

TELESCOPE

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**Great Lakes
Maritime
Institute**



**Dossin Great Lakes Museum,
Belle Isle, Detroit 7, Michigan**

Membership Notes

MEETING DATES

General membership meetings will be held at the Dossin Museum as follows. All are scheduled at 8:00 PM:

May 22, 1970; *Mr. Harry Wolf*, Slides With Sound.

(There is no meeting in the month of July.)

September 11, 1970; **HOLD THIS DATE.** *This year's Annual Meet The Author Dinner will feature well known Lakes writer and authority, Dana Thomas Bowen! More details will follow.*

Business meetings of the Board of Directors (all members are encouraged to attend these meetings) will be held at the Dossin Museum as follows: June 16, 1970; August 28, 1970, 8:00 PM

MUSEUM NOTES

The Dossin Museum will go afield with a special exhibit to be staged at the Detroit Historical Museum, opening on June 23. All of the paintings from the Dossin Collection will be shown in addition to maps from the Historical Museum's collection in the new Kresge Exhibit Hall. Rarely is it possible to show all of our fine collection in the limited space we have, so this will be a rare show of exceptional interest.

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OUR COVER PHOTO...

An early sign of spring makes an appearance at the coal docks in Toledo, Ohio, as the **BEN W. CALVIN** is towed stern-first into position by tugs *Maine* and *Tennessee* for her season's first loading. Photo for TELESCOPE by Carl H. Luhrs.

SOME

PROFESSIONAL

COMMENT

... about that great

LAKE ERIE RACE

One of the most unusual trials of speed ever run on the Great Lakes was between the *City of Erie* and the *Tashmoo*, on June 4, 1901. The race has been re-run in conversations around the waterfront docks and bars ever since, and nobody will ever be satisfied with the arguments, pro or con, presented by the other side. Frank E. Kirby was the designer of both vessels, and on the occasion of the ninth general meeting of the Society of Naval Architects and Marine Engineers he presented a paper which was read for him to the assembly. Following the reading, the meeting was thrown open to discussion among the learned men of the profession.

Mr. William Keller, Institute Member and student of naval architecture at the University of Michigan has made this copy of the paper, and the discussion, available to TELESCOPE. It is reprinted here in near-entirety, having only been edited to the extent of eliminating technical graphs and data beyond the comprehension of the non-technical reader.

The Kirby Paper...

On June 4, 1901, a trial of speed took place on Lake Erie between the paddle steamers *City of Erie* and *Tashmoo*. The course was straight along the south shore of the lake, starting from a line off the waterworks crib, six miles outside the breakwater at Cleveland, Ohio, to a line ten miles off Presq'ile Lighthouse, at Erie, Pa. The distance measured on the United States Coast Survey chart, is 94 statute miles. Computed from the latitude and longitude of the lighthouses at Cleveland and Erie, and corrected for location of starting line, the distance is

94.31 miles. The nearest land to the course was at Fairport, 2½ miles distant. The average depth of water along the course was 61.31 feet; minimum depth. 35 feet; maximum depth 77 feet. Weather fine; seas smooth.

The *City of Erie* is a passenger and deck-freight steamer, owned and operated by the Cleveland and Buffalo Transit Company; in daily service with the *City of Buffalo*, between the ports of Cleveland and Buffalo. Distance between the harbor entrances 173 miles; running time, ten hours. Best service run, eight hours, thirty-two minutes.

The hull is built of mild steel, divided into ten compartments, by nine bulkheads, six of which are watertight. The upper decks and houses are of wood, arranged in the usual style of American steamboats. Number of staterooms, 163. Number of regular passengers allowed by permit, 600; excursion permit, 2,700. This could be increased by providing additional equipment. Number of officers and crew, 108. Capacity for freight, 600 tons.

Engine, single, compound beam, driving feathering paddlewheels. Boilers, six; cylindrical, return tubular. Pressure of steam, 130 pounds. Amount of coal used per round trip in forty-eight hours, 67½ tons; amount of coal used per round trip of twenty-four hours, 55 tons. Coal used on the run of June 4th was select bituminous lump from the Youghiogheny district of the Pittsburgh Coal Company's *Eclipse Mine*.

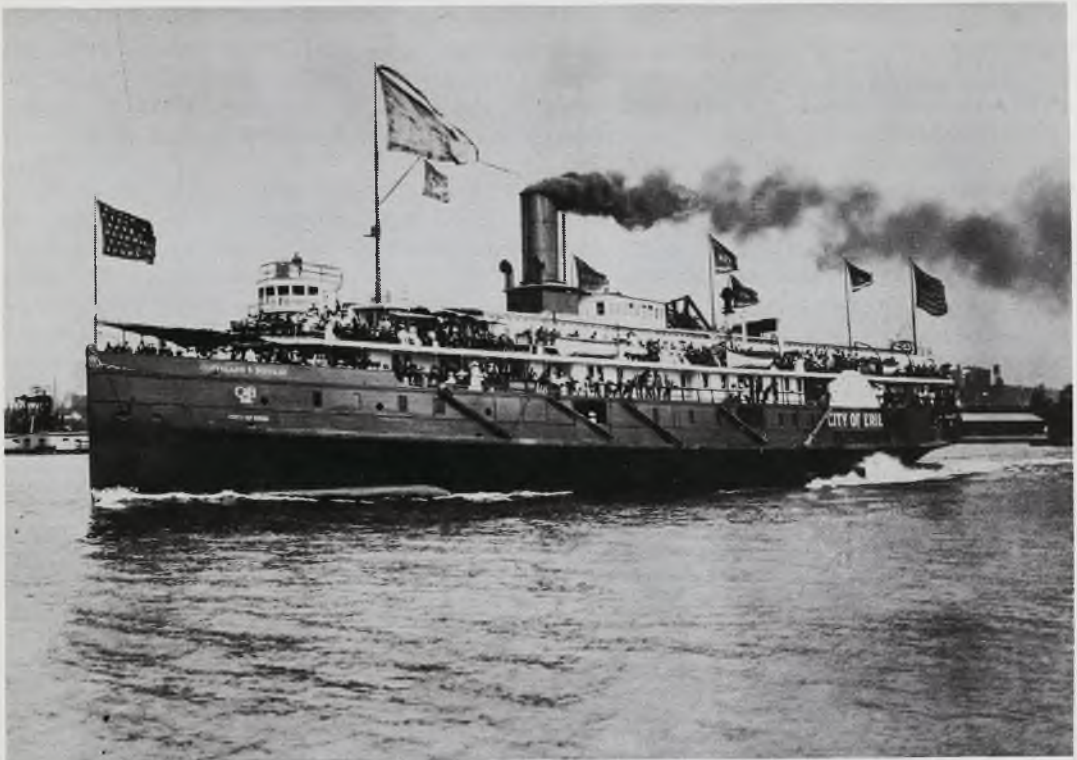
The *Tashmoo* is an exclusively passenger steamer, owned and operated by the White Star Line; in daily service on the Detroit and St. Clair rivers, crossing Lake St. Clair. The round trip between Detroit and Port Huron, occupies 11½ hours; twenty landings are made each way, and lying at Port Huron two hours. Most of the run is in shallow water, which includes the St. Clair ship canal and the narrow cuts in Lake St. Clair. She has three complete decks for passengers; ten parlors; cafe and buffet on main deck; smoking room on upper deck. Number of passengers allowed by permit, 3,000. Number of officers and crew, 84.

Engines, inclined, triple expansion, driving feathering paddle wheels. Boilers, cylindrical, return

tubular—two double ended, and three single ended. Steam pressure, 175 pounds. Consumption of coal per day, 27 tons. Coal used when running with the *City of Erie* was bituminous, from Jackson Hill Mine, Jackson County, Ohio. While the usual service of the *Tashmoo* is in smooth water, she is designed, built and classed as a lake steamer, making occasional runs across the head of Lake Erie to Toledo, the southern terminus of the White Star Line. She has a heavy equipment of anchors, chains, and eight lifeboats. Her peculiar cross-section was designed to allow the boilers to go under deck, thus leaving the main deck clear for passengers. The thin ends of the hull were cut off to reduce weight, and allow turning a reverse curve of 180 degrees in narrow water at two landing places on her regular route. The only novel feature in her design is the gear for handling the water ballast used for trimming athwartship, which has proved of great value. Tanks are built on the guards, just forward of the wheel housings, having a capacity, when full, of 13 tons of water each. Time required to fill one tank, seven minutes, the discharge water from the air pump being used. Time required to discharge, 45 seconds. The valves are arranged that, in any position, there is always a full outlet from the air pump. A connection is fitted for filling tanks by the fire pump when the main engine is not in motion. One man easily handles the gear, and his services are only occasionally required, except at landings.

Particulars of the steamers and data of the speed trial on June 4th, as follows:—

	<i>City of Erie</i>	<i>Tashmoo</i>
Length over all, feet	324	308
on keel, feet	314	300
Beam, feet	44	37.5
Breadth over guards, feet	77.2	69
Depth, feet	18	13.5
Draught, forward, feet	9.75	8.12
aft, feet	10.83	8.46
mean, feet	10.29	8.29



CITY of ERIE...Racing time: 21.76. Or was it 21.88?



