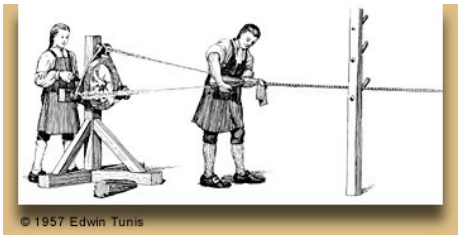


While one man cranks the spinner, the one holding the "top" walks backwards as the rope is twisted. From Edwin Tunis, *The Young United States, 1783 to 1830* (New York: World Publishing Co., 1969). Used by permission of the estate of Edwin Tunis.

Ropewalk

The Newsletter for
Shipwrights of Ohio – September 2024

Our Next Meeting: October 19, 2024;
Hybrid - Classroom "C"
"Weathering" by John Boeck

Table of Contents

September

Fall is here. Cool mornings, gentle rain and a promise of a beautiful few months before winter returns and a number of you can get back in your shops and build. Sure! First, we have to get rid of the drought.

We are all busy, family, work, other commitments, and we find that ship modeling has slipped down the priority list. Saturdays hybrid meeting attendance again, proved that to be true. In attendance, via zoom, were: Jeff joined us from Idaho, Bill from Cleveland, Jason from Strongsville, Mike from Lancaster and Steve from Oxford; and in classroom C, at the library, we hosted Loran, Lee, Bob, Cliff and Ric.

My observation is that there is a different dynamic between the group in-person and those on Zoom. In-person meeting seem livelier, while zoom participants are more observers. It is also harder, when presenting to interact with those on the edge of the screen, and easier for those in person.

If you can, plan to make an in-person meeting before the winter sets in. See you in October.

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. Till next month. Your editor.

Reminder Announcements

Society for Nautical Research

The Society, out of the UK, has posted their Fall 2024 lecture series, all available via Zoom.

- Oct 9th – The Spanish ship of the line.
- Oct 24th – *HMS Victory's* – Managing archaeological data.
- Nov. 6th – "Tempest; the Royal Navy and the Age of Revolution.
- Nov. 20th – "The Horrible Peace; British Veterans & the end of the Napoleonic Wars.
- Dec. 4th – Rewriting Women into Maritime History
- December 18th – William Shaw Lindsay; Victorian Entrepreneur.

The 2025 series subjects are:

- January: The past, present and future of shipbuilding.
- February: Archaeological exploration of historical shipwrecks in the Irish sea.
- March: Diversity at sea: How sharing historical research can make a difference to present and future of the maritime industry and public understanding.

Membership in the Society is required to attend their lecture series: Interested?
https://snr.org.uk/become-a-member/

£45* / year ($59.24 - US $)
Full access to over 2000 articles
Quarterly hard copy of *The Mariner's Mirror*
Topmasts Newsletters
Full Forum Access
Membership card for free access and discounts

Nautical Research Guild.

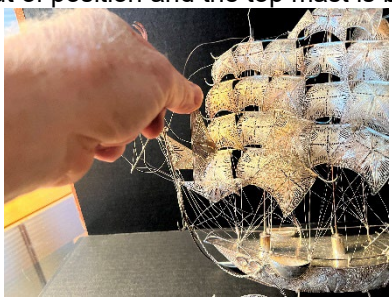
We have renewed our "Charter Club" status for 2025.

This allows us to provide information, on the NRG web site, about the "Shipwrights of Ohio", including modeling updates, club events, post meeting updates and pre-meeting announcements.

Ship Model Repair:

You have received notice on this request from the owner who lives in Wadsworth, Ohio.

The model is made from metal with silk sails, and with the rigging made from fine wire. It was damaged in shipping. Owner states the damage is to the bow and bowsprit, some snarled rigging, a few sails are out of position and the top mast is bent.



The photo above, gives you a perspective of scale. That is a hand and a thumb shown with the model. In our discussion during the meeting, the opinion was the repairs would need someone who has experience in the metal and the jewelry craft area rather than ship modeling.

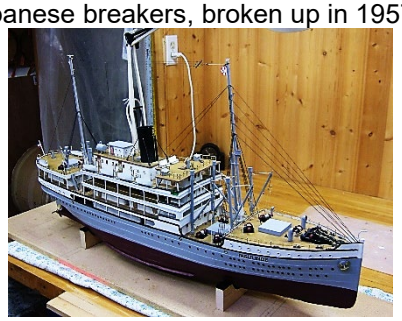
I have not had anyone who is willing to do the repairs. I do plan to contact the owner and suggest he contact someone in the jewelry craft locally.

Presentation:

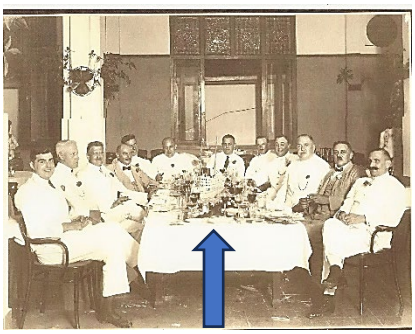
Scratch Building "Ultimate": by William Nyberg

In Chapter 1, on Page 1 of the "Ship Modeler's Shop Notes" Howard Chapelle wrote, in 1951, an article for the Nautical Research Journal "The Ship Model That Should Not Be Built". "In short – do not attempt to model any ship for which you do not have at least the hull lines and outboard appearance from reliable sources.

Scratch Building is defined as: "Reproduction or fabrication of a prototype or fantasy part with no drawing or directions". As an example, in 2013, I contracted to do a restoration on a model of the *D.S.S. Insulinde.* Her stats were: *D.S.S. Insulinde* Length OD = 478.4; Beam = 57.1'; Depth = 28' 11". Gross Tonnage: 9,615, Net Tonnage: 5,949. Launched October 13, 1913; built by: Kon. Maats. De Schelde, Flushing. Passenger, cargo freight. Final Disposition: sold to Japanese breakers, broken up in 1957.



D.S.S. Insulinde was a Dutch passenger/package freighter; that sailed Rotterdam, Holland to Jakarta. To celebrate her 100 round trip journey a local craftsman was asked to build a model of the *Insulinde*, roughly in the late 1930's.



The photo above was taken at the celebration, of the 100 round trip journey to Jakarta. The men sitting around the table are the ships officers. If you look carefully, the model sits in the center of the table. An example of Chapelle's caution, the model was built by local craftsman, without plans and from what he could see from the dock, when the ship was in port at Jakarta. The first thing I did was try to determine the scale. What I found out was the scale is inconsistent across the model

But, following is the rest of the story. Someone at that table kept the model and built a dry dock that the model was displayed in. It showed up at Scotts Antique Mall, Atlanta in early 2000. It was sold for $2,000 to a doctor who was returning from Floridia and who lived and worked at the Cleveland Clinic.

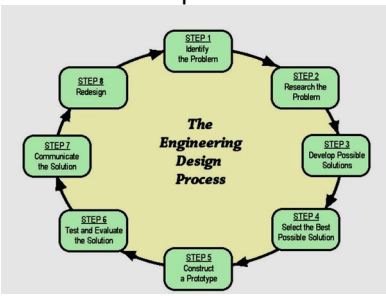
The owner at the time I did the restoration, had purchased the model from the Doctors estate for

$2000 and requested that it be repaired. After 278 hours of repairs over a two-year period, she was complete. The owner, was facing high medical cost for his wife and turned the model over to me for my time (278 hours) and materials ($273). At $10 an hour, the model was valued at over $3,000 + his original cost to purchase at $2,000.

I in turn, not wanting the model, donated it to the "Steamship Historical Society: Warwick, RI and wrote off my expenses as a donation on taxes.

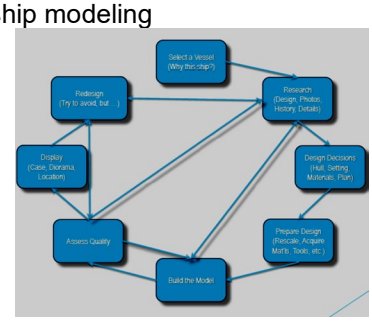
Another definition of "Scratch Building" is: "Model Ship building without starting from a kit". That is/was the topic for my presentation.

But first, let us review the Engineering Design Process from last month's presentation.



The steps are:
Step 1: Identify the problem
Step 2: Research the problem
Step 3: Develop possible solutions
Step 4: Select the best possible solution
Step 5: Construct a model
Step 6: test and evaluate the solution
Step 7: Communicate the solution (Commit to it)
Step 8: Redesign

Below is the original engineering design process applied to ship modeling



Steps 6, 7, 8 are a continues process during the models build.

Step 1, The problem: I have wanted to build a model of the Great Lakes bulk freighter. The only existing kit I had found was: A.J. Fishers "*Huron Brave*". But first some background:

In early 2000, Jim Krouse & I had spent three+ years, doing research for the Great Lakes Historical Society identifying 1623 sets of plans donated from American Ship Building and her predecessors, 1867 – 1920 (Wood, Iron & Steel). I checked the Excel spreadsheet I had from that volunteer work for the vessel. I also checked both the BGSU Vessel Database & Alpena County Public Library, Thunder Bay Research Collection which includes the C. Patrick Labadie Collection.

