. 12,000 bushels were damaged as well as the ship. The damage loss to the Sparta was set at \$1,000. In October 1883, bound down, the propeller Sparta went hard aground in Lake George, Saint Mary's River. She required to be lightered to be released. In June 1884, bound up, laden with coal, the propeller Sparta went hard aground on Saint Clair Flats. Lake St. Clair. Released. In July of that same year, the propeller Sparta went hard aground at Point Iroquois, Lake Superior. Released. Loss due to hull damage set at \$740. Master of the propeller Sparta for the 1885 season was Captain William Cummings with Henry F. McGinnis as chief engineer. During Winter layup, 1885-86, the propeller Sparta was rebuilt in Cleveland, OH, 202.25' X 34' X 17.42'; 1017.19 grt - 819.77 net. In June 1886, bound up, laden with coal, the propeller Sparta went ashore at Manitou Island, Lake Michigan. Released.

Ownership of the propeller *Sparta* was changed in March 1889 to Orient Transportation Co., Rockport, OH.

Ownership of the propeller *Sparta* was changed in April 1893 to Mills Transportation Co., Marysville, MI.

In June 1895, ownership of the propeller Sparta was transferred to Nelson Mills, 3/6 share; B. Mills, 2/6 share, both from Marysville, MI; and Alvin Neal, 1/6 share, from Port Huron, MI. Masters of the propeller Sparta were: Captain Alexander Johnson for the 1895-98 seasons, Captain A. Johnson for the 1899 season, and Captain Alexander Johnston for the 1900-01 season.

In June 1901, ownership of the propeller Sparta was transferred to Port Huron Navigation Co. Master for the 1902-03 seasons was Captain Alexander Johnson with H. Smith as chief engineer. In August 1904, while lying at the Ohio Central coal dock at Toledo, OH, fire was discovered around the engine room of the propeller *Sparta*. The fire was confined to the boat's stern, which was burned almost to the water's edge. Loss estimated at \$20,000. The propeller *Sparta* was laid up in the Dell River at Marine City, MI in 1904. In May 1907, the propeller *Sparta* was removed from the Dell River and rebuilt at Keynon's shipyard. Port Huron, Mi. She received a new Steeple compound engine; 22", 42" bore x 30" stroke, 500 horsepower, built by Dry Dock Engine Works, Detroit, MI in 1872 and a firebox boiler, 11' x 15', 100 pounds steam, built by A.H. Schofield, Port Huron, MI. Her measures were: 202' X 34' X 13.16'; 925 grt - 654 net. In July of that same year, she was renamed *David W. Mills*, US 115242. Her masters and chief engineers were: Captain Daniel Warwick seasons:1907, 1910-12, & 1914-16; Captain George L. Cottrell, 1917-18; with Ephraim J. Moore, 1907-08; Frank Cadotte, 1909-10; George Revueu, 1911-12; George Masters, 1914-15; and Philip Canton, 1917-18 as chief engineers.

In May 1918, ownership of the propeller *David W. Mills* was changed to Border Steamship Co., Buffalo, NY.

In April 1919, ownership of the propeller *David W. Mills* was changed to Frank J. Peterson, Buffalo, NY. her master for the 1919 season was Captain Matthew Lanagan with Thomas Burke as chief engineer.

In June 1919, ownership of the propeller *David W. Mills* was transferred to Mills Transportation Co., Mentor, OH. In August 1919, the propeller *David W. Mills*, blinded by the smoke from a forest fire in Northwest Ontario, stranded on Ford Shoal, near Oswego, NY, Lake Ontario. No lives lost. The hulk of the propeller *David W. Mills*, aground on Ford Shoal, Lake Ontario, was torn to pieces by wave action during storms.

Starrucca: At Buffalo, NY, the Union Dry Dock Co., built a wooden, propeller for the Union Steamboat Co., Buffalo, to be used in the package freight trade with a carrying capacity of 1,400 tons. Enrolled at Buffalo, April 1875, her measures were: 218.25' x 34.42' x 13.5': 1313.09 grt, 1155.20 net. She was powered by a Fore & Aft Compound engine, 28", 56" bore x 36" stroke. Builder unknown. She was assigned official number 115381. Master of the package freighter Starrucca for the 1875 season was Captain Moore with John Maybury as first engineer. In 1878, the package freighter Starrucca collided with the barge Ana Smith. The following month, she struck the Menomonee, MI drawbridge. Her master for the 1882 & 83 seasons was Captain Walter Robinson. In the fall of 1885, she towed the schooner barges Jeremiah Godfrey (76211) & the J. H. Rutter (75504) in the grain trade. In October 1885, the package freighter Starrucca, laden with a

cargo of flour, became disabled in mid Lake Superior. Repaired. Property loss set at \$2,000.