TASHMOO...Her racing time was agreed upon at 21.70.
Both photos Dossin Museum Collection

	City of Erie	Tashmoo
Displacement, tons	2,233	1,224
Trial load, tons	250	60
Wetted surface, square feet	12,776	8,976
Prismatic coefficient	.603	.584
Engine, type	Compound beam	Triple inclined
Cylinder, H. P. diameter, inches	52	33
I. P. diameter, inches	--	51
L. P. diameter, inches	80	82
stroke, inches, H. P.	96	72
stroke, inches, L. P.	144	--
Air pump, diameter, inches	52	45
stroke, inches	45	24
Feed pump, independent	16 x 11 x 14	14 x 8 x 12
Fire pump	14 x 8 x 10	10 x 6 x 10
Boilers, cylindrical, number	6	5
diameter, feet	12.5	11.08
length, feet	11.75	3 of 11.33 2 of 22
furnaces, diameter, inches	46	42
grate length, feet	5.5	6
surface, square feet	252	294
heating surface, square feet	11,580	8,750
Draft system	Howdens.	Natural.
Steam pressure, pounds	130	175
Blowers, number	2	--
diameter, inches	66	--
discharge, inches	34 x 34	--
engine, inches	7 x 7	--
heater, diameter, inches	25	25
length, feet	10.17	9.5
tubes, diameter, inches	1½	1½
length, feet	8	7
surface, square feet	302	282
Wheels, diameter over buckets, feet	28.5	22.42
Polygon, diameter, feet	25.17	19.08
buckets, number	11	9
width, feet	4	3.75
length, feet	12	12
dip, feet	5.17	4.75
Steam pressure, pounds	120.4	175
Vacuum, inches	23.5	22
Air pressure, inches	5 max.	--
Revolutions per minute	33.25	40.08
M. E. P. in H. P. cylinder, pounds	58.4	--
I. P. Cylinder, pounds	--	--
L. P. cylinder, pounds	36.6	--
referred to L. P. pounds	53.07	--
I. H. P., H. P. cylinder	2,004.6	--
L. P. cylinder	4,467.7	--
Total	6,472.3	3,400 (est.)
I. H. P. per square foot of grate	25.68	11.58
H. S. per I. H. P., square foot	1.79	2.57
I. H. P. per 100 square feet of wetted surface	50.66	39.1
Distance, in statute miles	94	94
Speed, in statute miles	21.76	21.70
in knots	18.899	18.847
Slip of wheel over bucket, percent	35.65	32.2
Depth of water in feet, start	57	57
minimum	35	35
maximum	77	77
average	61.31	61.31
Admiralty coefficient	178.2	225

The trial resulted in the City of Erie beating the Tashmoo 45 seconds in a run of 94 miles...less than

half a second a mile.

With the exception of four minutes stop of one of the blowers on the

City of Erie, the main engines and auxiliaries on both steamers worked perfectly throughout the trial; all journals running cool. The boilers furnished a full supply of steam at all times.

The admiralty coefficient should be considered in connection with the shallow water in which the run was made. It is estimated that the speed would have been at least one-quarter of a mile-an-hour greater had the steamers been in water of sufficient depth not to be influenced by the bottom.

I regret that owing to leaking snifting valves, no indicator cards could be taken on the *Tashmoo*; the power was estimated from a previous trial, when 3,120 horsepower was developed with 39 revolutions.

Both steamers were taken off the regular service, and prepared for the trial in a few hours. The *City of Erie* arrived in Cleveland from her regular run from Buffalo only four hours before the trial commenced. She was not dry-docked to clean her bottom, though that was in fair condition. Her boats were taken in on main deck to reduce wind resistance. The *Tashmoo* was drydocked, her bottom cleaned and painted. Both steamers were run by their regular crews.

The discussion that followed...

THE CHAIRMAN:...(In the absence of Mr. E. Platt Stratton, Mr. Stevenson Taylor was elected Chairman) Before proceeding to the formal discussion, I beg the Society's indulgence to supplant Mr. Kirby's paper by a few remarks of my own, because, of course, I was naturally very much interested in the *City of Erie's* performance. (Taylor was an official of C&B...Ed.)

Mr. Kirby, in his paper, has given you only the solid facts of the *City of Erie-Tashmoo* race, without embellishment, and without calling your attention to many of the features of an interesting occasion.

The race was the unusual result of steamboat talk as to who possessed

the fastest steamer on the Lakes. It was an unusual result in that a race occurred at all, and more unusual because all the care of an international yacht race was taken to make the affair satisfactory and decisive. Impartial judges and time keepers were selected. Government inspectors were present, that no infraction of the law occurred. Two lanes were mapped out on the course, so that the racers were always at least a half mile apart broadside, from the start to the finish, the lanes being marked at the beginning, the middle and the end of the course by tugboats, duly anchored in place. The choice of position was decided by lot with the *Tashmoo* winning and wisely choosing the outer course.

Mr. Kirby has taken as a basis for the calculations in his paper, the distance of the course to be 94 statute miles. You will concede that no boat could sail the course in less than that distance.

Those present at the race know that the boats each varied from the straight line, and I have for my calculations on the race, called the course 94½ statute miles. I trust you will agree that this is a fair assumption. You will note that the *City of Erie* is a freight as well as a passenger boat, with a double tier of staterooms and appurtenances for night travel, designed to carry loads of from 300 to 600 tons, and with wheels so placed that when the boat is loaded the power of the engines can be properly utilized, the immersion of the wheels being made to suit. At the time of this race, in order to have the wheels sufficiently immersed to utilize the power to a moderate degree even, it was necessary to carry a load of 250 gross tons.

Even with this handicap weight, considerable power was wasted, as is shown in the power-per-ton displacement, by the high number of revolutions per minute, and the corresponding slip of the wheel. The slip of the wheel is given for both boats taking the diameter given for outside

of buckets. This is not correct, of course, because the path of the outer edge of the buckets through the water is not a circle of the diameter given for the wheel, but this method of determining slip answers for a comparison. The *Tashmoo* slip is less than that of the *City of Erie*, showing a better hold on the water for the power developed. In this, however, the showing is not bad for either boat compared with fast side-wheel boats in Europe. The North Sea steamer *Marie Henriette*, on trial, with 52.89 revolutions per minute, and 23.3 knots per hour (sic), shows a slip of over 39 percent calculated by the method used by Mr. Kirby. If we could have possibly lowered the shafts of the *City of Erie* to give the wheels proper immersion without carrying that extra 250 tons load, the result would have been, of course, much more favorable for the *City of Erie*, but they had to take the *cart horse*, just as she is, against the *trotter*, and make the best of it.

I now desire to call your attention particularly to the effect of the depth of the water on the speed of the boats. When the race was first projected the owners of the *Tashmoo* wished to have the race on Lake Huron where the water is considerably deeper than in Lake Erie, but the owners of the *City of Erie* preferred Lake Erie, and the choice was almost disastrous. You will remember that the *Tashmoo* chose the outside course where the water is from two to four fathoms deeper than on the inner course left to the *City of Erie*.

For the first hour and a quarter the boats ran neck-and-neck, and advantage for either being almost impossible to determine. At the expiration of this time I went to the pilot house to look at a Nicholson Patent Log, which shows the speed per hour being made by the boat, as well as making at the same time a chart of the speed. To my consternation, the pointer on the

dial commenced to rapidly fall from 21.6 miles per hour, and as I had just left the engine room a few minutes before, with the engine running all right, making 33 revolutions I jumped at once to the conclusion that something had happened to reduce the speed of the engine, and I hastily returned to the engine room to find the engine close shut off and making almost 34½ revolutions, indicating shoal water. A look out of the gangways proved this to be correct by the sea following on the quarters.

The *Tashmoo*, at this time in deeper water, immediately commenced to gain on the *City of Erie* rapidly, and held the gain for some time. As soon as the *City of Erie* reached deeper water, however, she commenced to gain on the *Tashmoo*, but to those in the *City of Erie* it seemed a long long time before the *Erie* regained what had been lost. It was a full half hour before the 21.6 mark on the dial was again touched by the hand, and not until 70 feet depth of water was reached did the *City of Erie* attain the highest speed of the race, 22.2 miles per hour. Mr. Kirby's diagram of curves of speed, power, slip, and depth of water, shows at a glance the effect of the shoal water. This makes it very clear that had the race been in deeper water, the difference at the end would have been more than 45 seconds; but *all's well that ends well*.

You will note that the *City of Erie* had not been drydocked, and had arrived in Cleveland from Buffalo on her regular run with passengers and freight only four hours before the race commenced. So far as the engine and boilers are concerned, there was absolutely nothing done to prepare the boat specially for the race, because there was nothing needed to be done. The officers and crew had everything in proper condition, without any alterations or additions. The *City of Erie* went from regular business to a great trial, returned the 95 miles to

Cleveland, and in a short time...as soon as passengers and freight could be placed on board...left for Buffalo again on regular business. Machinery designed for a maximum of 4,500 horsepower, developing under these

conditions a maximum of 6,800 and an average of 6,400 horsepower, has, like Mark Twain's Jumping Frog, *good points*. The changes in Mr. Kirby's table that I suggest, are as follows:...