Step 2: Research There was not or ever has been a Great Lakes bulk freighter, American or Canadian named the *Huron Brave*. I had the plans from A.J. Fishers for their *Huron Brave* as well as the WPA (Works Progress Admin) plans for the *Sidney O. Neff.* To use the Fishers plans as a reference, I first had to determine if there was a bulk carrier that met the same dimensions of length, breath, & depth of the *Huron Brave.*

I had also worked on a project for the GLHS, identifying all wooden steamers built on the Great Lakes – American & Canadian, at or over 100 grt. Using my worksheets, I sorted the database of 1628 vessel for propellers & steambarges only, eliminating tugs, towboats, ferry's, sidewheel and stern wheel steamers. I then sorted the remaining 728 vessels by length. A.J. Fishers bulk carrier dimensions were: 175' x 36' x 12' at 1/8" scale. That reduced the 728 vessels to 48 that fell in the 170' to 179' length.

Why sort looking at length? A history background: In 1870, Elihu M. Peck, built the *R.J. Hackett* at Cleveland and standardized hull shape. He also moved the pilot house forward and the engine room to the stern. Hull shape for bulk carriers differed by length, breadth and depth. If you found one hull at the length at 175', all the other hulls would have a similar shape.

Step 3: Develop a solution. Fishers bulk carrier was 175' length, and out of the 48 vessels in the 170 – 179 length there were three at that length:

Oscoda: (US155012) 1878; 175' x 32' x 13'; 529.7 grt – photo available, no plans
R.G. Peters: (US110424) 1880; 175.34 x 31' x 10.5'; 386 grt – no photo, no plans
Margaret Olwill: (US91953) 1887, 175.7' x 35' x 10.2'; 542 grt – photo available, no plans

You will notice that none of the three had plans, but two had photos.

Step 4: Select the best possible solution: I chose the Margaret Olwill, both because of the photo and her history.

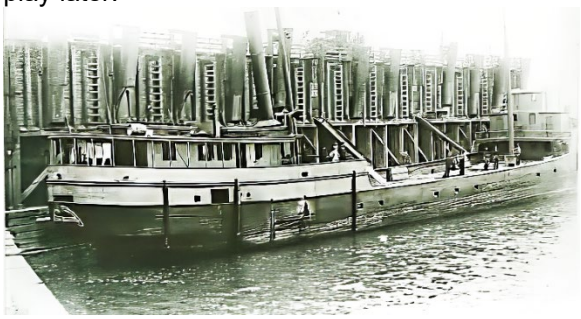
History:

- Built in 1887, by Henry Root, Lorain, OH, for L.P. & J.A. Smith, Cleveland, as a propeller for the lumber trade.
- Rebuilt in 1890 as propeller, 2 decks, 3 masts, 177.3' x 34.7' x 17', 925.33 gross tons
- Rebuilt in 1893 as steambarge for the stone trade. 1 deck, 3 masts, 175.6' x 34.7' x 10.2', 554.94 grt, 493 net tons
- Worked in the Kelly Island stone trade
- Owner: L.P. & J.A. Smith, had contract for suppling stone to build the breakwater at the Cleveland Harbor

Side question: what is the difference between GRT vs NET?

GRT – gross tonnage is the internal capacity of a vessel measured in units of 100 cubic feet
NET – net registered tonnage is the internal capacity of a vessel, excluding the space occupied by boilers, engines, shaft allies, chain lockers, personal quarters and other spaces not available to carry cargo or passengers.

Remember the net tonnage of the Olwill. It comes in play later.

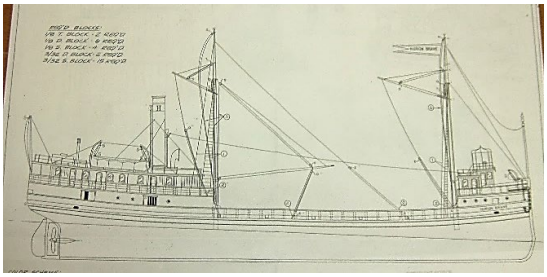


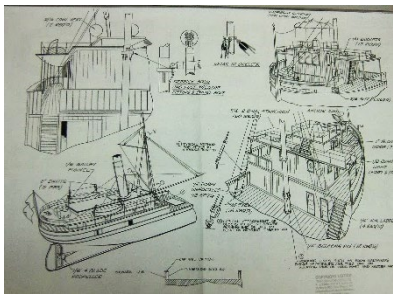
- Above is the only known photo, I found.
- Photo taken on June 28th, 1899, just prior to loading stone at the Kellys Island stone quarry, northeast dockage.
- Five crew on the cargo deck – can be used as a reference. Average height in 1890's was 5' 8"
- Captain John Brown, wife, son and friend are standing on the forward edge of the stern deck
- Problems:
  - Limited view of bow cabin and forward bow deck
  - No view of stern cabin from forward
  - Not clear how the two masts are rigged

<u>Step 5</u>: Construction Solution:

What did I have to work with?

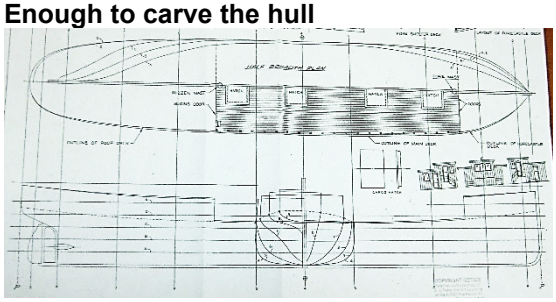
- Hull dimensions of the *Huron Brave*
  - Body Plan and sections for wooden propellers and steambarges differ only by length, breadth, depth.
  - Scale of plans is 1:96, scale I planned to build the model at.
  - *Huron Brave & Margaret Olwill* dimensions are close
  - Upper works: Pilot house & stern cabin differ, had photo showing both.
  - Average height in the late 1890's is 5' 8". Used as a reference
  - Had purchased the plans for the *Huron Brave*, from A, J, Fisher, to be used as a reference.
  - Shown are a side view of the vessel and some detailed sections



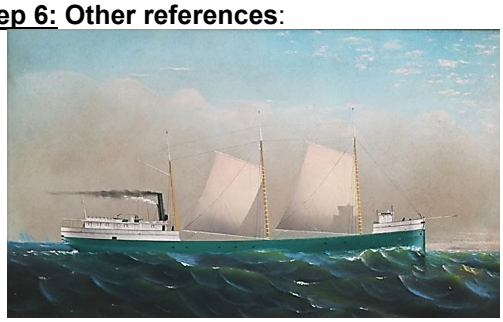


Most important was at the bottom below – **Profile view,** Middle of profile: **Body Plan,** Top: **Half Breath Plan.**

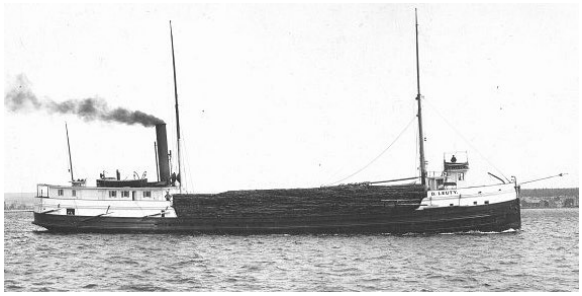
Enough to carve the hull



<u>Step 6:</u> Other references:

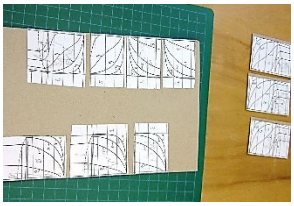


V.D. Nickerson (1844 – 1910) painting of the *Margaret Olwill*, dated 1888 (pre-stone trade). Painting is prior to the 1890 and 1893 rebuilds



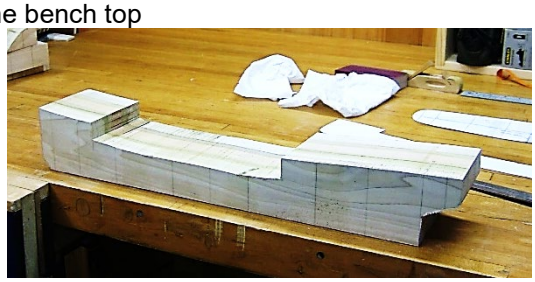
D. Leuty, 1882 steam barge, built by Henry Root at Lorain. lumber hooker, owned by L.P & J.A. Root

<u>Step 5</u>: Construction Hull

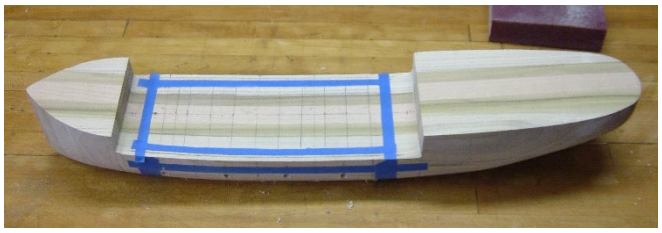


Preparing the templates from the Body Plan

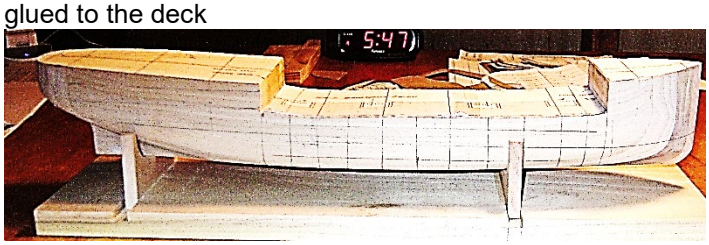
Preparing the hull blank, Profile & Hull Breath patterns on the bench top



Profile cut out

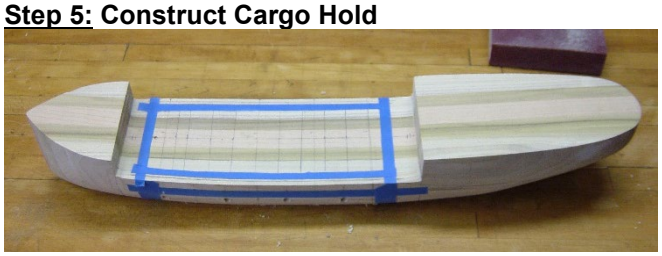


Bow & Stern pattern cut out. Note: the half-breath plan glued to the deck



Hull Shaped – showing guide lines drawn on the hull

<u>Step 5:</u> Construct Cargo Hold

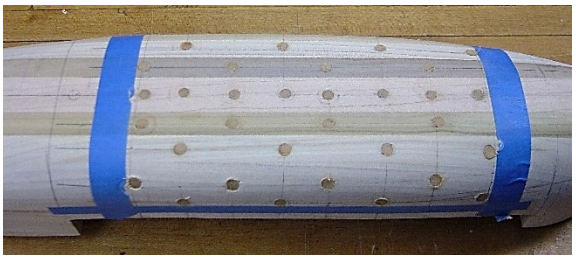


Laying out the cargo hold dimensions and taping area to be removed.