In April 1887, the package freighter *Starrucca* was operated by Lake Superior Transit Company. Her master of the package freighter *Starrucca* was Captain Charles S. Furey. In November 1888, the package freighter *Starrucca* received steel arches to prevent hogging. In June 1888, the package freighter *Starrucca* went aground on Burlingame Reef, Lake Superior. Released. In November of that same year, up bound from Buffalo, for Duluth, MN, the package freighter *Starrucca*, laden with general merchandise including railroad wheels, was driven on a bar off Deer Park, MI, Lake Superior during an icy gale. No lives lost.

Final enrollment for the propeller *Starrucca* was surrendered at Buffalo, NY, October 20, 1889, and endorsed "wrecked".

J. W. Steinhoff: H. A. Jenking, at Wallaceburg, Ont., built a wooden propeller for John W. Steinhoff, Chatham, Ont. to be used for the passenger, package freight trade on the Thames River and ran between Chatham, Ont., Windsor, Ont. and Detroit, MI. Enrolled at Chatham. Ont. in May 1874. her measures were recorded as: 123.2' x 24.1' x 8.7'; 182.0 grt, 124.0 net. She was assigned official number C71101. The propeller J. W. Steinhoff was powered by a High-Pressure engine, 18' bore x 18" stroke, built by R. Parkinson, Chatham, Ont. in 1874. In 1877, the propeller J. W. Steinhoff was rebuilt and remeasured: 311.80 grt, 208.55 net. Her master for the 1879 season was Captain Adam Steinhoff. August 1879, while moored at the bottom of Griswold Street. Detroit, the propeller J. W. Steinhoff caught fire in the middle of the night and was heavily damaged along with the Hutchings dock and warehouse. Two lives were lost. The burned-out wreck of the propeller J. W. Steinhoff was towed to Walkerville, Ont. and then to Chatham, Ont, where she was rebuilt.

Ownership of the propeller *J. W. Steinhoff* was changed in April 1881, to Weston, Northwood & Ronald, Chatham, Ont.

In April 1886, ownership of the propeller *J. W. Steinhoff* was changed to R. G. Barrett, Toronto, Ont. She was licensed, in 1886, to carry up to 155 passengers. In an effort to revive the Niagara International Ferry Co. the *J. W. Steinhoff* was placed on the Buffalo, NY - Fort Erie, Ont. run. Her master of the propeller *J. W. Steinhoff*, for the 1888 season was Captain Pollock with Frederick Henning listed as chief engineer for the 1894 & 95 seasons. In 1889, the *J. W. Steinhoff* had her engine compounded: 18", 32" bore x 128" stroke. In 1894, she had her hurricane deck extended forward and the pilot house moved nearer the bow.

May 1896, ownership of the propeller *J. W. Steinhoff* was changed to Victoria Park Co., Toronto, Ont. and she was renamed *Queen City*. Her chief engineers were Andrew Haas, Jr. in 1897, and Frederick Henning in 1898.

Ownership of the propeller *Queen City* was changed in July 1901, to Toronto Navigation Company and she was renamed *Canada*. Her master for the 1901 & 1902 seasons was Captain Charles LaPierre.

In March 1902, ownership of the propeller *Canada* was changed to A. C. Neff & D. M. Burkhart.

In April 1903.ownership of the propeller *Canada* was changed to the Owen Sound & Georgian Bay Park & Summer Resort Co., Ltd. Her master for the 1907 season was Captain W. J. Corbett, with E. J. Riley as chief engineer for 1907 & 1908.

In 1908, ownership of the propeller *Canada* was changed to Chew & Doty, Midland, Ont. Her master was Captain H. Hagen.

Final enrollment for the propeller *Canada* was surrendered at Owen Sound, Ont. November 29, 1909 and endorsed "dismantled". The hull of the propeller *Canada* was scuttled in 1911 at Colpoy's Bay, Ont.