	<i>City of Erie</i>	<i>Tashmoo</i>
<i>Revolutions per minute</i>	33.254	40.08
<i>M. E. P. in H. P. cylinder, pounds</i>	58.44	--
<i>L. P. cylinder, pounds</i>	36.625	--
<i>referred to L. P. pounds</i>	53.08	--
<i>I. H. P., H. P. cylinder</i>	1981	
<i>L. P. cylinder</i>	4436	
<i>Total</i>	6417	3400
<i>I. H. P. per square foot of grate</i>	25.46	11.58
<i>H. S. per I. H. P., square foot</i>	1.805	2.57
<i>I. H. P. per 100 square feet of wetted surface</i>	50.23	39.1
<i>Distance in statute miles</i>	94½	94
<i>Speed, in statute miles</i>	21.88	21.70
<i>in knots</i>	19	18.847
<i>Slip of wheel over bucket, percent</i>	35.32	32.2

The difference in indicated horsepower is caused by my deducting the piston rods, which Mr. Kirby has not done. The diameter of h.p. rod is 634 and l.p. rod 834 inches.

Let me call your attention to one more interesting item concerning the *City of Erie*, mentioned in Mr. Kirby's paper, which has nothing to do with the race: Amount of coal used per round trip, 350 miles, 175 miles each day, 67½ tons of 2,000 pounds each. Amount used for same round trip made in 24 hours, 55 tons.

This latter record was made during the summer months of this year when these boats, *City of Erie* and *City of Buffalo*, made regular day and night trips between the cities of Cleveland and Buffalo, at an average speed of about 18½ miles per hour. There are no indicator cards showing the exact power developed, but 3,000 or 3,500 horsepower must have been necessary, which makes a small consumption of coal per horsepower per hour.

The difference between the 55 tons and the 67½ tons per round trip is caused by keeping up steam all day in port, when only a night trip is made, and moving of the boat from place to place at Cleveland to get freight and coal on board. Coal is now put on board without moving the

boat from her own pier.

That is all I have to say on this subject, gentlemen. It is now open to you for discussion.

MR. ANDREW FLETCHER, JR. *Member*:... The illustrations accompanying the paper show, on board the *City of Erie*, a great number of people, and it occurs to me that the members might get the impression that the race was made under those conditions while we who were there at the race know that this was not so; we were boiled down pretty well. Lifeboats were taken off, and we even trailed the boat davits aft, and our colors were off; we flew a fifteen cent flag, and I might say that this was about the same way with the *Tashmoo*; we were all locked in practically, even the reporters, and they had the hardest work. The windows on both boats were all closed. Both boats were stripped right down to their racing condition. I thought possibly it might be the impression here that we had a great number of people on board. While there were undoubtedly many people on board, the crowd was nothing like what these illustration would show.

MR. WILLIAM H. FLETCHER:...I think, Mr. Chairman, the thanks of the

Society are due to Mr. Kirby for his paper, which, it seems to me, is an able presentation of the matter, and contains a great deal of valuable information. The remarks of my cousin just now in regard to being locked in might be supplemented by saying that we were not even allowed to go out of doors without a pass. But while we were well stripped on the *City of Erie*, we did not put any weight ashore. They had to put weight on board. I think one of the most striking things to me in the paper was the falling off in speed of the *City of Erie*, at the time you mentioned, Mr. Chairman, when we were off Fairport. I was up in the Captain's room with you at the time, if you remember. My principal occupation was watching this speed curve. The *City of Erie* suddenly dropped off a mile an hour on that indicator and when you went to the engine room I went outside to the rail and saw this wave, unusual in shallow water, following the boat. When we consider that at the time this speed drop of a mile an hour occurred, there was, according to the chart, about six fathoms under the vessel, drawing a little more than ten feet of water, it is remarkable that she should feel the bottom so decidedly with so much water under her. The other boat according to the chart and according to the distance from our boat, had nearly two fathoms more water under her at this time than we did. I thought just before we reached Fairport, as nearly as I could judge from watching the position of the two boats, that we were as far ahead of her at that time as we were at the finish; although we crossed the line slightly in advance, that was due to our gathering way quicker than the *Tashmoo* did, as we started the *City of Erie* from the drop of the flag. It was a magnificent race. No race could be conducted more fairly, and no greater precautions could be taken to make the race sure and absolute than were taken in this case. I do not believe any one ever saw a race equal to it; certainly

no one ever saw a better one.

MR. W. IRVING BABCOCK: *Member of the Council*:...The general impression on the Lakes at the time of the race was that while the *City of Erie* was stripped the *Tashmoo* was not. I am a little surprised to hear Mr. Fletcher say that both boats were properly stripped. I was not there; I only know what I heard up on the lakes... that the *Tashmoo* was beaten because they did not take proper precautions. Another thing I notice, and that is that the air pressure on the *Erie* is given as five inches as the maximum, which is pretty high. Was there any change indicated by this, or were any unusual means taken to get vacuums?

THE CHAIRMAN:...On the *Erie*?

MR. BABCOCK:...Yes.

MR. W. H. FLETCHER:...I would like to answer Mr. Babcock, in a measure, on that point. I would say this; that Mr. Andrew Fletcher and I arrived in Cleveland about 7:30 in the morning. We went down on board the boat, the *Erie*, a little before nine o'clock...about half-past eight...as I remember it. She was then discharging some of her freight. There was absolutely no preparation made as far as the boat was concerned, except to take the lifeboats from above and put them on the main deck; they were not put ashore. There was nothing done around or about the engine, as far as I could discern, and I believe all who were on board will bear me out on this. Of course, we had good coal; that was evident. There is no question about the vacuum. I think if Mr. Babcock will read between the lines he will see some reason why cards could not be taken. Another thing that I noticed...I only bring this out for discussion now as long as you mentioned it...was that it appeared to me from the *Erie* that the *Tashmoo* would come up on us and drop back, come up and drop back. Of course, I was not on the *Tashmoo*. I had never seen her except at a distance, but I

had the impression at that time that they were using the pass-over up to the point where she would begin to lose vacuum, and then would shut it off, and she would drop back. I may be mistaken. That is only a theory.

MR. F. P. PALEN, *Member*:...This trial between the *Tashmoo* and the *Erie* has developed a little point which is, I think, of very decided interest to all who are engaged in running trials, and that is this matter of depth of water and the influence on speed. I rather wish we had a little more information on it. I was particularly impressed by the remark of one of the gentlemen a moment ago, who said he was surprised that six fathoms of water under the ship would have an influence. I remember an occasion when making a voyage on a ship from New York to Savannah, when we were taking very accurate data, and the depth of water ran all the way from 12 to 40 fathoms. By indicating the engine and keeping track of the revolutions and the speed of the ship, we could fairly accurately plot the depth of water. This was a ship of about 6,000 tons displacement.

A MEMBER:...Was she a screw?

MR. PALEN:...Yes.

A MEMBER:...What was the speed?

MR. PALEN:...About seventeen knots.

THE CHAIRMAN:...Are there any other remarks? If not, with your permission I will touch on some of the points that have been raised by the various speakers. As to the matter of these illustrations, they were put in the paper at my suggestion simply to show the character of the boat. (TELESCOPE *did not use the same illustrations, as they were not available, but they were the same in character, showing both ships in the normal service condition.*) I think the criticism of Mr. Andrew Fletcher, Jr., is a good one. You are not to understand that we were in that condition on the day of the race.

The *City of Erie* was stripped to the extent of taking the lifeboats down from the upper deck and placing them on the main deck. The flag poles were taken down, and that is the only stripping that was done. That, however, was, I think, quite an important item, and that was done at the insistence of the captain of the boat himself. The *Tashmoo* did not have her lifeboats taken down nor her flagpoles. That is the only lack of strip that she had. She came there prepared for the race, and, as I have been reliably informed, the engine was specially prepared for this race to the extent of trying to make her condensing apparatus more efficient to take care of the increased pressure on that engine. In other words, it was very much easier for those on the *City of Erie* to get a very great increase over the normal horsepower than it was on the *Tashmoo*. I perhaps would not have mentioned this fact had not Mr. Babcock asked if there was any special work done on the condenser of the *City of Erie*. There certainly was not. She took care of the steam perfectly well, and, as you can see by the vacuum mentioned, sufficiently well for the requirements of the day in spite of the great increase in the horsepower. On the *Tashmoo* however, I understand they covered the condenser with a special coating and then played water upon that from the steam pump in order to increase the efficiency of the condenser. Well, of course, that naturally made a messy engine room and made considerable vapor in addition to the leaking of the snifting valves, and that was why they did not take cards. On the *City of Erie* everything was in such perfect order that anybody could go to any part of her engine or boiler room at any period of this trial without trouble. The engineer, and most of the time, myself, stood in front of the engine taking observations. I kept a careful log of the performance of the engine every five minutes, and we had positively nothing unusual to do. There was no

trouble in taking the cards any more than there would be on her regular trips. But that is all due, of course, to the style of engine, which is very well adapted for that sort of work.

As to the dropping back that Mr. William H. Fletcher refers to, I think that is due to variations in the course of the boats, rather than to any variation in speed. I am informed, and I believe that the information is correct, that the pass-over valves on the *Tashmoo* were not opened until the last half-hour. Mention of that is made in this paper. But when two boats are traveling side-by-side, if one varies the course in one direction, and the other in an opposite direction, the result would be an apparent going forward and dropping back. But, as I said before, during the first part of the race it was very difficult to decide which boat had the advantage.