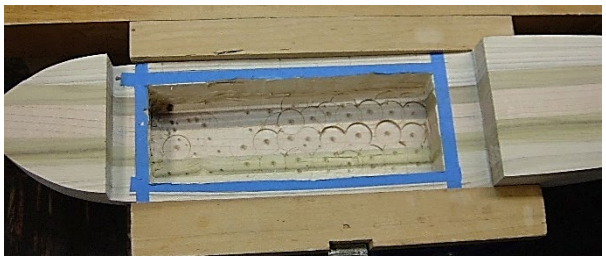
<u>Issue:</u> how to prevent breaking through the model's hull while carving out interior?

<u>Solution</u>: The following procedure was featured in a *Forecastle Report* about three years ago

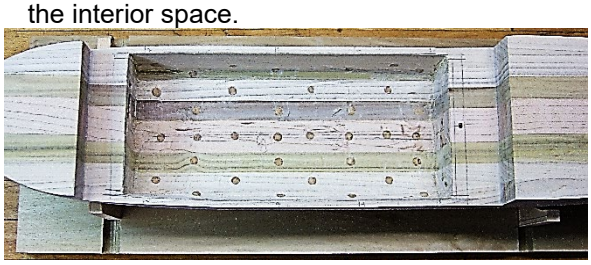
- Determine hull thickness required to maintain the strength of the hull – my choice – Hull: 3/8" thick.
- Drill 3/8" holes 3/8" depth, on the outside of the hull within the area marked for the hold, both on the bottom and sides of the hull.



- Glue in dowels. As you carve out the hold, the ends of the dowels will indicate hull thickness..

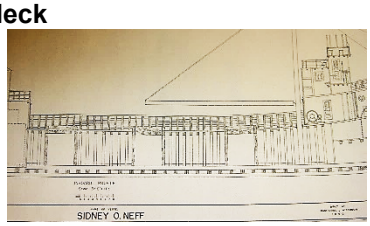


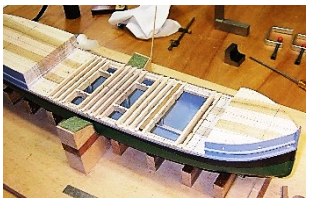
- Using a drill press with a Forstner bit, carve out the interior space.

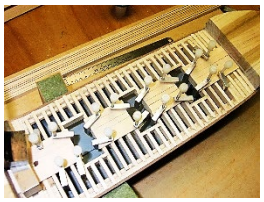


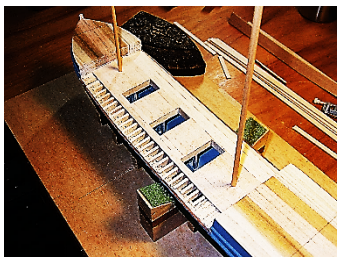
- Cargo hold carved out. Using a softer wood then the hardwood dowels & setting the dowels grain at 90 degrees from the hull grain. You will know when you have reached the depth (thickness of the ships hold sides.

Step 5: Building the deck









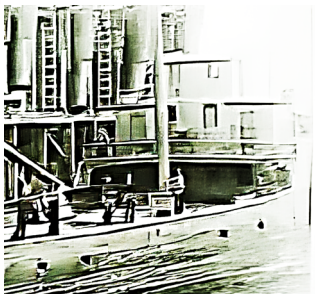
- UL - Interior of cargo hold painted & and support bulkhead plus deck beams installed fore and aft

- UR - Deck supports using inboard – profile pattern from the steambarge Sidney O. Neff. Scale reduced from 3/16” to 1/8”
- ML - Deck has three hatch openings and all deck beams are supported so she can carry cargo on her deck
- MR - Cargo hold opening framed and decking started. Note the deck beams installed on the solid portion of the hull.
- LM - **Deck almost finished**. Cargo holds framed, Mast holes drilled and masts set in temporarily

Step 5: Finishing the hull

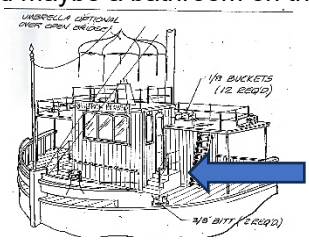
- Install keel and rudder post. Note propeller shaft
- Hull painted, propeller installed,
- Adding propeller and rudder

Step 5: Bow pilot house



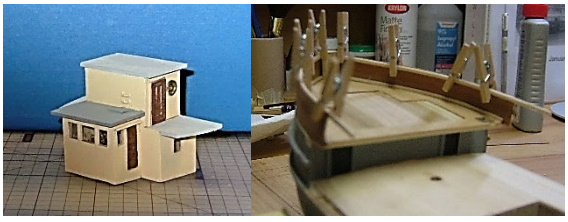
What is known

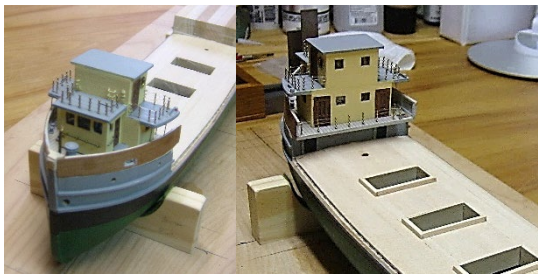
- Bow deck overhangs the main or cargo deck
- Walkway behind the cabin with two doors opening to the deck
- Two windows on the 1st level
- Second level has two windows implying cabin on the port and maybe a bathroom on the starboard



Compared to other steam barges

- Notice pilot house sits higher than cabin behind it
- Three steps from bow deck to door of pilot house. Pilot house and cabin behind are not at the same level





UL - Assembled bow cabin
UR - Bow deck planked with bulwarks being added
LL - Pilot house and cabin structure installed
LR - Completed pilot house and cabins

Step 5: Stern Deck Cabin

- UL - Stern cabin modeled out of styrene to check fit
- UR - Stern cabin structure
- LL - Stern cabin with skylight and stack in place; Stern cabin roof supports and bulwark being installed
- LR - View from the stern looking forward

- Stern deck cabin finished looking forward. Lifeboat, vents, water barrel, buckets and Charlie Noble installed.

Step 5 Masting & Rigging

Photo above, of the *Margaret Olwill* show two masts, without gaff rigged for sail and what appears to be a

cargo boom off the second (aft) mast. Photo also shows the loading chutes (two). Masting and rigging is in process

Did you remember the 543 net tons? The captain was ordered, by the owners, to load 600 tons. 200 ton of limestone in the holds and 400 ton on the deck.

The *Margaret Olwill* loaded her cargo and at midnight, June 28th she left for Cleveland, planning to arrive off Cleveland at 8 AM, June 29th, 1899.

Halfway there, off Lorain, OH, she ran into a Nor-easter storm. In attempting to reach the safe harbor at Lorain, she turned to starboard, her steering chain broke and she broached and sank. (steering chains run from the pilot house down the to main deck level, then aft, attached to the roof of the main deck ,back to the steering room in the stern.)

Of the crew and passengers (12), there were 4 survivors. It was also thought that another individual joined the crew and was working his way from the island to Cleveland.

2017 the wreck was found 8 miles off Lorain in 50 feet of water. CLUE (Cleveland Underwater Explorers, Inc.) had been searching for her for 28 years.

Ships on Deck

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

HMS Endurance

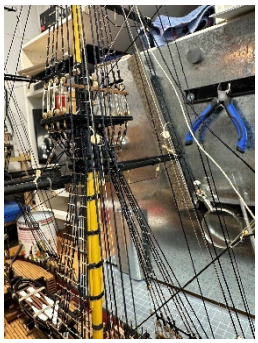
Jeff Northup

Jeff wrote: Progress continues-slowly! Masts and bowsprit are set and most shrouds are up. Working on the ratlines. Hope to be done by Christmas.