V. Swain: William J. Miller, at Cleveland, OH, built a wooden steambarge for B. L. Pennington et al, also from Cleveland, OH. The steambarge was enrolled in May 1874, and her measures recorded as: 187.42' x 33.42' x 13.42'; 985.89 grt, 816.0 net. Her official number was 25888. The steambarge *V. Swain* was powered by a High-Pressure engine, 27" bore x 30" stroke, built by Globe Iron Works. Steam was generated by a tubular boiler, 6.5' x 17', 90 pounds steam. She was built for the bulk freight "iron ore" trade. In May 1874, the steambarge *V. Swain* went aground at the St. Clair Flats, Lake St. Clair. Released. During winter layup, 1876/77, the steambarge *V. Swain* was repaired and had her cabins changed. Her enrollment tonnage was change, in April 1877, at

Cleveland, OH: 955.35 grt, 816.92 net. In August 1883, she went aground at Bar Point, Lake Erie. Released. Chief engineers for the steambarge *V. Swain:* for the 1885-86 season was James W. Baker, with John F. Walsh in 1888, William Carrick in 1889, and John Broderick for the 1891 season. In October 1893, the *V. Swain* caught fire and burned while at Cleveland, OH.

In 1896, ownership of the steambarge *V. Swain* was changed to J. C. Gilchrist, et al. and he had her rebuilt from the 1893 fire.

In March 1897, ownership of the steambarge V. Swain was transferred to Lake Shore Transit Co., Cleveland, OH. Masters of the steambarge V. Swain were Captain Herbert H. Parsons, 1899 season; Captain Fred H. Reid for the 1900 season; Captain J. B. Lyons for the 1901 season; Captain George S. White for the 1902 season; and Captain B. J. Lyons for the 1903. Her chief engineers were George Reid in 1899; J. W. Douglass for the 1900, 1902 season; A. W. Carlisle for the 1901 season: and D. Conway for the 1903 season. In July 1903, the steambarge V. Swain, laden with iron ore, settled on a rock at Tow Harbors, MN, Lake Superior, and sank in 20 feet of water. She was raised and went into dry dock for repairs. The steambarge V. Swain was laid up in 1903, at Superior, WI.

In 1906, ownership of the steambarge *V*. *Swain* was changed to James E. Sheehan, Detroit, MI. The following year, in November, the steambarge *V*. *Swain* caught fire and burned to a total loss, while laid up at Superior, WI,

Final enrollment of the steambarge *V. Swain* was surrendered at Cleveland, OH, March 31, 1908, and endorsed "abandoned".

Transit: In 1874, R. Davis at Clayton, NY, built a wooden, car ferry, for D. Purkis, Prescott, Ont., for ferrying rail cars across the St. Lawrence River between Prescott, Ont. and Ogdensburgh, NY. She was assigned official number C71098 and her measures were: 108.0' x 21.0' x 6.0'; 141.0 grt, 93.0 net. She was powered by an two engines, 13" bore x 14" stroke, built by King & Co., Oswego, NY. In 1882, the car ferry Transit was rebuilt at Power's Yard, Kingston, receiving new frames, keelson, bilge streaks, hanging knees, stern post and several new streaks. She was sheeted with iron below her load line for breaking ice. The cost of the rebuilt was \$5,000. March 1883, the rail car ferry Transit broke down while running between Ogdensburg and Prescott. Repaired. In September 1886, a pontoon was built at Davis Yard for R. McCarthy & Co., Prescott, and was used to lift the rail car ferry Transit stern out of the water so that her shaft could be removed and a new wheel installed. In August 1890, the propeller *Transit*, with an excursion party from Cardinal, Ont., burst a pipe and became disabled near Three Sisters Island, Niagara River. She was towed to Brockville, Ont. for repairs.

In 1895, ownership of the propeller *Transit* was changed to Canadian Pacific Car & Passenger Transfer Co., Prescott, Ont. In 1898, the enrollment for the propeller *Transit* was closed and endorsed as "retired".