MR. W. H. FLETCHER:...It has been suggested to me that the condensers in both boats were jet condensers.

THE CHAIRMAN:...I am reminded of an interesting incident that occurred as we were going over the Cuyahoga River that morning. Cleveland being the headquarters of the *City of Erie* she was saluted in great style by every tug and river boat in the harbor all the way out, and there was a great fuss made by every boat there. One of the firemen who stood near me said, *That is all very well, but I hope they will be doing the same when we come back.* Needless to say they were.

As to the dip of the wheel on the *City of Erie*, Mr. Kirby and I talked that matter over last winter. We knew that it would be a very close race. Mr. Kirby was the father of both boats and was sought by the managers of each of them to go with them on the day of the trip. But he wisely concluded that his best place would be on shore, because he was responsible for both boats, and he thought he would show no preference. After full consideration, Mr. Kirby

and I came to the conclusion that about five and a half feet dip would be about the proper mean for the *City of Erie*. That is to say, we were working her so we would get about 5½ feet dip. I went up to Cleveland a day or two before the race and made two trips in her between Cleveland and Buffalo, just to look her over, and I found there was a sentiment on board that we ought to run the boat as light as possible; so that, on the morning of the race, the captain said to me: *How will you have this boat loaded? I will leave it to you.* I said I would like to have 5½ feet dip of the wheels. He thought that would make a great deal of load; *but*, he said, *I will put it wherever you say.* I had learned in the meantime that every man on board the *City of Erie* had bet on this race; I then made up my mind if I said 5½ feet dip and they put that load on, and lost the race, I would have to walk home. So I compromised on the matter, and we put on a bit less load than originally intended.

MR. W. IRVING BABCOCK:...Why did you reduce the load if a greater dip of paddlewheel was more advantageous?

THE CHAIRMAN:...My life is still sweet, Mr. Babcock, and I did not know if I would even live if I lost that race by putting on load. We could have done a little better if we had put on more dip; that is, a little less waste of power would have resulted. But it was a beautiful race, and a great credit to both boats and crews, for the responsibility was with them, after all.

If there are no further remarks on this paper we will continue with the next matter.

MR. J. C. KAUFER, *Member of Council*: I second the motion of Mr. Fletcher that the thanks of the meeting be given to the author for his most interesting paper.

THE CHAIRMAN:...I certainly think that is due Mr. Kirby.

The motion was unanimously carried.

FROM AN ERA LESS HECTIC, HERE IS A
PORTFOLIO OF A SHIP WITH A PLAN,
A PAINTING, A PHOTO, AND A
HISTORIC VIGNETTE.

The "Hungry" HOUGHTEN



By M. KARL KUTTRUFF

The author gratefully acknowledges the valuable assistance of Capt. Frank Hamilton, Mr. Frank Crevier, and the late Wm. A. McDonald in preparing this article and the accompanying drawings and art work.

In 1889, the F. W. Wheeler Co. of West Bay City, Michigan, built the steambarge *H. Houghten* for Henry Houghten of Detroit. She was Wheeler's hull number 59, constructed of oak, and braced by two iron hogging arches. The vessel was 126 feet long with a beam of 27 feet and a depth of 8 feet. Her engine was a fore-and-aft type, fabricated by J. B. Wilson of Detroit.

For approximately 37 years the *H. Houghten* steamed up and down the St. Clair and Detroit Rivers and into the waters of Lake Erie, transporting cargoes of limestone, lumber, coal and general freight from ports such as Detroit, Kelleys Island and Marblehead.

The *Houghten* led a normal life until September 9, 1902, when, at 4:15 in the morning, second engineer D. Anderson shouted an alarm that the vessel was sinking! The shouts of Anderson and the sounds of crashing timbers awakened Captain William

Deeg. Half dressed, he leaped from his bunk, ran out on deck and grabbed the whistle cord to sound warnings. Capt. Deeg then yelled to Mrs. Mary Neville, the cook, that the boat was sinking. Rushing to the forward companionway he shouted to two crewmen, Edward Close of Harbor Beach, and William Daniels, whose hometown is unknown. They had somehow managed to sleep through all of the commotion to that point. Their sound sleep was fatal, for the final warning from the captain was too late to save them. As the vessel rolled over, Mrs. Neville, clad in a nightgown, deserted her cabin and Capt. Deeg helped her up the now precipitous, slanting side of the ship, to the dock.

The other six crewmen, with their hastily gathered belongings, had already scrambled ashore to safety. The chief engineer, William Reed, barely escaped with his life, for he has also been below, sound asleep.

Captain Deeg and the cook just got into the clear as the lines parted under the strain and the steamer with her full load of stone rolled over and went to the bottom of the river in 22 feet of water.

Around 12 o'clock the same day, Captain Harris W. Baker, with the wrecker *Snook*, arrived, and within a half hour diver Judson Toefflemer had recovered the bodies of Close and Daniels.

Why the *H. Houghten* sank at the foot of Dubois Street in Detroit is a mystery. Her trip across Lake Erie and up the Detroit River had been uneventful. The vessel had an A-2 rating and was not known to be leaking. The only theory the captain was able to suggest was that there had been a heavy rain that morning and his ship had a large deck load of finely crushed stone that had come from Marblehead, Ohio. Perhaps the stone had absorbed sufficient water to add considerable weight, and the scuppers had become clogged with a mixture of the fine stone and water keeping any of the added water from draining. Added to the weight of the

fully loaded vessel, this may have caused her to heel over... then the river water rushed in to finish her.

Eventually the vessel was raised and returned to service. She served Henry Houghten faithfully for another thirteen years, then her ownership passed to Winford L. Emery of Detroit in 1915. Emery placed her in the sand trade.

During this period of her career, she gained the nickname of *Hungry Houghten* from residents along the St. Clair River. The sand business was very big on that river and its channels. The gravel bottom began just above Algonac, about where the Chenal Ecarte takes off from the St. Clair River, and ran all the way to Lake St. Clair. The property owners along this part of the river had riparian rights to mid-stream on the American side. It was customary for any company taking gravel or sand to pay the property owner a royalty. In fact, they were legally entitled to such payment.

The *Hungry Houghten* was said to have made a practise of evading this item of overhead by taking a small part of her load on one property, then slipping along to the next to continue the procedure until she had achieved a full cargo.

The *H. Houghten* underwent large repairs in 1920 and it was possibly at this time that she was converted to a sandsucker. Her mast was removed and a higher forecastle and a derrick were added. It is also a possibility that a new pilot house was added at the same time.

The vessel served W. L. Emery until 1926 when she appears under the ownership of Service Gravel Company, of Marysville, Michigan. On November 20, 1926, the *H. Houghten* caught fire and sank in the North Channel, just below Algonac. Captain Robert B. Young and his thirteen man crew took to the lifeboats and escaped after the burning vessel had been driven aground. Officials of the Service Gravel Company stated that the boat was a total loss, and so ended her 37 year career.



H. HOUGHTEN - U.S. 96006 LENGTH 120' BEAM 27' DEPTH 8.5'
BUILT 1883 BY F.W. WHEELER & CO. AT WEST BAY CITY, MICHIGAN FOR H. HOUGHTEN
OF DETROIT, MICHIGAN. THE ENGINE BEING OF THE FINE 8 HPT COMPOUND TYPE
WAS BUILT BY J.E. WILSON OF DETROIT. SHE SPENT MANY OF HER YEARS CARRYING
LIMESTONE AND GENERAL CARGO UP AND DOWN THE ST. LAIR AND DETROIT RIVERS
ON NOVEMBER 20, 1928 THE H. HOUGHTEN BURNED IN THE RIVE BONA CHANNEL,
ST. LAIR RIVER.

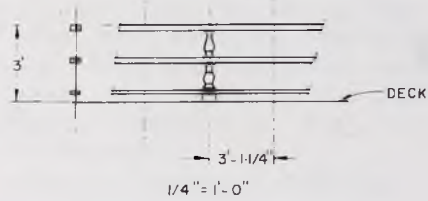
F.W. WHEELER
& CO.
WEST BAY CITY, MICH.



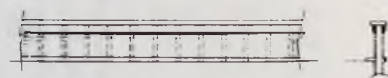
GREAT LAKES MARITIME INSTITUTE	
DOSSIN MUSEUM	
WOODEN STEAMBARGE	
H. HOUGHTEN	
DRWN: M K KUTTRUFF	DATE: 8-14-68
CHKD: <i>H. Ho</i>	DATE: 9/19/69
SCALE: NOTED	SHT. 1 OF 3

SEGMENT OF RAIL

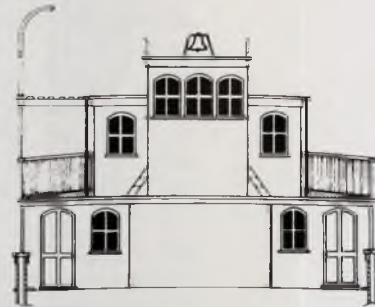
NOTE:
RAIL CONTINUES AROUND
FRONT OF PILOT HOUSE.



