

MR. BOWEN, a resident of Lakewood, Ohio, has written and published three books. The latest, *Shipwrecks of the Lakes*, is reviewed in this issue. The present article is based on an address given before the St. Louis County Historical Society in Duluth, September 22, 1953.

GREAT LAKES

Ships and Shipping

DANA THOMAS BOWEN

WHEN THE St. Lawrence Seaway becomes a reality, it will undoubtedly revolutionize many aspects of commerce on the Great Lakes.¹ The development of Minnesota taconite, North Dakota oil, and Canadian high-grade iron ore may also have far-reaching effects on shipping traffic on the lakes.

Watching the docks of a Great Lakes harbor today, one will see many small freighters from some of the leading maritime countries of the world. Overseas companies operate these tramp ships, which bring to the lakes the products of foreign lands and carry to all corners of the earth goods produced in the United States and Canada. The cargoes are often unbelievably varied. Recently I saw a large quantity of Dutch and German beer being unloaded along with flower bulbs, dried fish, and sugar.

Although ships of foreign registry are coming into lake ports in increased numbers each year, their size is limited at present by

the locks in the St. Lawrence River through which they must pass to reach the Great Lakes. The St. Lawrence Seaway will undoubtedly greatly increase the present trickle of international commerce, bringing the products of the world by water to the heart of the North American continent.

Only a little more than a century ago men were building canals and ships and erecting the base of a giant commerce on the lower lakes, but only a few traders and adventurers were poking around in the dense woodlands of the upper lakes area. Large-scale shipping on the Great Lakes did not begin until iron and copper were discovered in the 1840s near the shore of Lake Superior. At that time the region was pretty much a wilderness.

News of the discovery attracted increasing numbers of men to the wild Michigan country in 1844, greatly overtaking the puny lake transportation facilities then available. Mining towns quickly sprang up at prospective harbor points along Lake Superior's south shore, and the capacity of the small fleet of sailing vessels on the big lake was stretched to the limit in carrying men and

¹ The United States Senate approved the seaway bill on January 20, 1954. It had not yet come before the House for a vote when this issue went to press.

supplies to the new operations. More and larger ships were urgently needed.

To help meet the acute shortage of vessels on Lake Superior, Captain James Averill built and outfitted at Chicago a new propeller steamer, the "Independence," with equipment for hauling it around the rapids of the St. Marys River at Sault Ste. Marie, and started for the upper lakes in the summer of 1845. With its sails set and its two propellers churning, the little two-hundred-and-sixty-two-ton "Independence" could not make much more than a scant five miles an hour going up Lake Michigan. After successfully navigating the Straits of Mackinac between Lakes Michigan and Huron, the ship entered the mouth of the St. Marys River at Detour Passage. Then began the tortuous run up the uncharted river to Sault Ste. Marie.

Upon arriving there, the ship was hauled out of the water, and for seven weeks all hands struggled to get it across the one-mile portage leading to Lake Superior. Late in October the "Independence" was at last launched in the river above the rapids, and promptly readied for a trip up the lake. Haste was necessary, as winter was close at hand, but the ship left its pier fully loaded with supplies for the mining settlements of the Keweenaw Peninsula. With that trip the "Independence" became the first steam craft to plow the waters of Lake Superior. For eight years it plied its trade, competing with other steamers that were quickly hauled after it over the portage trail. In 1853 the ship blew up as it was leaving the Soo dock on what was to have been its last trip of the year.

The appearance of the "Independence" on Lake Superior was a significant event for the little mining and fur-trading settlements along the lake. For them it heralded the beginning of a new era — the steamboat age — which would mean more dependable transportation of both men and supplies. No longer would these communities have to depend upon the uncertain arrival of schooners powered only by wily winds. The

"Independence" pioneered a route that was to prove satisfactory for a long time.