HMS Pegasus

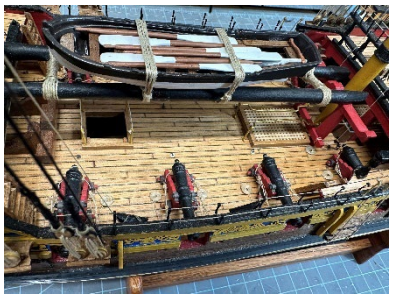
Jason Smith

Main sail yard jeers and truss (fore jeers and Truss look the same)

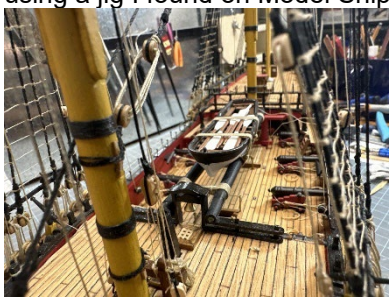


Fore and Main topsail yard halyards (they look the same)

Mizzen gaff and yards in place



I decided to change out my rope coils from tighter ones using a jig I found on Model Ship World

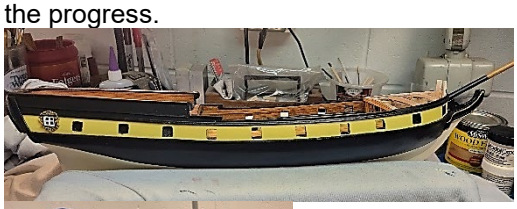


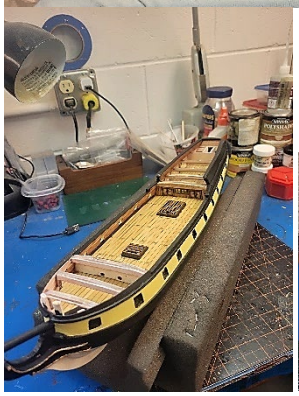
View looking aft. The old cannon rope coils were still in place here

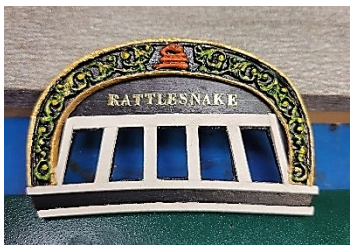
Rattlesnake

Phil Tempelton

Phil wrote: Tinkering here and there on a ship. *Rattlesnake*. Been building all of my own fittings so long process. Didn't care for the cast pieces. Winter is my ship building time. Attached are a few pictures of the progress.







HMS Sphinx

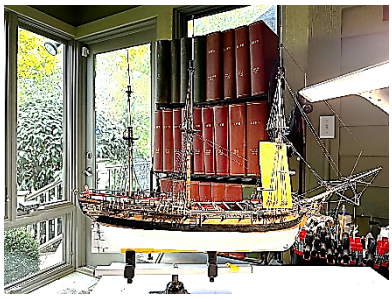
Cliff Mitchell

It has taken me weeks to complete the making of the following:

1. Stern Ensign Staff
2. Mizzen Topgallant Yard
3. Mizzen gaff
4. Mizzen Topgallant Yard
5. Mizzen Topsail Yard
6. Crossjack Yard
7. Main Topgallant Yard
8. Fore Topgallant Yard
9. Fore Topsail Yard
10. Main Topsail Yard
11. Fore Yard
12. Main Yard

Each of these was fitted with appropriate hardware including single, double and fiddle blocks according to the plans. These were painted black. Stunsail Booms were left natural. Stirrups and footropes were also added. The picture above shows these elements.

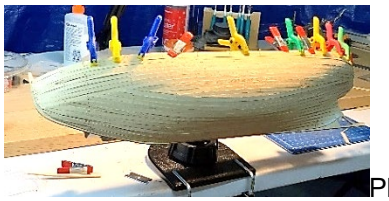
At present Cliff is working on the ratlines. (next photo)



St. Canute

Rob Washburn

The following photos are of the finished model of the Billings Boats towboat *St. Canute*.


Planking


Building the deck


Deck house


Side view of deck


Finished model

Other Notes: "Stuff", Tugs & Things

Nautical Terms

Puddening: Fibers of old rope packed between spars or used as a fender

Pulling: (of an oar, as used at sea) using an oar for propulsion of a boat where each person (of several) uses one oar. This contrasts with rowing (at sea), where each person uses two oars, one each side of the boat.

Punt: A flat-bottomed boat with a square-cut bow designed for use in small rivers or other shallow water and typically propelled by pushing against the riverbed with a pole. In this way it differs from a gondola, which is propelled by an oar.

Purchase: A mechanical method of increasing force, such as a tackle or lever.

Purser: The person who buys, stores, and sells all stores on board ships, including victuals, rum, and tobacco. Originally a private merchant, latterly a warrant officer.

Nautical Terms Wikipedia

Tugs: Great Lakes

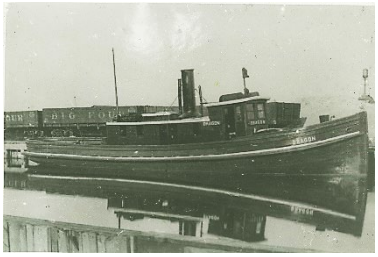
Kittie Downs, 1890

The *Kittie Downs*, was built at Ashtabula, OH by James Laird, for William Downs, also from Ashtabula. She was enrolled, August 2, 1890 at Cleveland, and her measures were: 63.2' x 16.4' x 6.1'; 34 grt, 16 net. She was powered by a HPNC engine, 18" bore x 19" stroke, 225 hp, 135 rpm, built by Sutton Brothers, Buffalo. She was equipped with a firebox boiler, 5'8" x 11', 150 psi, built by C.M. Riter, Buffalo. Her official number was: 161001.

She was owned by Ashtabula Tug Co. in 1896, which was incorporated into the Great Lakes Towing Co. in 1899. In 1913, her owner was listed as The Breakwater Co., Cleveland. She was dismantled and abandoned in 1917.

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

Dragon, 1866



The tug *Dragon* was built at Buffalo, by Vans & Notter, for Christian of Erie, PA. Her measures were 62.6' x 14.7' x 6'; 32.9 grt. She was assigned official number 6103. When enrolled at Buffalo in 1866.

In November 1867, she caught fire and burned while at Buffalo. In May 1869, the *Dragon* went aground on Bird Island reef. In August of that year, she was damaged in a collision with the bark *Ogarita* (19190) near Buffalo. Two lives lost. In September of 1869, with two barges in tow, she went ashore on Windmill Point, Lake Erie. In December 1872, she was holed in the bow by ice, near Erie, PA.

Ownership of the tug *Dragon* was changed in 1875, to W. Downs et al, Ashtabula. She received a new boiler in 1875. In April, 1881, the tug *Dragon* sank at her dock at Cleveland. Raised.

Ownership of the tug *Dragon*, was changed to D.D. Johnson, Port Huron. In 1913, she was sold Canadian and her enrollment closed.

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

Presentation Schedule:

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

Events & Dates to Note:

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

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

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

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

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

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

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

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

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

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

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

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- **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

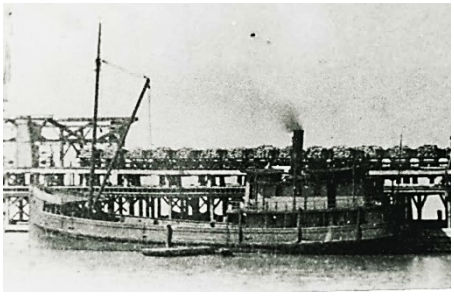
Researched & Written
by William E. Nyberg

1873-A

Active: In 1873, George Brulette, at Montreal, Que., built a wooden towboat for the Montreal Transportation Company. Enrolled at Montreal, April 13, 1892, her measures were recorded as:129.30' x 24.20' x 10.90'; 301.70grt, 189.7 net. She was powered by a low-pressure engine, 34" bore x 32" stroke, 200 hp, built by J.B. Angier, Montreal, in 1865. Steam was generated by a firebox boiler, 10' x 130', 73 psi, built by Kingston Machine Works. At her enrollment she was assigned official Canadian number 100186. The towboat was given the name *Active,* and was built for towing on the St. Lawrence River, from Kingston, Ont and east on the St. Lawrence River. Her master for the 1873 season was Captain James Murray. In May 1874, the tug *Active* had her wheel replaced to suit her for towing on the lakes. In May 1879, she caught fire between her coal bunker and the boiler. The fire was quickly extinguished and the damage was assessed as slight. Her master for the 1880 season was Captain Simonson, with Captain Thomas Gaskin completing the 1880 season and master for the 1881 season. In 1882, the propeller tug *Active* received a new boiler and she was reported as a 368 gross ton, lake & river screw-tug. Her master for the 1883 season was Captain Simmonds. In May of 1883, she was dry docked for repairs at the Power's Shipyard, Kingston, Ont. where she had to be pulled off the ways when the carriage became de-tracked. In August of that year, the tug *Active* broke her piston while towing the schooner barges *John Gaskin* (C80668) and *Glenora* (C80699) out of Port Dalhousie, Ont, Lake Ontario and in September she broke her wheel off Port Stanley, Ont. on Lake Erie. Her master for the 1884 & 85 seasons was Captain James McMaugh with C. Gutette as chief engineer.

During the winter layup of 1891, the tug *Active* was rebuilt at Kingston, Ont at a cost of $16,000. Her master for the 1899 season was Captain Edward Bennett and in 1900 her master was Captain John Gaskin with John Hamilton as chief engineer.

Enrollment for the tug *Active* was surrendered on November 01, 1911 and endorsed as "broken up".

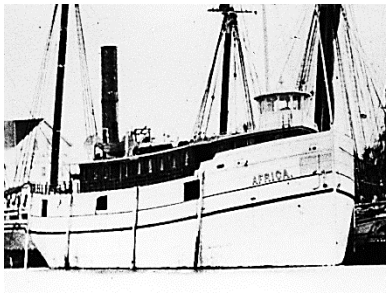


Adventure: George Dickson at Dog Lake, Ontario, built a wooden propeller steambarge for John Delaney, Kingston, to be used on the Rideau Canal and in the Bay of Quinte. Her initial enrollment was issued at Kingston, Ont. July 28, 1873, and her measures were recorded as:102.8' x 23.3' x 6.9'; 156.1 grt, 108.0 net. She was assigned official Canadian number 88575. Her master for the 1873 season was Captain John Delaney, Kingston, Ont. In August of that year, the steambarge *Adventure,* on her return trip to Kingston from Ottawa via the Rideau Canal, struck the gate at No. 1 Lock at Kingston Mills, badly breaking the gate. Traffic on the canal was interrupted for eight to ten days for repairs. Her master in 1874 was Captain James O'Brian.