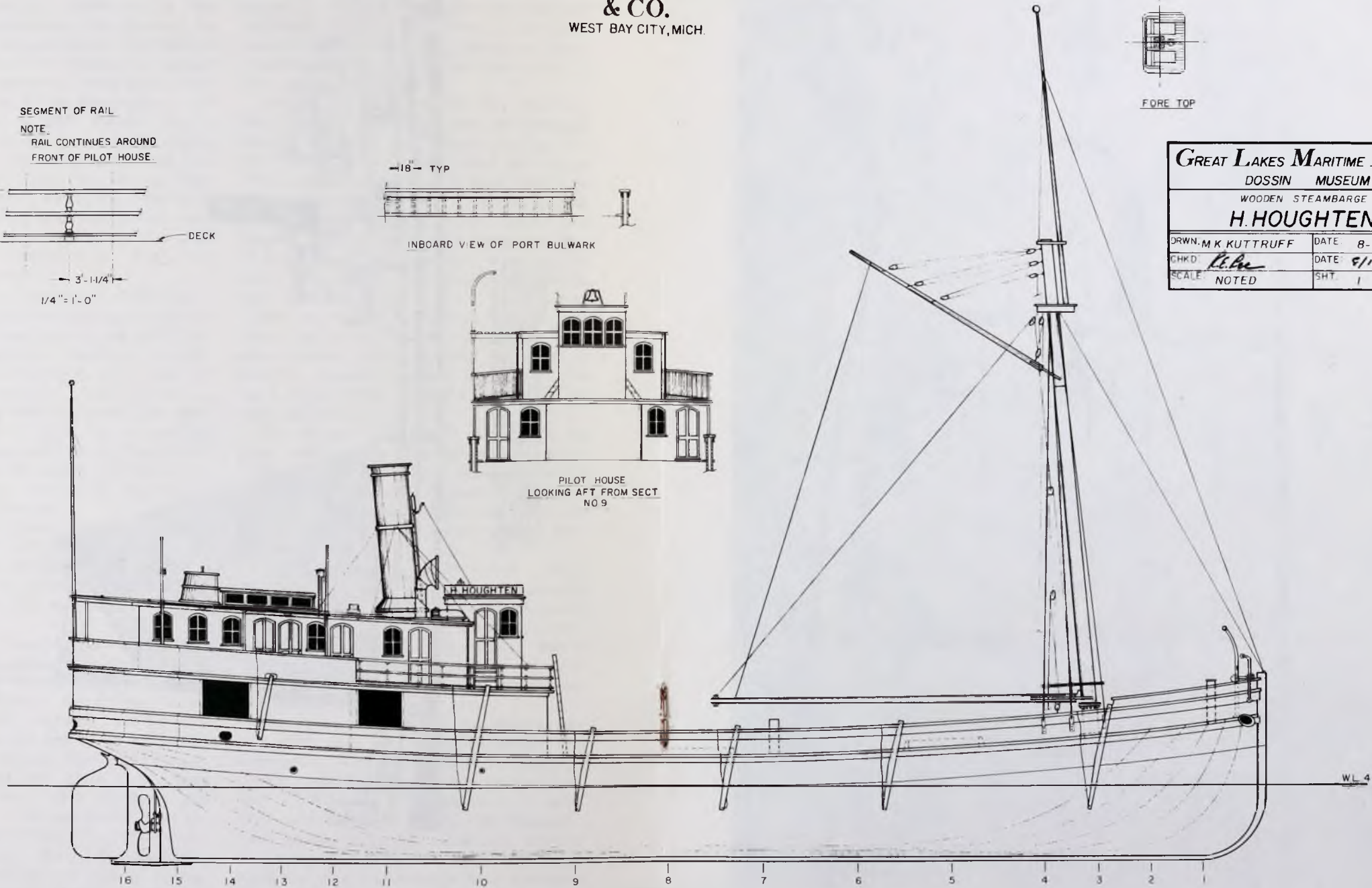
18'- TYP



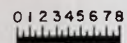
INBOARD VIEW OF PORT BULWARK

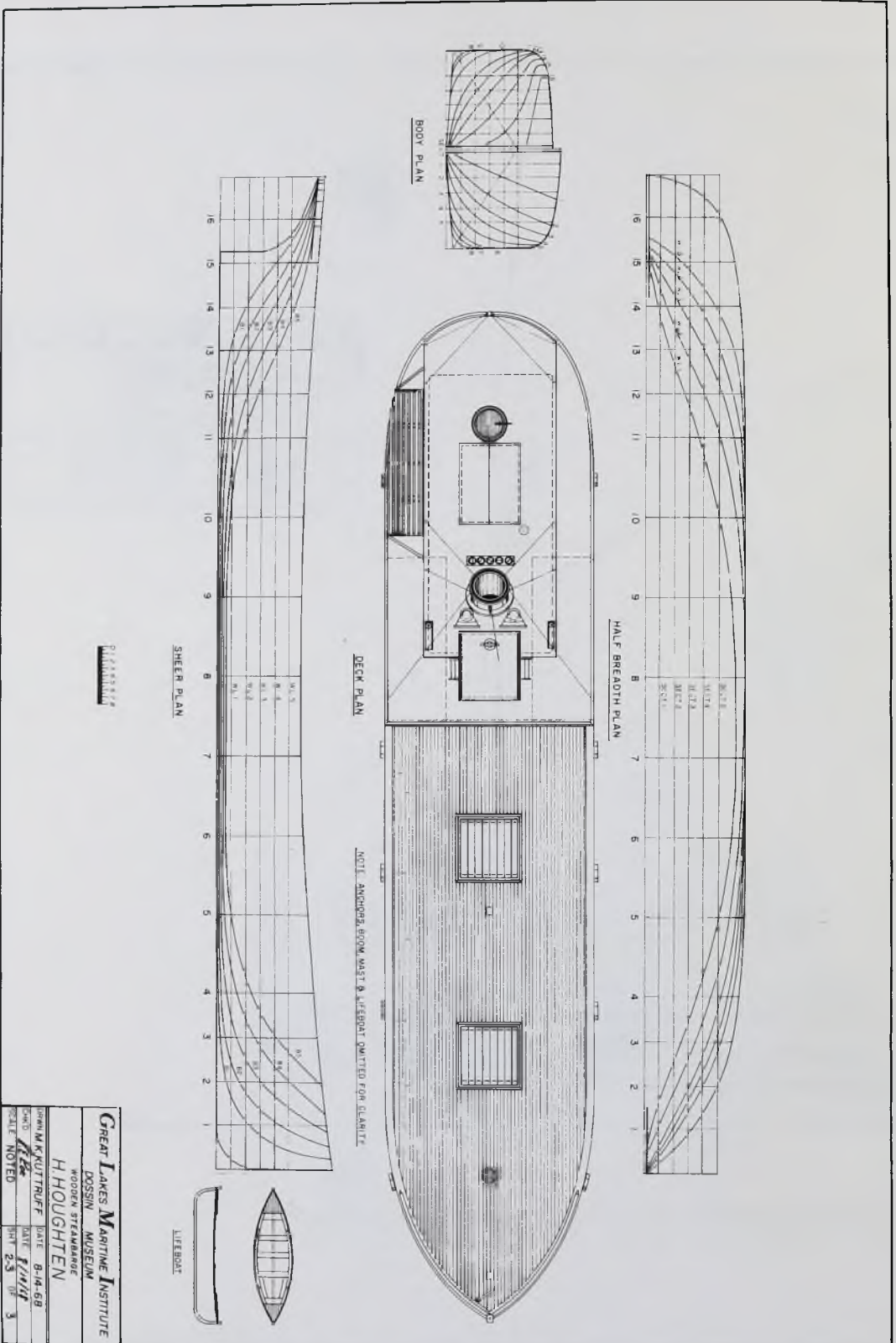


PILOT HOUSE
LOOKING AFT FROM SECT
NO. 9

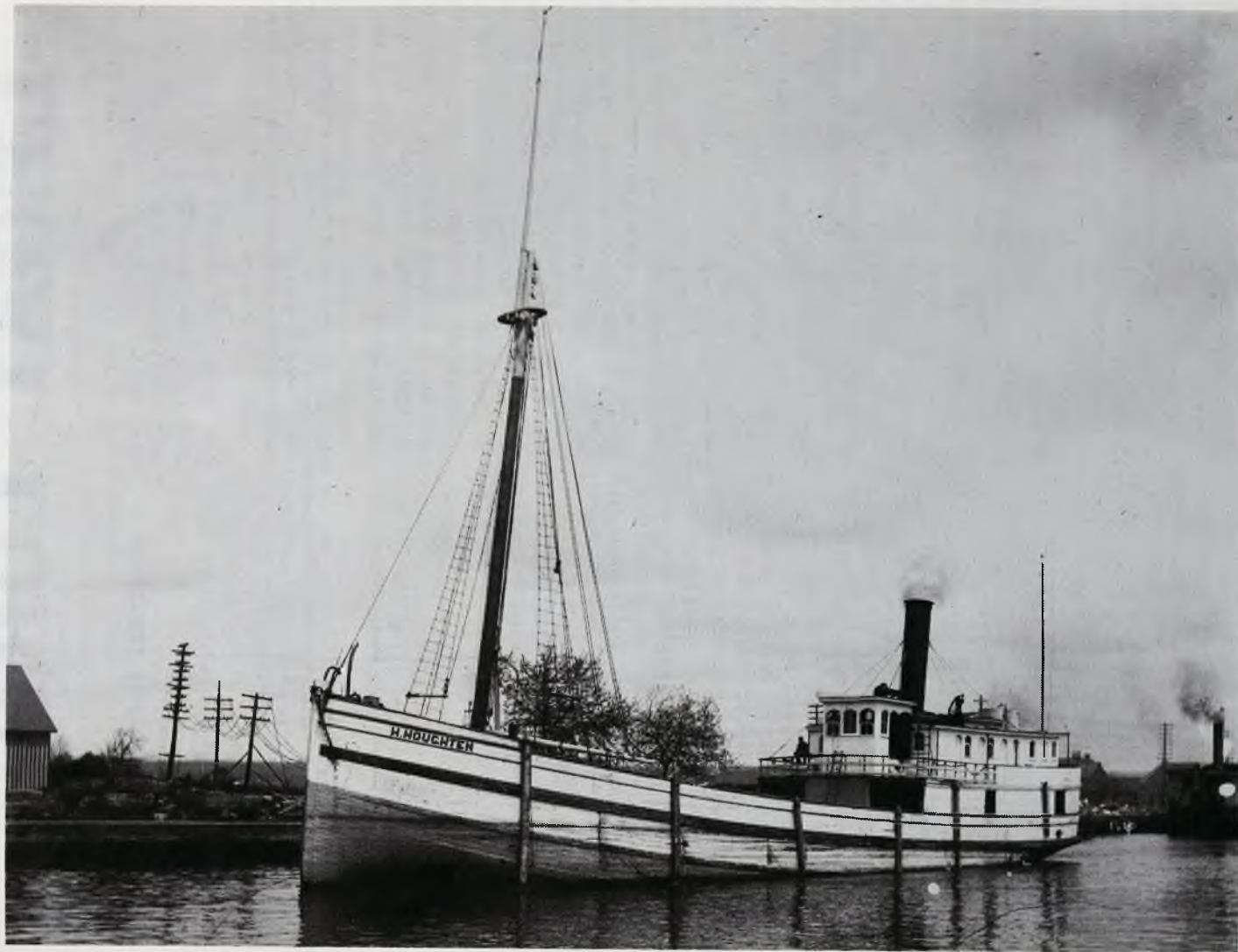


OUTBOARD PROFILE





Great Lakes Maritime Institute
 DOSSIN MUSEUM
 WOODEN STEAMBOAT
H HOUGHTEN
 DRAWN BY MCKNUTTRUFF DATE 8-14-59
 SCALE NOTED SHIP 2-3" 10' 3"



LEGAL LORE



by ROBERT I. SCHELLIG, Jr.

With the race between the *Tashmoo* and the *City of Erie* providing the subject for this month's main article, it seemed fitting that the legal aspects of the end of one of the participants in the great event should be presented in this same issue. Thus, the following account of the wreck and final disposition of the *Tashmoo* was drawn from legal files to prepare the story told here.

On June 18, 1936, at about 11:30 P.M., the steamer *Tashmoo*, while enroute from Sugar Island in lower Detroit River to Detroit, on a moonlight excursion, struck an unknown object concealed beneath the water which holed her in the area of the boiler room, causing her to leak badly with water entering the boiler and engine rooms. She immediately proceeded at full speed to the nearest available dock, the Brunner-Mond dock on the Canadian side just above Amherstburg, to disembark her passengers. She arrived there at 11:50 P.M. On arrival at the dock, as the water was gaining on the pumps, the tug *Progresso* with extra pumping equipment was called out to assist. Despite the efforts of the tug and the crew of the *Tashmoo*, she settled on the river bottom and immediately listed to port about 15 degrees with her main deck under water, and her promenade deck barely visible above the water line. Fortunately, all passengers were off when she sank.

On June 20 a *no cure - no pay* salvage contract was let to the Pyke Salvage Co. of Kingston, Ontario. Under this type of contract, the owner of the vessel is only required to pay if the salvage operation is a success. *Medical doctors take note.*

Before the operation began, the White Star Line, owners of *Tashmoo*, removed much of the furniture and

equipment from the vessel and stored it in their warehouse in Detroit.

Salvage operations were carried on until July 8 when serious additional damage to the hull had developed. Pyke declined to proceed further with the contract. In the meantime, officers of the Canadian Government, acting under Canadian law, notified the owners of *Tashmoo* that she was a menace to navigation in her present position and would have to be removed without further delay. Under Canadian law, when a vessel which has sunk in navigable water is found to be a menace to navigation, the owner is required to remove the vessel at his own expense, and on failure to do so, the Canadian Government is authorized to remove the wreck and collect the cost from the vessel's owners.

A further examination of the vessel was made by the surveyor for Hull Underwriters on July 8 and 9, following which he telegraphed his principals as follows: *TASHMOO situation greatly changed. Vessel broken open starboard side and bottom and various beams buckled. Also hull buckled and twisted. Upper decks badly twisted and buckled and otherwise damaged including paddle boxes and starboard wheel. This due to vessel's uneven position on rock and boulder bottom also current and wash of passing steamers which has also hampered salvage efforts. In my*

opinion provided vessel floated and delivered to drydock repairs would exceed \$130,000 and probably more. My opinion Hull Underwriters should make no further effort salvage vessel which is also opinion our wreckmaster, but should consent to owner taking any steps owner may desire as to removal of wreck.

It is ironic to note that the *Tashmoo*, a vessel whose enormous wake was a constant source of destruction, should herself be destroyed, in part, by the pounding of wash from other steamers.