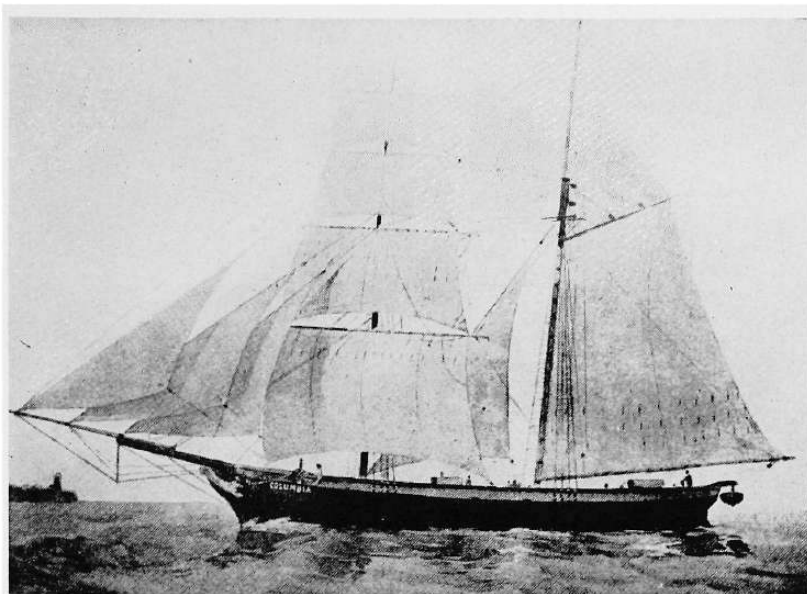
As the new mines began to produce, however, shipping difficulties became apparent. Between Lake Superior and the lower lakes lay a barrier — the rapids of the St. Marys River. Rocky, and filled with swirling, crashing waters, this one-mile stretch of river stood between the newly discovered ore and its eastern markets. Commerce was strangled because cargo vessels could not pass between the lakes.

It remained for a salesman of weighing scales to break this bottleneck. He was Charles T. Harvey, who in the course of his selling duties called at the Soo and became aware of the big problem. Financing and constructing a canal around the rapids was an immense job, but Harvey tackled it, persevering through many disheartening difficulties. At last on June 18, 1855, the vessel which inaugurated ship traffic by water between the upper and lower lakes moved through the new canal. It was the side-wheeler "Illinois," commanded by Captain Jack Wilson, upbound to Lake Superior. The "Baltimore," a steamer under Captain John Reed, was the second ship through, passing down to Lake Huron.

With the opening of the Soo Lock, the development of the Lake Superior country began in earnest. Steamboats inaugurated regular sailing schedules, and on them families and supplies flowed northward. Copper and iron ore soon made up the full cargoes of down-bound lake vessels, while coal, needed in the new settlements on Lake Superior, made an excellent bulk cargo for the return trip up the lakes. And so it was that these minerals became the basis of Great Lakes commerce.

AT THIS POINT, it has always seemed to me, the lakes trade entered its most interesting phase — the transition from small to large vessels. In many respects, the change-over was characterized by experimentation and tragedy. The cry was ever for bottoms that could carry greater tonnage. Shipbuild-

THE brig
"Columbia"



ers, turning out a new vessel, would turn it over to the eager mariners to try out. Some of these ships had been improved by experimenting in length, beam, speed, power, hull lines, and so on. When unlooked-for heavy weather was encountered, the innovations sometimes made the ships difficult to handle, and many were lost. By such trial and error methods, sounder ships were gradually constructed to meet the special problems and conditions of the lakes. In response to the demands of certain trades, vessels were developed that were suited to hauling such specific cargoes as ore, coal, grain, lumber, stone, sand, and package freight.

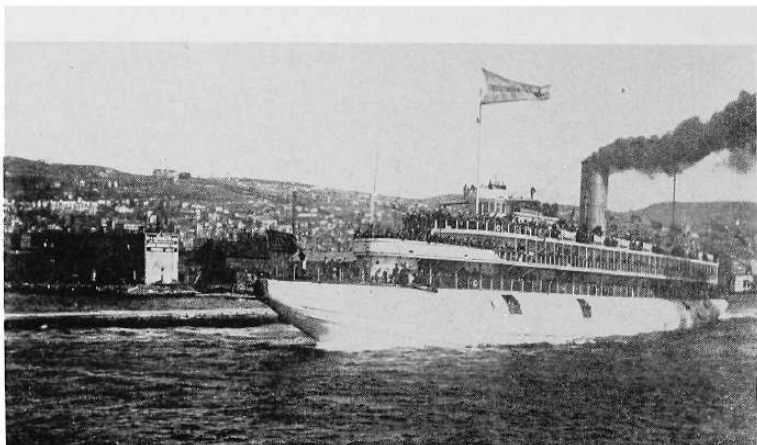
It early became evident that iron ore was to be the prime cargo of the lakes, but at first no special ships were needed to transport it. Three historically important ore shipments stand as guideposts to mark the flow of this rapidly expanding trade. The earliest, comprising six barrels of the red mineral, was placed aboard the steamer "Baltimore" at Marquette, Michigan, on July 7, 1852. This shipment was consigned

to Detroit and had to be portaged at the Soo.² No one knows how the ore traveled from the Soo to Detroit, although it was probably placed aboard a steamer or schooner bound for that port.