D. R. Van Allen: Chisholm & Simpson, at Chatham, Ont., built a wooden steambarge for D. R. Allen et al, also from Chatham. Enrolled at Chatham, in September 1874, her measures were recorded as: 136.0' x 26.0' x 10.0'; 260.0 grt, 178.0 net. Assigned official number C71104. She was powered by a High-Pressure engine, 23" bore x 24" stroke, 87 horsepower, built by Hyslop & Ronald, Chatham, Ont. The steambarge D. R. Van Allen was built for the bulk freight lumber & grain trade. Her master of the steambarge D. R. Van Allen for the 1874 season was Captain Simpson. In September of 1874, bound for Montreal, the steambarge D. R. Van Allen, laden with 50,000 feet of lumber from Chatham for Oshawa, Ont. 12,000 bushels of wheat from Toledo for Montreal and wool for Toronto, broke her engine on the St. Lawrence River, east of Cornwall, Ont. Repaired. In December of that same year, the steambarge went aground on Fighting Island, Detroit River. Released. For the 1875 season, the steambarge D. R. Van Allen ran in the Western Express Line with 10 other propellers between Montreal and all ports west. In May of 1875, due to low water, the steambarge D. R. Van Allen went ashore above Brockville, Ont. For the 1876 season, the steambarge D. R. Van Allen was awarded the government contract to deliver lighthouse supplies to the upper lakes. Her master for the 1877 season was Captain Crowley. She was re- measured in August 1877 and her enrollment update: 317.95 grt, 216.31 net. In May 1879. the steambarge D. R. Van Allen, while coming down the Thames River, struck a log with her wheel and broke part of one bucket off. Repaired at Wolverine Dry-dock.

In February 1881, ownership of the steambarge *D. R. Van Allen* was changed to George Wright & Sons, Port Hope, Ont. In September of 1881, she was contracted to haul grain from Duluth to Kingston. She carried her first lot of 75,000 bushels that month. In June 1885, the steambarge *D. R. Van Allen*, laden with deals for Quebec, went aground on the sandy bottom in Water's Bay, near Brockville, Ont.,

St. Lawrence River. Released. In June of the following year, the steambarge *D. R. Van Allen* was towed to Detroit, MI from below Amherstburg, Ont., Detroit River, with her machinery broken. Repaired.

Ownership of the steambarge *D. R. Van Allen* was changed, in April 1887, to Herrick & Emerick, Oswego, NY (Oswego Manufacturing Co., Chatham, Ont.) Her master for the 1891 to 1900 seasons was Captain Joseph Thompson, Oswego, NY.

Ownership of the steambarge *D. R. Van Allen* was changed in 1892, to Samuel Rogers, Toronto, Ont. She was rebuilt during the winter of 1899/1900 and had her engine compounded: 16", 28" bore x 24" stroke, steeple.

In May 1900, ownership of the steambarge *D*. *R. Van Allen* was changed to the Toronto Electric Light Co. In April 1901, the steambarge received a new Clyde boiler, 10' x 11', 125 pounds steam, built by Polson Iron Works, Toronto. Coming down the Welland Canal during the night of May 01, 1901, the steambarge *D. R. Van Allen* struck the foot gates of Lock Six, carrying away all four gates.

In December 1902, ownership of the steambarge *D. R. Van Allen* was changed to S. Payette, Penetanguishene, Ont. Her master for the 1903 season was Captain William Van Vlack..

In 1909, ownership of the steambarge *D. R. Van Allen* was changed to Lake Coast Navigation Co., (W. C. Thompson, Port Arthur, Ont.). Her masters of the steambarge *D. R. Van Allen* were: 1910 - Captain J. A. Montgomery; 1911 & 12 - Captain W. C. Thompson. Her chief engineers were: L. Williams in 1910; and Louis Williams for 1911-12. In July 1913, the steambarge *D. R. Van Allen* went ashore near Cape Croker, Georgian Bay. Released.

Ownership of the steambarge *D. R. Van Allen* was changed to James Whalen, Canada Towing & Wrecking Co., Ltd. In 1915.

In 1917, ownership of the steambarge *D. R. Van Allen* was changed to Norman M. Paterson & Sons, Ltd., Port William, Ont. where she was used for grain transport between elevators. In 1920, the steambarge *D. R. Van Allen* was condemned at Thunder Bay, Ont., Lake Superior. She was broken up at Port Arthur, Ont.

Final enrollment was surrendered, December 17, 1923, endorsed "condemned".