To this telegram the Hull Underwriters replied: *We agree to stopping salvage operations and owners making arrangements to remove wreck*

at their expense.

The Hull Underwriters paid White Star Line the face amount of the policy and refused to continue in the salvage operations.

Thus the *Tashmoo's* fate was sealed on July 9, 1936. The removal contract went to Pyke Salvage Company and the removal of the wreck was completed on August 29, 1936.

The litigation began about the same time. Various insurance companies, owners, White Star Line, and Charterers *Tashmoo* Transit Company, battled through the courts until finally on January 18, 1943 a decree was entered on behalf of owners against a British insurance company for the awesome sum of \$106.44!



The dawn of June 19, 1936 presented a sad picture of the beautiful *TASHMOO*, resting on the bottom, mortally wounded, at the Brunner-Mond Dock at Amherstburg, Ontario.



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Otto Strek; *Detroit*

Carl Luhrs; *Toledo*

*Jan. 1...*Canadian Pacific's *Beaverpine* was officially declared the first arrival into the Port of Montreal in 1970. The traditional award of the gold-headed cane was bitterly disputed by the Soviet freighter *Lena*, which had docked several hours earlier than the winner, at 2:15 AM. The controversy arose over the official harbor limits at Tracy, near Sorel. *Beaverpine* was timed at this check point at 12:19 AM, January 1, and *Lena* was timed at 10:15 PM, December 31, and ruled out. The error was blamed on the pilot for not recognizing the new harbor limits established by the National Harbours Board last year.

...The *Yankcanuck* arrives at the Canadian Soo about 36 hours after the Coast Guard icebreaker *Mackinaw* chopped her free of ice up to eight feet thick on the St. Clair River. (see photo in TELESCOPE, current volume, page 58)

...The U. S. Lake Survey reported that seasonal fluctuations had sent the levels of the Great Lakes generally below their levels of December 2. Lake Superior is three inches below its level of a month ago. Lakes Michigan, Huron and Erie are two inches lower.

*Jan. 2...*Capt. Frank Manzzutti, owner of the *Yankcanuck* hopes to make one or two more trips between the Canadian Soo and Windsor, Ontario.

*Jan. 4...*The *Yankcanuck* sails from Sault Ste Marie, Ontario, for Ojibway, just south of Windsor, with a load of steel.

...The self-unloader, *Peter Reiss*, headed for Detroit from Toledo with a load of coal, became stuck in Lake Erie ice at 6 PM, eleven hours after sailing from Toledo. She had reached a point about two miles from Detroit River Light. No immediate effort was made to free her.

*Jan. 5...*The Coast Guard cutter *Acacia* came to the aid of the *Yankcanuck* in the St. Clair River.

...The *Peter Reiss* snapped her tail shaft this afternoon in a freak accident while backing in an ice field preparatory to making a new run to freedom from the ice at the mouth of the Detroit River. The rudder chain broke, permitting the rudder to

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slam forward into the turning propeller. The impact ripped a seven foot gash in the rudder, and dropped the 73-inch wheel into the mud bottom of the channel. The Canadian tugs *Amherstburg* and *Atomic* are going to her aid.

Jan. 6...The tug *Amherstburg* towed the *Peter Reiss* to the Zug island dock of Great Lakes Steel, at Detroit, with the tug *Atomic* in the lead as an icebreaker.

...Ice, building up in sub-zero weather, caused the Coast Guard cutter *Acacia* to become stuck in the St. Clair River this morning. She is alongside the *Yankcanuck*, which she was attempting to free.

Jan. 7...Great Lakes fleets in the Iron ore trade chalked up the highest December tonnages in history when they moved a record 3,316,734 gross tons. This does not include ore which entered the Lakes through the Seaway. Previous high for December was in 1959, when 3,149,947 tons were carried.