In 1877, ownership of the steambarge *Adventure* was changed to J. Carruthers, Kingston, Ont. The steambarge *Adventure* was readmeasured and her tonnage changed in May 1877, to: 160.19 grt, 103.06 net. In October 1878, the steambarge *Adventure* ran into and demolished the swing bridge on the Rideau Canal at Cornwall. She was towing a heavily laden barge and had too much way on her to stop.

In 1882, ownership of the steambarge *Adventure* was changed to A. Gunn & Co. The steambarge *Adventure* was rebuilt at the Marine Railway, Kingston, Ont. Her master for the 1882 season was Captain William Corrigan and the steambarge *Adventure* would be used in the grain trade on the Rideau Canal and Bay of Quinte. In September of that year, she went aground on Nigger Island, near Trenton, Ont. In October, the steambarge *Adventure* ran upon a snag near Washburn's Cut on the Rideau Canal and knocked a hole in her bow, filled and sank. She was pumped out and repaired. In April, 1884, the steambarge *Adventure* sank to the bottom at Gunn's dock when the ice broke. She was raised and sent on the Portsmouth marine railway to K. & M. F. Co.'s shipyard, Portsmouth, Ont for repairs. In July of that same year, the *Adventure* was struck while moored at Portsmouth when the schooners *Bangalore* and *Hyderabad* tore their moorings during a gale. She had her bulwarks and stern injured. In 1885, the steambarge *Adventure* was rebuilt as a barge. Her enrollment measures were recorded as: 103.00' x 22.60' x 7.00'; 141.71 grt, 128.93 net. Her master for the 1885 season was Captain Pregent. In October 1885, the barge *Adventure,* under tow of the tug *Traveller,*(C72569), parted her line and struck a rock and sank in the Gallops Rapids, St. Lawrence River, near Cardinal, ONT. No lives lost.

Final registration for the barge *Adventure* was surrendered at Kingston, ONT, December 11, 1885 and endorsed as "struck a rock and sank".



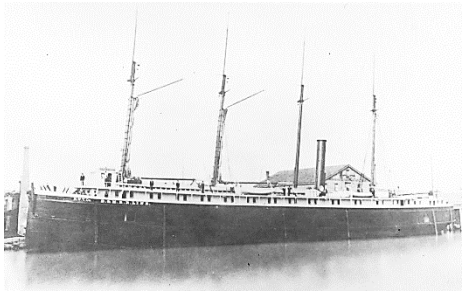
Africa: William Power & Co., at Kingston, Ontario, built a wooden propeller for Patterson & Proctor, Kingston, for the passenger, package freight trade, sailing for the Merchants' Line. She was enrolled at Kingston, May 12, 1873, and her measures recorded as: 135.7' x 25.4' x 12.0'; 352 1094/3500 tons (old style). The package freight steamer was powered by a low pressure engine: 36" bore x 30" stroke, 35 HP, built by Davidson & Doran, Kingston, in 1872. The engine was originally installed in the Canadian propeller *China* (built, burned and sank in 1872). She was assigned official Canadian enrollment number 92285. Her master for the 1873 to 1882 seasons was Captain Patterson. The package freighter *Africa* operated between Montreal, and Chicago, from 1874 to 1882.In June 1877, she was readmeasured according to 40th Victoria, Chapter 19: 652.02 grt, 403.59 net. In July 1880. The *Africa* struck and sank the Canadian tug *Wadsworth* (69523) in the Welland Canal. Damages $50. During winter layup 1881, she underwent extensive repairs, adding twelve staterooms and having her machinery improved. For the 1881 season, she ran between Montreal and Cleveland. She could accommodate 45 passengers. The cost of repairs and alterations was set at $1,800. Her master for the 1883 season was Captain La France and the propeller ran from Owen Sound to Georgian Bay ports and the Sault Ste. Marie.

In April 1886, while the propeller *Africa,* in winter quarters at Owen Sound, caught fire from a stove amidships and burned to the main deck. Her partial loss was set at $10,918.

In 1886, ownership of the propeller *Africa* was changed to Mrs. A. R. Christie, Toronto, Ont. The *Africa* was rebuilt as a steambarge, removal of her passenger accommodations, by J. Simpson, Owen Sound. She was re-registered in May 1888, with measures: 148.00' x 26.00' x 12.50'; 482.39 grt, 328.15 net and had her official number, 69523 assigned. For the 1889 season, her master was Captain Andrew Thompson. In October 1889, the propeller *Africa* went aground on the rocks off Clapperton Island, North Bay, Lake Huron. In 1891, her engine was compounded. Her master for the 1895 season was Captain H. P. Larsen.

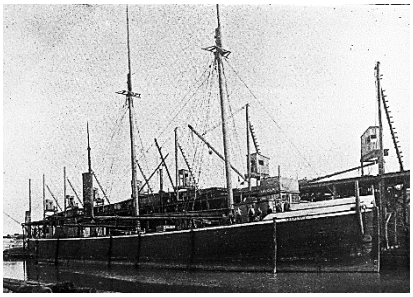
In October 1895, the propeller *Africa,* bound from Ashtabula, OH for Owen Sound, laden with 1,270 tons of coal, and towing schooner barge *Severn,* struck a reef and foundered off Cove Island in the main channel into Georgian Bay during a gale. The *Africa* went aground on a ledge off Bradley Harbor, north of Stokes Bay, 15 Miles south of Cove Island Light, Georgian Bay, Lake Huron and was pounded to pieces. Thirteen lives were lost from the *Africa.* The schooner *Severn* (Canadian 1872) was let go by the captain of the *Africa* and blown out of control on Lake Michigan during the night

Final registration for the propeller *Africa* was surrendered at Owen Sound, December 08, 1896 and endorsed "foundered".



Amazon: Alvin A. Turner, built a wooden propeller at the Crosthwaite's Yard, Trenton, MI for the Crosthwaite's Yard to be used in the bulk freight trade. Her first enrollment was at Detroit with noted measures of: 230.8' x 34.4' x 14.2'; 1406.0 grt. It was also noted that she had three masts and was schooner rigged. She was powered by an engine: 20". 40" bore X 36" stroke, built Cuyahoga Iron Works, Cleveland and steam was generated by boilers: 7 ½' x 17'. Assigned official number 105252. In November 1873, the *Amazon* with the schooners, *E.T. Judd* (8938) & *C.B. Jones* (125159) bound up, Cleveland to Chicago, all went aground in a storm on North Manitou Island, Lake Michigan and the *Amazon* was declared a total loss. In June 1874, the vessels were released and towed to Detroit, to be repaired and returned to service.

For the 1874 season, the propeller *Amazon* was chartered to Detroit and Milwaukee Railroad to run between Grand Haven Mi and Milwaukee WI. In 1875, the *Amazon* stranded near Presque Isle, MI, Lake Huron. She was released and repaired. Also in 1875, the *Amazon* had a full-length cabin added for passenger accommodations. Her master for the 1879 season was Captain James Fraser. In October of 1879, with a cargo of 900 tons of flour, pork and sundries and 68 passengers, the propeller *Amazon* struck the south pier at Grand Haven, and became a total loss. No lives lost.



Argonaut: Launched in April 12, 1873 as hull #00025 at the Detroit Dry Dock Company as an unrigged double decked wooden barge (no engine) for the bulk freight trade. Enrolled at Detroit with measures: 213.0’ x 35.16’ x 12.33’; 1118.59 grt, 984.62 net. She was assigned official number 29755. The wooden barge *Argonaut* was advertised for sale May 17, 1873. The *Argonaut* and *Annie Vought* were towed by the twin screw steamer *Inter Ocean* (100046).

In April 1874, ownership of the barge *Argonaut* was changed to E.G. Merrick, Detroit MI; et. al.

Ownership of the barge *Argonaut* was changed in March 1879, to Escanaba & Lake Michigan Transportation Co. St Clair, MI. During winter layup 1880/81, the barge *Argonaut* was converted to a propeller and fitted with the starboard engine from *Inter Ocean*; steeple compound engine. 22”, 42” bore x 30” stroke, originally built by Dry Dock Engine Work; plus, she received a firebox boiler 9’ x 15.1’. In November 1853, caught in a storm on Lake Michigan, the propeller *Argonaut* had the fires in her boilers quenched when water flooded her fire hold. The crew cut through her bulkheads to release the water into her cargo hold, the fires were restarted and steam made.

Ownership of the propeller *Argonaut* was changed, in July 1884, to John E. Mills, 1/4, Port Huron; Charles H. Carleton, 1/4, Cleveland; et al. In that same month, the *Argonaut* went aground in Lake Michigan. Released. (07/24/1884)

The chief engineer of the propeller *Argonaut* in 1895 was William Eddy. Master of the *Argonaut* in 1901 to 1905 was Captain George J. Bennett with E. R. Kelly as chief engineer in 1903.

In April 1902, ownership of the propeller *Argonaut* was changed to Nelson Mills, 5/12, Marysville MI; John E. Mills, 3/12, Port Huron; et al.

October 1906, the propeller *Argonaut* caught fire and burned at her dock while her engines were being removed at Marysville, MI, St Clair River. Vessel was a total loss.

Armenia: In 1873, J. Simpson & D. Chisholm, Chatham, Ontario, built a wooden propeller for the Malcolmson Brothers, Hamilton, Ont. to be used in the bulk freight trade. She was powered by a low-pressure engine, 34" bore x 34" stroke, built by Thomas Wilson Iron Works, Dundas, Ont. Steam was generated by a steam scotch boiler, 11'6" x 10'9", 78 pounds steam. In August 1876, the propeller *Armenia* ran aground near Bath, Ont, North Channel, Lake Ontario. Released.