Waverly: Built as a wooden package freighter at the Union Dry Dock Co., Buffalo, NY for the Union Steamboat Co., Buffalo, NY, she was enrolled at Buffalo in June 1874. Her measures recorded were: 191.16' x 33.58' x 13.33'; 1104.02 grt. The *Waverly* was assigned official number 80432. She was powered by a Steeple Compound engine, 22", 44" bore x 36" stroke, 450 horse power, built by Cuyahoga Iron Works, Cleveland, Ohio. Steam was generated by a 9' x 18' boiler, built by Philip Riter Boiler Works, Buffalo, NY. The Waverly was built for the package freight trade between Buffalo, NY & Chicago, IL and had a capacity for 1,200 tons. Her master for the 1874 season was Captain J. W. Moore. In March 1876, her enrollment tonnage was changed to 989.76 net. In November 1874, the propeller Waverly broke her wheel at Buffalo, NY. Repaired. In October 1878, the propeller Waverly ran down and sank the scow Two Katies (24980) off Whitefish Bay, MI, Lake Michigan. Her masters were: 1879 - Captain Pratt; 1879-81 -Captain Walter Robinson. In May 1881, the propeller Waverly collided with the schooner Joseph Paige (75593) in thick weather on Lake Huron. In November of the following year, the propeller Waverly collided with the steambarge Robert Wallace (110518) on Lake Michigan, and in May 1883, she collided with a Chicago pier during heavy weather. Her chief engineers for the 1886 season were: Francis Harringer and Newton W. Penny. In August 1886, bound up, laden with a cargo of general merchandise, the propeller Waverly ran hard aground at the head of Bois Blanc Island, Lake Huron. Released, but her stern post was bent and the rudder useless, she put in for repairs.

In November 1886, ownership of the propeller *Waverly* was changed to Frank W. Gilchrist, 1/3 share, Alpena, MI; Thomas Maytham, 1/3 share, Buffalo, NY; et al. The propeller *Waverly* was cut down to a single decker and converted for the bulk freight trade. (1886)

Ownership of the propeller *Waverly* was transferred, in March 1887, to Thomas Maytham, 4/12 shares, Buffalo, NY; Frank W. Gilchrist, 3/12 shares, Alpena, MI; J.C. Gilchrist, 3/12 shares, Vermilion, OH; et al. In November 1887, the propeller *Waverly* went ashore in hazy weather, on South Manitou Island, MI, Lake Michigan. She released herself. Later that same month, the propeller *Waverly*, in hazy weather mistook the bright lights of Whitefish Bay for the North Point light and went on the rocks off Whitefish Bay, Milwaukee, WI, Lake Michigan. Released and repaired, the property loss was set at: hull \$10,000, cargo \$50,000. In 1888, the propeller *Waverly* received a new firebox boiler, 9.5' x 17', built by M. Riter Boiler Works, Buffalo, NY. Her chief engineers for the propeller *Waverly* were Wilkins Osgood in 1891, and Charles T. Martin for the 1892-94 seasons. In October 1891, the propeller *Waverly*, bound from Duluth, MN for Kingston, ONT, laden with 85,000 bushels of grain, went aground on the Carruthers Shoal, Kingston harbor, Lake Ontario. Released.

Ownership of the propeller *Waverly* was transferred, in March 1894, to J.C. Gilchrist, 7/12, Vermilion, OH; et al. Masters of the propeller *Waverly* were Captain William P. Benham, 1895 season; and Captain Frank Henrich, 1896 season with A. J. Millett as chief engineer in 1895. In November 1896, down bound for South Chicago, IL, the propeller *Waverly*, laden with ore, went ashore on Biddle's Point, MI, Straits of Mackinac, Lake Michigan. She was released after jettisoning 300 tons of iron ore. She was taken to St. Ignace, MI for repairs.

Ownership of the propeller Waverly was transferred to Lake Shore Transit Co., Vermilion, OH, in March 1897. Masters of the propeller *Waverly* were: 1899 - Captain Frank H. Ott and Captain G. W. Case with Dibble as chief engineer; 1900 – Captain Hubert G. Haybarger with Charles T. Martin as chief engineer; 1901 - Captain D. Kirby and Captain Frank H. Ott with John McGregor as chief engineers. July 1901, while attempting to release the steamer Venus, the propeller Waverly went ashore on False Presque Isle, Lake Huron. Released. Masters of the propeller *Waverly* were: 1902 - Captain James Laird and 1902-03 -Captain Henry Bennett, with Charles T. Martin, 1902-03, as chief engineer. Bound up from Buffalo, NY for Milwaukee, WI, laden with a cargo of coal and towing the schooner barge W. S. Crosthwaite (U80344), the propeller Waverly, on July 22, 1903, was struck and sank by the steel steamer Turret Court (C106609), about five miles southeast of Harbor Beach. MI. Lake Huron. No lives lost.

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

<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.

<u>Old Style Tonnage</u>: 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 he 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, which can be packed and moved by manpower from dock to hold and reverse.

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

<u>Ship Inventory</u>: 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.)