...U. S. Steel's ore carrier *Enders M. Voorhees* has been withdrawn from service after falling behind in her schedule and has gone into winter quarters in Milwaukee, Wisconsin.

Jan. 8...The *Yankcanuck* remains fast in the lower St. Clair River, as the cutter *Acacia* tries in vain to make a path for her. Coast Guard report ice up to 50 inches thick, with seven inches of snow on top, in the worst jams on the St. Clair River within memory.

...The cutter *Bramble* which had undergone repairs to her thrust bearing at Sturgeon Bay, Wisconsin, sailed for Detroit.

...The *Irving S. Olds* was the last ore-carrier to lock through the Soo, upbound. She was preceded by the *Philip R. Clarke*.

Jan. 9...The U. S. Coast Guard is investigating complaints that it is responsible for damaging dock and boathouses along the St. Clair River. The damage apparently occurred when tons of ice were displaced while the icebreaker *Mackinaw* was shepherding the *Yankcanuck* north through the ice-clogged river.

Jan. 10...Shipping closes on Lake Superior as a Coast Guard helicopter removes crews from the lake's two island light-houses. Picked up were crews of Manitou Island, four miles east of Keeweenaw Peninsula, and Passage Island, three miles northeast of Ile Royale. Removal of the crews coincided with the passage of the last long ship downbound.

...*Peter Reiss* went into the drydock of American Ship's Toledo yard for removal of her tail shaft, wheel and rudder which sustained damage in an ice accident January 5. After removal of the damaged parts she was taken out of the drydock to allow work on other vessels to continue.

...The Canadian icebreaker *Alexander Henry* was reported on her way from Georgian Bay to aid the *Yankcanuck*, which remains in

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an ice jam despite efforts of the *Acacia* to free her.

...U. S. Steel considers diverting two ore vessels from Chicago to Lorain on the trip down from Lake Superior, but a decision will await further information on the St. Clair River ice conditions.

Jan. 11...The longest upper Great Lakes shipping season is officially ended at 11:42 AM as the *Irving S. Olds* follows the *Philip R. Clarke* down through the Poe Lock.

...*Yankcanuck* finally reaches Windsor, Ontario.

Jan. 12...The convoy of *Irving S. Olds*, *Philip R. Clarke*, and the icebreaker *Mackinaw*, halted for the night at Russell Island in the St. Clair River. They reported slow going in ice which has clogged the river for the past two weeks.

...Two other vessels of U. S. Steel's winter fleet, the *A. H. Ferbert* and *Arthur M. Anderson* arrived in Milwaukee to go into winter layup. The *Cason J. Callaway* is due tomorrow for layup. All three had delivered iron ore in the Chicago area.

...The *Yankcanuck*, escorted by the Canadian icebreaker *Alexander Henry* was reported in the St. Clair River upbound for the Canadian Soo, from Windsor.

...A total of 23 passages were made through the Soo during January, 1970, by commercial vessels. A total of 98,565,229 net tons of cargo passed through the locks in the season that ended on January 11, 1970, falling somewhat short of the record 1953 season when 128,481,596 tons were logged.

...The tanker *Venus* is in Lake Michigan, lodged in ice about ½ mile from St. Joseph, Michigan. The cutter *Woodbine* is on the way to aid the ship.

Jan, 13...The cutter *Woodbine* becomes beset by ice along side of the *Venus*. The Cutter *Raritan* is now being sent out of Milwaukee to aid both stricken vessels. The *Venus* is loaded with 1½ million gallons of fuel oil and gasoline. The ice is said to be six feet thick.

...The *Clarke* and the *Olds* have hove-to at the western end of Lake Erie to wait until morning to resume their fight with the ice. They are 36 miles west of Southeast Shoal.

...The floe of ice down the Detroit River has created a solid jam stretching from the Erie Islands to the lower river. This jam was so severe that the *Mackinaw* was diverted to assist the Coast Guard cutter *Ojibwa* into Toledo, Ohio. The *Ojibwa* had assisted the *Robert S. McNamara* from Toledo to the Detroit River, and was then unable to get back to her port. In Lake Michigan, meanwhile, the cutter *Mesquite* is being sent to help the tanker *Meteor* out of Grand Haven, Michigan. The ice field at that port is reported two miles wide and up to 36 inches thick.

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Jan. 14...The 1969 navigation season ended for the ore fleets today when the *Clarke* and the *Olds* put in at Lorain harbor, a little after 4 PM. This ended an all-day battle with the ice with the icebreaker *Mackinaw* helping every foot of the way. Tugs of the Great Lakes Towing Company broke out the harbor at Lorain.

...At the Canadian Soo, the *Yankcanuck* arrived at noon to go into winter layup at the lower harbor.

...After spending 48 hours trapped in Lake Michigan ice, the tanker *Venus* docked safely at St. Joseph, Michigan. The *Woodbine* crashed out a channel into the harbor.

Jan. 18...The former St. Lawrence River passenger cruise ship *St. Lawrence*, serving as a floating hotel in Copenhagen, is being used to accomodate refugees arriving in Denmark from Poland.



STADACONA at the Port Weller Piers on November 8, 1969.

Photo by B. GILLHAM

Jan. 19...Cargo tonnage moving on the St. Lawrence Seaway last year totaled 41 million tons, down 14.5% from 1968.

...After five tries, the cutter *Arundel* freed the trapped tanker *Meteor* on Lake Michigan. She was caught in ice five miles from her destination at Indiana Harbor, Indiana.

Jan. 21...Despite the loss of the barge *L. A. Learmouth* in the Arctic last year, the Canadian Government is investing another \$400,000 in the Axelbow ice plow. The fault of the sinking was attributed to the barge, insufficiently reinforced to withstand the ice pressure.

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L'ESCALE (ex-Arthur Cardin) now a floating theatre, has been hired by the City of Hull (Que.) from the Quebec government for the current winter layup season. The showboat, a former ferry, was renovated as a floating theatre a few years ago to bring performances of the arts to small communities on the St. Lawrence River. She is shown here docked almost directly opposite the Parliament Buildings on the Ottawa River.

Photo by GEORGE AYOUB

...Trapped in Lake Michigan ice, six miles off Chicago's 68th. Street, the tanker *Mercury* was rescued by the *Arundel* which then escorted her into Indiana Harbor.

Jan. 22...Informal discussions are being held between the United States and Canada to determine if tolls on vessels that use the St. Lawrence Seaway meet financial requirements. David Oberlin, administrator of the St. Lawrence Seaway Development Corporation, stated that present tolls did not meet construction and operating costs.

Jan. 23...Capt. Steven Hathy, 53, died in Ashtabula, Ohio. He was with the Boland fleet for 31 years, with his final command having been the *Joseph S. Young* in 1969.

Jan. 24...Oglebay Norton's Columbia fleet purchased the self-unloader *Frank Purnell* (a; *Steelton*) from Interlake.

Jan. 26...The Liberian freighter *Giannis N*; 37,500 tons, arrived in Montreal with 1400 British made cars on board. She is the largest cargo ship to visit the port during the winter.

Jan. 27...A new patrol boat has been acquired by the Port of

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Montreal to curb pilferage, pollution, and to assist in traffic control around the harbor. Built in Vancouver, B. C., the 28-foot vessel was transported by truck and will be christened *Vigiland I*. (The number distinguishes her from another vessel of the same name.)

...The International Shipmasters Association meets in convention at Detroit, Michigan. During the sessions, Captain Donald Erickson, Master of the *William Clay Ford*, and Grand President of the organization, presented a plaque and citation to Dr. George P. Cressman, Chief of the U. S. Weather Bureau. The presentation marked the 100th Anniversary of the Bureau, which originated in the Great Lakes.

...A TAG airliner crashes into Lake Erie, about ten miles off Avon Point, Ohio. It was headed from Detroit to Cleveland at the time of the crash.

Jan. 29...Adm. James A. Hirschfield, president of the Lake Carriers' Association, will retire in April of this year.

Jan. 30...Sen. Walter F. Mondale (D-MINN) said that hearings on his bill to cancel the \$150 million debt of the St. Lawrence Seaway Development Corporation would begin on February 17.

Feb. 1...Shifting ice and five-foot waves hampered the search for bodies and wreckage of the TAG Airlines plane which crashed through the Lake Erie ice January 28. The Coast Guard tug *Kaw* has been assigned to the search.

...Sen Vance Hartke, (D - IND.), chairman of a special subcommittee on the Great Lakes and St. Lawrence Seaway, said his committee will open hearings February 17, on plans for a massive assault on Great Lakes pollution. He said the hearings will also take up questions of operation and financing of the Seaway.

Feb. 2...Thirty-two crew members were removed from the tanker *Gezina Brovig* (in Seaway service) after a boiler room explosion about 300 miles N.W. of San Juan, Puerto Rico, on January 31. A Greek and a Soviet ship took part in the rescue.

...In Toledo, Ohio, the *Paul H. Townsend* of the Huron Cement fleet was towed to the Huron facility from the Cherry Street bridge, to be unloaded of her winter storage cement.