In 1877, ownership of the propeller *Armenia* was changed at auction of the estate of John Malcolmson, to J. H. G. Hagarty. The initial enrollment for the propeller *Armenia* was issued at Hamilton, Ont. in June 1877. Her measures were: 136.0’ x 23.0’ x 11.0’; 601.0 grt. She was assigned official number 74388. In November 1878, during a heavy gale on Lake Ontario, the propeller *Armenia* went ashore on the head of Amherst Island, St. Lawrence River. Released. Master of the propeller *Armenia* for the 1879 to 1885 seasons was Captain J. C. Hume with Samuel Malcolmson as chief engineer in 1880. In June 1879, bound down, Toronto to Ogdensburgh, NY, the propeller *Armenia,* laden with corn, went ashore in dense fog near Salmon Point Lighthouse. Released. In January 1880, the *Armenia* was disabled near False Duck Islands, Lake Ontario. In October of the same year, the propeller *Armenia* ran on the shoal at Gananoque, Ont, St. Lawrence River. Released. In the same month, leaving Kingston for Toronto, the propeller *Armenia* had her boiler tubes give out near the Ducks. Towed in for repairs. During winter layup of 1883, the propeller *Armenia* was rebuilt and lengthened by Muir Bros. Pt. Dalhousie, Ont. Her enrollment measures were updated to: 172’ x 23.1’ x 11'; 925 grt, 594 net. In May of that year, while waiting to unload her cargo of barley, from Toronto, at Fulton elevator, Chicago, the *Armenia* was struck by the schooner *Driver* (US6201) under tow of the tug *Chicago* (US126009), near the Kinzie Street railway bridge, Chicago River. Her superstructure was damaged.

In 1886, ownership of the propeller *Armenia* was changed to J. C. Hume, Whitby, Ont.

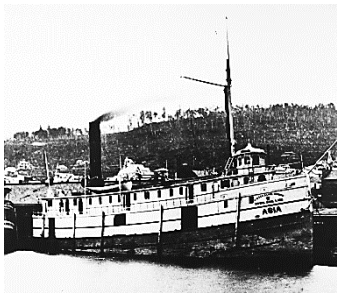
In 1888, ownership of the propeller *Armenia* was changed to Calvin Company, Garden Island. The *Armenia* was rebuilt as a steambarge for the timber trade and her registered measures were updated to: 172’ x 25’ x 12'; 643 grt, 403 net. Her master for the 1888 & 1889 seasons was Captain G. O’Brien. In September 1889, the steambarge *Armenia* was struck

by the steel bulk freighter *Pontiac* (US150476) on Lake St. Clair and sank in fifteen feet of water. She was raised and repaired. Master of the steambarge for the 1899 season was Captain Charles E. Coons with W. Cunningham as chief engineer.

Ownership of the steambarge *Armenia* was changed in 1900 to Deseronto Navigation Co. Masters of the steambarge *Armenia* were: 1900, Captain S. Anderson with Thomas O'Neill as chief engineer for 1900 and 1901; 1901. Captain G. Arthurs; 1904, Captain William Skillen with John Jamison as chief engineer; 1905 with Captain Albert Barnhart with Michael Toppings as chief engineer; 1906, Captain Albert Baunhart with John Jameson as chief engineers.

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

The steambarge *Armenia* was dismantled in 1908.



Asia: Melancthon Simpson, St. Catharines, Ontario, built a wooden propeller for the passenger, package freight trade. Her owner was J. C. Graham, et al, St. Catharines, Ont. She was enrolled at St. Catharines, Ont., October, 1873 and her measures recorded: 136.0' x 23.33' x 11.0'; 364.0 grt. She was equipped with a fore-and-aft compound engine, builder unknown. She was intended for the grain trade between Windsor, Ont. To Duluth, MN. She cost $35,000 and could carry up to 16,000 bushels of grain. In October 1873, bound down from Chicago for Montreal, laden with wheat, she struck a rock while entering the harbor at Port Colborne, Ont., causing her to leak badly and then sink. She was raised and repaired. In April 1874, the *Asia* collided with the schooner *E. H. Rutherford* (C77694) at Port Dalhousie, Ont. Loss $300. In May of that year, she went aground at the St. Clair Flats, St. Clair River. She required to be lightered to be released. Loss $400. In July of that year, the propeller *Asia* broke her rudder in the Welland Canal. Loss $200.

In 1875, ownership of the propeller *Asia* was changed to Campbell, Neelon & Graham, St. Catharine, Ont. June 1875, down bound on Lake Huron, the propeller *Asia* broke her steam pipe and required a tow from Goderich to Port Sarnia, Ont for repairs. September 1875, bound up, the propeller *Asia* and the down bound barkentine *Levi Rawson* (US 14615) collided off Fort Gratiot, on the St. Clair River. Loss to the *Rawson* was $2,000.

In 1877, ownership of the propeller *Asia* was changed to J. G. Graham, St. Catharines, Ont. She was operated by Northwest Transportation Co. Her master for the 1879 season was Captain McNaugh. In July 1881, down bound, the propeller *Asia*, laden with 14,000 bushels of No. 1 hard wheat, collided with the schooner *Helena* (US95276), in the flats on Lake George, Sault Ste. Marie, the former sinking with her stern underwater. She was raised and repaired at Sarnia, Ont. For the 1882 season, her master was Captain John W. Savage with John McDougall as chief engineer. In September of that year, the propeller *Asia*, carrying livestock and lumber camp supplies, and with 125 passengers aboard, foundered during a storm on Georgian Bay, off Lonely Island and Bying Inlet, Lake Huron. One hundred twenty-three lives lost.

David Ballentine: The wooden propeller *David Ballentine* was enrolled at Port Huron, MI, on May 27, 1873. Built as a steambarge by Thomas Boston, Bangor, MI, for the Ballentine Brothers of Bay City, MI, her measures were: 221.0' x 37.0' x 13.42'; 972.0grt, 595.0 net. She was equipped with three-masts and a steeple compound engine, 20", 37" bore x 36" stroke, built by David Bell Engine Works, Buffalo, NY, in 1873 and rated at 500 horsepower. The *David Ballentine* was built as steam barge for the bulk freight trade, and at enrollment was assigned official number 6768.

In July 1873, laden with a cargo of corn, the steambarge *David Ballentine* struck a rock at the entrance to the Detroit River, Lake St. Clair. She required to be dry docked for repairs. In November of that same year, laden with a cargo of corn consigned to J. D. Sawyer, the steambarge *David Ballentine* went aground at Lime Kiln Reef, in the Detroit River. She was dry docked again for repairs.

Ownership of the vessel was changed in May 1875, to J.M. Ballentine et al, Bay City, MI. In July 1875, while proceeding along the north branch of the Chicago River, the steambarge *David Ballentine* collided with the Erie Street Bridge and knocked off her stern. She was dry docked for repairs. In September of that same year, the steambarge *David Ballentine* went aground on the St. Clair Flats, St. Clair River. In October 1875, down bound from Chicago for Buffalo, the steambarge *David Ballentine,* laden with a cargo of grain and with the schooner barges *Alexander B. Moore* (US105241) and *H. W. Sage* (US95414) in tow,

broke the crosshead of her engine off Racine, WI. She had to return to Chicago for repairs.

Ownership of the vessel was changed in April 1877, to R. D. Fitzgerald, et al, Milwaukee. For the 1887 season, master of the steambarge *David Ballentine* was Captain Henry Warwick. In June 1887, up-bound from Buffalo with a cargo of coal, the steambarge *David Ballentine* went aground at the southwest head of the Detroit River. Her cargo was lightered to release her.

Ownership of the steambarge *David Ballentine* was changed to William Mack, Cleveland in March 1888. Master of the steambarge *David Ballentine* for the 1888 season was Captain William S. Mack with William Cavanaugh as chief engineer. In October 1889, laden with coal, the steambarge *David Ballentine* with her consort barge *Ironton* (US100122) in tow, went aground, and broke in two, on the Grosse Point Ledge, Chicago, IL, Lake Michigan during strong NE winds and heavy seas. During the winter layup season of 1889/90, she was released and dry docked for repairs and rebuilding at Wolf & Davidson's yard, Milwaukee, WI. Her enrollment was updated in June 1890: 2 decks, 3 masts, 204.0' x 36.2' x 21.7'; 1394.96 grt, 1206.17 net. She also received a Scotch boiler, 11' x 13', 120 psi, built by the Cleveland Ship Building Co. She was renamed *Quito.*

In June 1890, ownership of the steambarge *Quito* was changed to William J. White, et al, West Cleveland, OH.

Masters of the steambarge *Quito* for the 1890 season were Captain Ira B. Mansfield followed by Captain Richard Call.

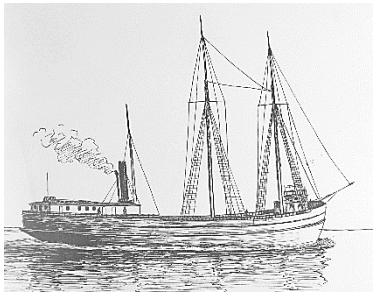
In September 1897, her enrollment tonnage at Cleveland, OH was changed to: 1372 grt, 1099 net.

In July 1898, ownership of the steambarge *Quito* was changed to J. C. Gilchrist, Vermillion, OH.

In April, 1899, ownership of the steambarge *Quito* was changed to Tonawanda Iron & Steel Co., North Tonawanda, NY

In January 1900, ownership of the steambarge *Quito* was changed to James Corrigan, Wickliffe, OH. In April 1890, her ownership was recorded as Wickliffe Transportation Company, James Corrigan, President. Her master for the 1902 season was Captain Hugh S. Cody with B. Henry as chief engineer. November 1902, bound down from Escanaba, MI for Cleveland, laden with a cargo of iron ore, the steambarge *Quito* missed the piers at Lorain, OH during a furious gale and stranded 1,400 feet from shore about 100 feet east of the piers. She was abandoned as a constructive total loss. No Lives lost.

Final enrollment surrendered at Cleveland, OH, January 30, 1903.



William H. Barnum: Launched April 5, 1873, the wooden steambarge *William H. Barnum* was built at Detroit, by James M. Jones for the bulk freight trade. Her initial owners were: Alvin C. Burt, ½; and Herman C. Ralph, ½, both from Detroit. First enrollment issued at Detroit, on May 30, 1873. Her recorded measures were: 218.50' x 34.66' x 16.16'; 937.15 grt. She was powered by a 600-horsepower engine, built by Frontier Iron Works, Detroit. Steam generated by a 7'4" x 17' boiler, built Detroit Locomotive Works. Her official number was 80342. In Julu 1874, bound up, the steambarge *William H. Barnum,* with the schooner *Thomas W. Ferry* (US-1872) in tow, collided with the, down bound bark *S. V. R. Watson* (US22284) off Point Au Pelee, Ont, Lake Erie. The *Watson* with 32,500 bu. corn sank in 28 feet of water. In September of that same year, the steambarge *William H. Barnum* collided with the schooner *Exile* (US8183) in the St. Clair River.

April 1878, ownership of the steambarge *William H. Barnum* was changed to: Robert P. Fitzgerald, 1/4, and John Plankinton, 1/4, both from Milwaukee, and Philip D. Armour, 1/4, and J.F. Armour, 1/4, both from Chicago. In April 1879, she was readmeasured at Detroit and her enrollment updated to: 218.5' x 34.66' x 21.33; 1212.5 grt, 1058.68 net. For the 1880/81 season, George Waterbury was chief engineer on the steambarge *William H. Barnum.* September 1881, bound down for Buffalo with a cargo of corn, the steambarge *William H. Barnum* went aground at Point Abino, Lake Erie during heavy smoke. Released.

April 1883, ownership transfer was recorded as: Robert P. Fitzgerald, ¼; and John Plankinton, ¼ both from Milwaukee; and Philip D. Armour, ¼, and Carrie L. Armour, ¼, both from Chicago.

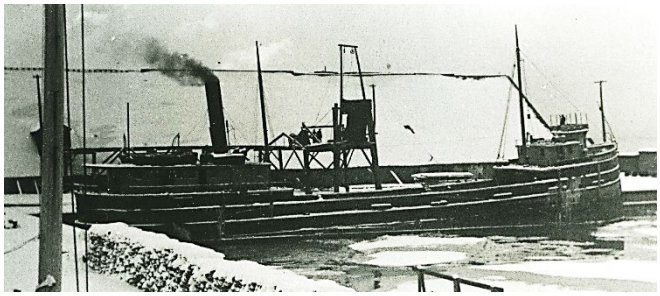
Ownership of the steambarge *William H. Barnum* was recorded changed in March 1889 to: James J.H. Brown, Joseph B Rogers, and Edward Smith, Buffalo; Charles Goulder, Cleveland; Ben Birdsall, Detroit; and John F. Gauntlett, Ithaca, NY. For the 1890 season, Charles Coushaine was chief engineer on the steambarge *William H. Barnum.* In September 1890, the steambarge *William H. Barnum* struck a dock in Port Huron in heavy fog. The vessel was badly damage. Master of the steambarge *William H. Barnum* for the 1892 & 93 seasons was Captain James Kenny who purchased a 1/10 interest in the vessel. During that same period Edgar Hull in 1892 and Thomas Leitch in 1893 served as chief engineer.

In May 1893, the vessel went ashore on Hare Island, Lake Superior.

Ownership of the steambarge *William H. Barnum* was transferred in early April 1893 to: Ben Birdsall, ¼, Detroit; John F. Gauntlett, ¼, Ithaca; J.H. Brown, ¼ and Joseph B. Rodgers, ¼ both from Buffalo, NY.

Ownership shares of the steambarge *William H. Barnum* in late April 1893 were transferred to: Charles A. Chamberlain, 1/12, Harris W. Baker, 3/12; Ben Birdsall, 3/12, and B. White, 2/12, all from Detroit, and John F. Gauntlett, 3/12, Ithaca, NY. Her master for the 1894 season was Captain Smith. In April 1894, bound down from Chicago, for Port Huron, the steambarge *William H. Barnum,* laden with 55,000 bushels of corn on first trip of season, had her seams opened while in ice in Straits of Mackinac. The vessel filled with water and sank north of Freedom, MI about two miles from the present bridge. No lives lost.

In 1963, the wreck of the steambarge *William H. Barnum* was located. Her rudder is on display in St. Ignace.



California: A. M. Robertson of Hamilton, Ont. built a wooden propeller for package freight trade between Montreal, Que. and the Upper Lakes that could carry 18,000 bu. of grain. Her original owners were B. Butters, et al, Montreal, Que. Enrolled at Montreal on August 10, 1873, her recorded measures were: 137.0' x 23.6' x 13.5'; 667.0 grt, 412.0 net. She was powered by a low-pressure condensing engine, 36" bore x 36" stroke, 34.95 horsepower, built by Thomas Wilson Iron Works, Dundas, Ont. in 1873. In August 1873, she made her maiden voyage, Montreal - Head of Lake Superior; and was operated by Merchants Lake & River Steamship Co., Montreal, Que. In November of that year, the *California,* steaming light, went ashore at Point Traverse, Ont., Lake Ontario. Her master for the 1875 season was Captain J. W. Leslie and made her first direct trip from salt water to Duluth, MN. The *California* left Pictou, Nova Scotia, Gulf of St. Lawrence, May 25th, 1875, with a cargo of coal for Montreal, Que. She discharged her cargo at Montreal and loaded a cargo of railroad iron for the Canada Pacific Railroad at Duluth, MN, Lake Superior, which she delivered on May 10th. She then loaded a cargo of wheat to be delivered to Montreal July 03, 1875.

In March 1880, ownership of the propeller *California* was changed to S. Cringle & J. Geddes, Toronto, Ont. for $14,000, 1/3rd of her original build cost. Her master for the 1880 season was Captain Samuel Crangle, and for the 1880-81 season, Captain James McMaugh. In July 1880, the propeller *California* and the schooner *Nellie Hunter* collided in the Welland Canal, between Allanburg and Port Colborne, Ont. Both vessels were damaged and repaired. In November 1880, the propeller *California,* after loading 17,500 bushels of wheat and corn at Buffalo for Ogdensburg, was cut through at the water-line by the ice. She rapidly sank in 12 feet of water. The *California's* owners spent about $4,000 to repair the damage, and extend her cabins to include 20 additional staterooms. For the 1881 season, she will run between Montreal, and Chicago. Her master for the 1882 season was Captain Vaughn. June 1882, the propeller *California* was engaged to make a tour of the lakes with Canadian lighthouse supplies. The vessel, with the general lighthouse inspector, Commodore Patrick Harty aboard, would tour the one hundred and three Canadian lighthouses between Montreal and Fort William on Lake Superior. Masters to the propeller *California* were Captain Samuel Crangle in 1883 and Captain John F. Trowell, Jr. for the remainder of 1883 through 1887 with James Howard Ellis as chief engineers in 1887.

In August 1883, the propeller *California* was rebuilt by Muir Brothers, Port Dalhousie, Ont. and lengthened 46 feet to increase her capacity by 5,000 bushels. She was also strengthened with two steel arches on her sides. She was registered at Port Dalhousie, Ont: 179.5' x 26.0' x 11.0', 901.95 grt, 580.33 net and assigned official number of C85309. She also had her engine rebuilt: 34.5" bore x 36" stroke, 300 horsepower and a new scotch boiler 11'4" x 10'6", 60 pounds steam installed. In June 1884, down bound from Chicago for Montreal, the propeller *California,* laden with 26,500 bushels corn, went aground, during a gale, on Sand Beach, MI, Lake Huron. She was released by the tug *Olive L. Moore.* Damage loss set at: cargo - $14,500; hull $9,000. In October 1887, down bound from Chicago for Montreal, the propeller *California,* laden with 20,000 bushels of corn, general merchandise and 26 persons aboard including six passengers, encountered heavy winds and seas, off St. Helena Island, Straits of Mackinac, Lake Michigan and foundered. Nine lives, seven crew and two-passenger were lost. Her owners, Cringle & Geddes, abandoned the propeller *California.*

In 1888, the hulk of the propeller California was raised by Edward Trachan and towed to Bay City, MI to be rebuilt at Wheeler's Shipyard as a double-decked bulk freighter. She was registered at Port Huron as *Edward S. Pease*, official number 136025, with measures: 168.6' x 26.4' x 11.6'; 542.7 grt, 399.06 net. Her owner was L. E. Pease, Bay City, MI.
In June 1889, the propeller *Edward S. Pease* went ashore near Port Hope, MI, Lake Huron. She was released by the tug *Molly Spencer* (90004) and towed to Ashtabula, OH for repairs.