...Three car ferries, the *Highway 16*, *Madison*, and *Grand Rapids*, were unable to enter Muskegon harbor on Lake Michigan until the cutter *Woodbine* arrived to break a track through the ice packs. The *Mackinaw* is on her way there and is expected to do a more thorough job of breaking open the entrance.

...Gales and snow flurries are reported on Lakes Michigan, Huron, Erie, and Superior, as a cold front approaches.

...Assistance from the icebreaker *Mackinaw* has been requested in the Detour, Michigan, area as residents of Drummond Island feared their ferry connection with the mainland would be cut

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off. The ice is now eight inches thick.

*Feb. 3...*The Liberian tanker *Arrow* has gone aground on the rocks in Chedabucto Bay, Nova Scotia. She has been in Seaway service.



The Liberian tanker **ARROW** (*ex-Sea Robin; ex-Olympic Games*) was built at Sparrows Point, Maryland, in 1948. Dimensions: 549.6 x 64.4 x 29.9 - 11,379 gross tons; 6,897 net. She was in regular Seaway service since 1962.

Photo by GEORGE AYOUB

...A proposal that vessel speeds be kept below 15 miles per hour through the international section of the St. Lawrence Seaway between Montreal and Cornwall has been made by a joint Canadian-U.S. study. The Canadian Seaway Authority and Transport Department, together with the U.S. Seaway authority, Army and Coast Guard, has proposed varying speeds in various sections of the river.

*Feb. 4...*The Coast Guard icebreaker *Mackinaw* is scheduled to start working in the St. Mary's River today in an effort to keep ferryboat service open between Drummond Island and Detour Michigan. Tank trucks with fuel oil and school children are the principal users of the ferry at this time of year.

...The crane-boat *William H. Donner* has been bought by Miller Compressing Co., of Milwaukee, Wisconsin. Plans for their use of her were not revealed. Now laid up at Toledo, she will be towed to Milwaukee in the spring, according to a Miller spokesman.

*Feb. 6...*Dan Weber, long time Institute member, and Toledo news correspondent to TELESCOPE, died at Toledo today. Dan was

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equally well known for his activity with the Lake Erie Steam Association, and owned and operated a steam launch which had gained fame and note in the Maumee River area.

*Feb. 7...*A Chicago lawyer, L. A. Lincoln, has been elected to a vice presidency in the Great Lakes Towing Company in Cleveland, Ohio.

*Feb. 8...*The tanker *Arrow* broke in two and has been declared a total loss. The 11,372-ton tanker was under charter to the Imperial Oil Company, Ltd., and was carrying 3,800,000 gallons of bunker oil. The stern section was towed away, but sank.

...Lawrence B. O'Leary, director of the Lake Huron Basin office of the Federal Water Pollution Control Administration is studying the hulk of the *Monrovia* for possible pollution danger. The ship, which sank after a collision with the Canadian ore-carrier *Royalton* on Lake Huron in June of 1959, is said to contain about 50,000 gallons of heavy oil...enough to pollute 800 square miles of beach!

...The Coast Guard says the *Bramble*, using divers, has recovered the main piece of wreckage from the January 28 TAG Airline crash in Lake Erie.

*Feb. 12...*Seven control gates in the dam at the Soo on the St. Mary's rapids have been opened, and an eighth was lifted part way in a continuation of water control experiments on the levels of Lake Superior by the Corps of Engineers.

...The Coast Guard is considering use of a radar-like device that can see through fog and darkness to detect oil dumped by vessels off shore. The device weighs less than 100 pounds, and can be carried by a light patrol plane. It was developed by Aerojet General Corporation's Space Division. Last year the Coast Guard's planes spotted more than 800 such dumpings on off-shore waters.

...The Kinsman fleet ore-carrier *William J. Olcott* will be renamed *George E. Seedhouse*. Mr. Seedhouse is a supervisor of community centers and playgrounds of the Cleveland Board of Education. The *Olcott* is in the Chicago yard of American Ship, being prepared to return to service in the Great Lakes bulk trade this year.

...An old wooden barge loaded with coal has been found on the bottom of Lake Erie near wreckage of the plane that crashed off Avon Point. The barge is about 100 feet long by 40 feet wide.

*Feb. 13...*The Canadian Government was seeking damages up to \$1,100,000 from owners of the wrecked Liberian tanker *Arrow* for the cleanup of oil pollution along the coast. The owners, Sunstone Marine Panama, SA., Monrovia, are one of the shipping firms controlled by Aristotle Onassis, of Greece.

*Feb. 15...*The after-end crew of the self-unloader *Ben W. Calvin*, and Ford's *Robert S. McNamara*, have arrived to fit out

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for the coal run between Detroit and Toledo. They will sail March 1st.

...Rumors in Cleveland indicate that at least eight more lake carriers will go for scrap this year. No names given.

*Feb. 16...*The first ice report from Detroit Weather Bureau said heavy ice conditions in Lake Erie and on the St. Lawrence Seaway will delay opening navigation in those areas, but in the upper lakes near normal opening dates are expected.

*Feb. 18...*Republic Steel Corporation and Cleveland Cliffs Iron Company have reached an agreement in principle on a long-term contract for hauling ore. Details remain to be worked out by legal representatives for both sides. Four companies had been interested in the lucrative contract, which will replace one held by Wilson Marine Transit Company. The 15-year Wilson contract expires on December 31, 1971.

*Feb. 20...*The *Peter Reiss* was returned to the drydock at American Ship's Toledo yard for installation of her new shaft, and replacement of her wheel and rudder.

*Feb. 23...*The tanker *Mobil Chicago*, is reported stuck in some six-odd feet of ice, about a mile off St. Joseph, Michigan.

...Efforts to recover the wreckage of the TAG Airline plane will not resume until late April. The search was halted February 11 because ice and bad weather endangered divers examining the submerged wreckage.

*Feb. 27...*Armed with an 1899 law, federal officials in Cleveland plan to crack down on shipping firms whose vessels are polluting Lake Erie and the Cuyahoga River with waste.

...A check for \$776,389,56 was presented by the St. Lawrence Seaway Authority to the Caughnawaga Indian band near Montreal. The payment was made as an 80% settlement of Indian claims for land taken or damaged in construction of the Seaway.

MISCELLANEOUS

...*C. A. Bennett* (ex-*Viscount Bennett*; ex-*Berryton*; ex-*B. F. Berry*) and *Midland Prince* were resold by Marine Salvage, Ltd., through Jacques Pierot, Jr. and Sons to Spanish shipbreakers, Disguaces y Recuperaciones del Sur Emilio Alonso Castrillo. Scrapping was underway for *Midland Prince* on July 31, 1969, and *C. A. Bennett* August 29, 1969, at Puerto de Santa Maria.

...*Ong* (ex-*Congar*; ex-*Lake Transport*; ex-*Blue Cross*; ex-*Red-head*) formerly owned by Johnstone Shipping, Ltd., Toronto, was transferred to Hamilton, Bermuda and Canadian registry closed on January 7, 1970.

...The Canadian tankers *Coastal Cliff* (ex-*Bruce Hudson*) has been renamed *Witcroix* and the *Transtream* (ex-*Transiter*) has been renamed *Witsupply*, during October, 1969.

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...*Fire Chief* (ex-*John H. Farley*) steam tug built in 1894 at Cleveland, formerly owned by McAllister Towing, Ltd., of Montreal, has been dismantled and Canadian registry closed on January 5, 1970.

...For the general information of those interested in such material, reporter George Ayoub provides the following list of vessels sold by Steel Factors, Ltd., Montreal. (* indicates lake service.)

<i>Canadian Victor</i>	<i>Federal Husky*</i>	<i>Westmount</i>
<i>Canadian Observer</i>	<i>Empire John</i>	<i>Macaivellie</i>
<i>Canadian Highlander</i>	<i>Cyrus Field</i>	<i>Florida</i>
<i>Canadian Leader</i>	<i>Lord Kelvin</i>	<i>Blanche Hindman*</i>
<i>Canadian Conqueror</i>	<i>Algosoo*</i>	<i>Algocen*</i>
<i>Imperial Welland*</i>	<i>Keyshey*</i>	<i>Hillsdale*</i>
<i>Imperial Simcoe*</i>	<i>Coalfax*</i>	<i>Capt. C. D. Secord*</i>
<i>Bricoldoc*</i>		<i>Vedalin*</i>

...U. S. Steel's *Ralph H. Watson* and *Leon Fraser* will be converted to oil burners this winter. The *Watson* will undergo the conversion in Cleveland, and the *Fraser* at Milwaukee.

...At Sturgeon Bay, Wisconsin, the self-unloader *Rogers City* will be fitted with a bow-thruster during the winter.

...The Norwegian freighter *Oslo*, built at Bergen in 1962, has been acquired by Agenci Maritime, Inc., Quebec, and renamed *Nordbec*. Transfer was durinf November, 1969, and the renaming was apparently delayed until December.



The former Morrisburg-Waddington ferry **WADDINGTON** is still operating as **I.V. No. 5** (left). On the right is **I.V. No. 3**, formerly a newsprint carrier **ETHEL TOMBS**. The two vessels were in a convoy with a self-propelled dredge and a tug, all owned by Verreault Navigation Inc., Les Mèchins, bound for Port Burwell, Ontario, on October 26, 1969.

Photo by GEORGE AYOUB

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