In 1890, ownership of the propeller *Edward S. Pease* was changed to Cleveland Cliffs Iron Co. Cleveland, and registered at Cleveland: 167.5' x 26.2' x 18.7', 721 grt, 548.34 net. In December 1891, the *Edward S. Pease* caught fire at Cleveland, with the loss of two lives, the engineer, Philip Stutzman, and a fireman. Master of the propeller *Edward S. Pease* for the 1893 – 99 seasons was Captain Thomas Sloane. In November 1898, the *Edward S. Pease* caught fire off Port Huron, MI, Lake Huron. She had minimal damage. November 1899, the propeller *Edward S. Pease* collided with the dock at Ashtabula, OH, Lake Erie, while entering the harbor during heavy weather and sank. Estimated damage: $10,000.
Master of the propeller *Edward S. Pease* for the 1900 season was Captain Thomas E. Murray with John L. Booth as chief engineer. October 1900, the propeller *Edward S. Pease* struck some floating wreckage from the sunken schooner *John Martin* (U75717) at Fort Gratiot, MI, St. Clair River. She was released and passed un-injured. Master of the propeller *Edward S. Pease* for the 1901 and 1902 seasons was Captain G. A. McCoy, and Captain Thomas Sloane in 1902, with George Reed as chief engineer. In May 1902, the propeller *Edward S. Pease* went on the bar at South Haven, MI. She was released and dry docked for repairs to her planking. In July 1902, the *Edward S. Pease* collided with 100 feet of city wharf at Manistee, MI, Lake Michigan, damaging her hull.

Ownership of the propeller *Edward S. Pease* was changed in 1903, to C. P. Gilchrist & Co, Cleveland, OH. Masters of the *Edward S. Pease* were Captain John Little for 1903, and Captain James Hoskins for 1904 with J. C. Walsh as chief engineer. November 1904, the *Edward S. Pease,* while unloading coal at the Tannery coal dock, caught fire at Collingwood, Ont. Georgian Bay and burned to a shell. No lives lost.

The hulk of the *Edward S. Pease* was repaired and used as a barge. The barge was later towed to Wiarton, Ont. for use as a break wall. She was placed nose to tail with the steambarge *Lothair* (C71170) in Colpoy's Bay to keep logs in the mill pond.

Selah Chamberlain: At Cleveland, Quayle & Martin built a wooden steambarge for the bulk freight trade. Her original owner was Captain Alva Bradley, Cleveland, OH; et al. Enrolled at Cleveland, her measures were: 212.0' x 34.0' x 14.8'; 894.69 grt. Her official number was 115147. She was powered by a high-pressure engine, 30" bore x 30" stroke, non-condensing engine, 514 horsepower. Steam was generated by a tubular boiler, 7'3" x 7', 95 pounds steam, built by Globe Iron Works.

In May 1873, the steambarge *Selah Chamberlain* went aground on Bois Blanc Island, Straits of Mackinac. During winter layup, 1873/74, the steambarge was rebuilt with 2 decks and her registered tonnage changed on March 30, 1874 to: 1207.01 grt, 963.98 net. Chief engineer for the steambarge *Selah Chamberlain* for 1880 season was William W. Tyler. During the winter layup 1880/81 the steambarge received $2,500 of repairs at the Globe Dry Docks, Cleveland. During the 1880's the steambarge towed the schooner-barge *John Martin* (75717), *Escanaba* (7319) and *Fayette Brown* (9748) in the Lake Superior ore trade.

Ownership of the steambarge *Selah Chamberlain* was transferred in May 1883, to Bradley Transportation Co., E. Cleveland, OH. Master of the steambarge *Selah Chamberlain* for the 1883 – 85 seasons was Captain James Lawless with John William Green as chief engineer. In November 1883, on Lake Superior, she lost her main mast when her rigging became entangled in her prop. In September 1884, the steambarge *Selah Chamberlain* was chartered, for three trips, to carry wheat from Duluth to Buffalo. In October 1884, the steambarge was driven against and damaged at the Port Arthur coal docks.

Master of the steambarge *Selah Chamberlain* for the 1886 season was Captain Greenly. Bound from Milwaukee, WI to Escanaba, the steambarge *Selah Chamberlain,* with the schooner *Fayette Brown* (9748) in tow, collided with the propeller *John Pridgeon Jr.* (US75756)*,* off Cheboygan, WI, Lake Michigan, in heavy fog and sank. Five lives were lost.

Final enrollment was surrendered at Cleveland in 1887.

Follow Up Note:

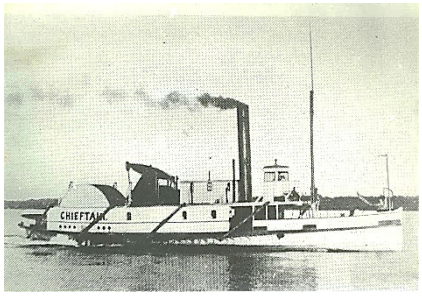
<u>October 18, 1886</u>: The *Pridgeon,* running Chicago to Ogdensburg, was leased to Vermont Railroad by her owner John Pridgeon, Detroit MI. The *Chamberlain* was struck on her port bow and sank at once. Five lives were lost from the *Chamberlain*.

<u>October 18, 1886</u>: The steambarge *Selah Chamberlain* was insured for $6,000 but her value was estimated at $54,000.

<u>1887</u>: Attempts have been made to raise the steambarge *Selah Chamberlain*, but on the last attempt the massive chains which were put around her broke again. M.A. Bradley has ordered the wreckers home and the vessel will be abandoned. The wreck is located 3-6 miles east of Sheboygan, WI, Lake Michigan, in 70 – 85 feet of water.

<u>October 22, 1891</u>: The Pridgeon-Chamberlain case was settled at $44,000. The *Chamberlain* was not found in fault and the award is to be

paid to the estate of M.A. Bradley. Judge Blodgett, U.S. District Court, Chicago ruled for the *Chamberlain* based on evidence that the *Pridgeon* was steaming at a high rate of speed in the fog. U.S. Circuit Court sustained the ruling.



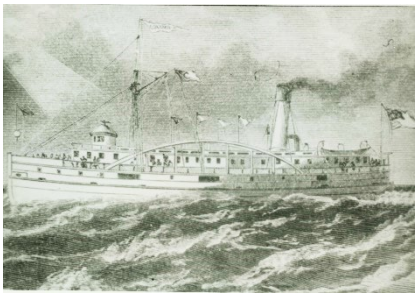
Chieftain: First enrollment for the sidewheel steamer *Chieftain* was issued at Kingston, Ont., November 11, 1874. Built and launched by Henry Roney, Garden Island, Ont., the wooden sidewheel steamer (tug) measures were: 136.66' x 24.10' x 9.40'; 434.60 grt, 197.13 net. She was powered by a vertical beam engine, 39" bore x 90" stroke, 100 horsepower, built by Brush & Co., Montreal. The engine was originally installed in the sidewheel steamer *Henry Gildersleeve* (C-1839). Her Canadian official number was 71178. She was built for towboat service and wrecking. In May 1874, the sidewheel steamer tug *Chieftain* broke her walking-beam at Kingston, Ont. Master of the sidewheel steamer tug *Chieftain* for the 1876-81 seasons was Captain Sughrue.

Master of the sidewheel steamer tug *Chieftain* for the 1882 & 84 seasons was Captain George Miller, and for the 1883 season, Captain J. F. Allen, with Kelly and Mullen as chief engineers. In September 1882, the sidewheel steamer tug *Chieftain* while lying with a Port Hope timber raft off Nicholson's Island, Ont. when the wind veered, breaking up the raft. The timber drifted to the shore at Wellington, Ont. Recovered.

Master of the sidewheel steamer tug *Chieftain* for the 1886 season was Captain Sughrue. The sidewheel steamer tug *Chieftain* received major repairs in 1889 at Garden Island, Ont.

Masters of the sidewheel steamer tug *Chieftain* were: Captain John Sullivan, 1899-1900 season; Captain John Doyle, 1901-02 season; and Captain David Lafavre, Sr. for the 1903 season with Thomas Gray as chief engineer.

Enrollment closed at Kingston, Ont. December 21, 1906 and endorsed as "dismantled and out of commission".



Columbia: A. M. Robertson, Hamilton, Ont. built a wooden propeller for the Captain John E. Fairgrieve et al, Hamilton, Ont. to be used in the passenger, package freight trade Montreal, P.Q. and Pictou, N.S. on the St. Lawrence River. Enrolled at Montreal, in 1873, her measures were: 137' x 23.5' x 13.5'; 630.0 grt, 409.0 net. She was powered by a low-pressure engine, 34" x 34", built by Thomas Wilson & Co., Dundas, Ont.

Ownership of the passenger, package freight propeller *Columbia* was changed, in 1875, to D. Butters & Co., Hamilton, Ont. in November 1874, the propeller *Columbia* ran aground on St. Lawrence River. Property loss $200. In 1875, the *Columbia* ran between Montreal, Que. and the Upper Lakes. Master of the propeller *Columbia* for the 1875 season was Captain Kennedy. In June 1875, down bound, the propeller *Columbia* ran aground on the foot of Fighting Island, LaSalle, Ont., Detroit River. Lightered of 3,000 bushels of wheat and 40 cords of wood. Released.

In 1877, ownership by D. Butters was shifted from Hamilton to Montreal. Master of the propeller *Columbia* for the 1880 7 81 seasons was Captain J. S. Malcomson with William Crossley as first engineer. In September 1881, downbound from Chicago for Collingwood, Ont. with passengers and a cargo of corn, the propeller *Columbia* foundered in a gale on September 10, 1881, when her cargo shifted. She went down three miles off shore Frankfort, MI, Lake Michigan, in 20 fathoms of water. Sixteen lives lost.

Notes:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The current system of measurement for ships includes:

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

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

P.Q.: Province of Quebec

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

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

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

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

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

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