Three years later, on August 14, 1855, another pioneer shipment of iron ore left Marquette. This time it was the first full cargo of this mineral to be sent down the lakes. It consisted of a hundred and thirty-two tons, loaded by wheelbarrow aboard the brig "Columbia," Captain Justus O. Wells, master. The vessel passed down through the new Soo Lock on August 17, and unloaded its cargo by wheelbarrow on a dock at Cleveland. It is interesting to note that the "Columbia" was ninety-one feet long and had a twenty-four-foot beam. If it were placed athwartships on the deck of the "Wilfred Sykes," one of today's ore carriers, the "Columbia" would hang over only ten feet on each side, for modern freighters are about as wide as the earlier vessels were long.

The third significant shipment, which left Superior, Wisconsin, on November 11, 1892, in whaleback barge "102," was the first cargo of iron ore from the Mesabi Range to be carried to the lower lakes. According to the bill of lading, Captain E. Peabody was mas-

² The bill of lading covering it is owned by the Western Reserve Historical Society of Cleveland, Ohio. It is reproduced in Ralph D. Williams, *The Honorable Peter White*, 63 (Cleveland, 1907).



PASSENGER
whaleback
at Duluth, 1885

ter of the vessel, which loaded 2,073 gross tons of ore from the Mountain Iron Mine consigned to Cleveland.³

By the time the third shipment was made, an unusual type of craft had been designed and built by Captain Alexander McDougall of Duluth for use in the ore trade. The story of these vessels, called "whalebacks" because of their shape, comprises a distinctive chapter in the history of Great Lakes shipping, for these boats floated thousands of tons of ore to the lower lakes. I have always considered them the earliest effort at streamlining the steel-hulled freighter.

McDougall described a whaleback as "a boat with a flat bottom designed to carry the greatest cargo on the least water, with rounded top so that water could not stay on board; with a spoon-shaped bow to best follow the line of strain with the least use of the rudder and with turrets on deck for passage into the interior of the hull."⁴ Many of these unique craft were built in the American Steel Barge Company's shipyard in West Superior.

Although they are no longer coming off the ways, two whaleback steamers and a barge or two are still sailing the Great Lakes. One of the steamers—the "John Ericsson" now under the Canadian flag—looks today very much as it did when it left the shipyard many years ago. The other, a tanker of American registry, now known as the "Meteor," little resembles its former whaleback self.

The development of special types of ships was not, of course, limited to the ore trade. During the late nineteenth and early twentieth centuries, the shipping of lumber was also a big business on the lakes. Huge fortunes were accumulated in the lumber industry, and many ships, built especially for this trade, plied the lake lanes. Called "lumber hookers" by the sailors, most of them were built of wood, although a few later ones were made of steel. Slow steamers that usually towed one, two, or even three barges, the "hookers" averaged only about eight trips a year, suffering long delays in loading and unloading. Nevertheless, these ships provided a very inexpensive way to transport lumber. They disappeared one by one only when the heyday of lumber shipping on the Great Lakes drew to a close. Some were destroyed by fire, some by stranding, a few by collision, and several just wore out tied to a dock. All are now gone.

In recent years new cargoes on the lakes have stimulated the building of efficient and economical ships to carry them. For example, there are crane ships, self-unloaders, Portland cement and automobile carriers, sand and stone boats, and tankers. Each type serves its trade perfectly.

Crane ships carry their own loading and

³ Reproduced in *Skilling's Mining Review*, vol. 13, no. 3, p. 1 (May 31, 1924) and owned by the Western Reserve Historical Society.

⁴ McDougall, *Autobiography*, 81 (Duluth, 1932).

unloading derricks or cranes. If the cargo is scrap iron, as it often is, the crane ship carries a huge magnet which handles the scrap with a minimum of delay. Self-unloaders transport primarily crushed stone, sand, or coal. A complicated system of belt conveyors in the hull, connecting with a long boom on the deck which can be swung over the side, makes it possible for these ships to unload heavy cargoes, sometimes amounting to eighteen thousand tons, right on the dock.

The Portland cement ship, which carries cement or the clinker from which it is made, is a wonder to behold. Various pipes and slides make it possible to unload quickly, and the cost of shipment is very low. Expense is also a factor in shipping automobiles by lake carrier, since this is the manufacturers' cheapest method of transporting new cars.

Still another specially constructed freighter — the humble sand sucker — is responsible not only for transporting but also for processing its product. This type of ship is fitted with elaborate pumping and screening systems for sucking sand from the bottom of the lake, grading it, and taking off the surplus water. Thousands of tons of high quality lake sand obtained in this way are used each year by the construction industry.

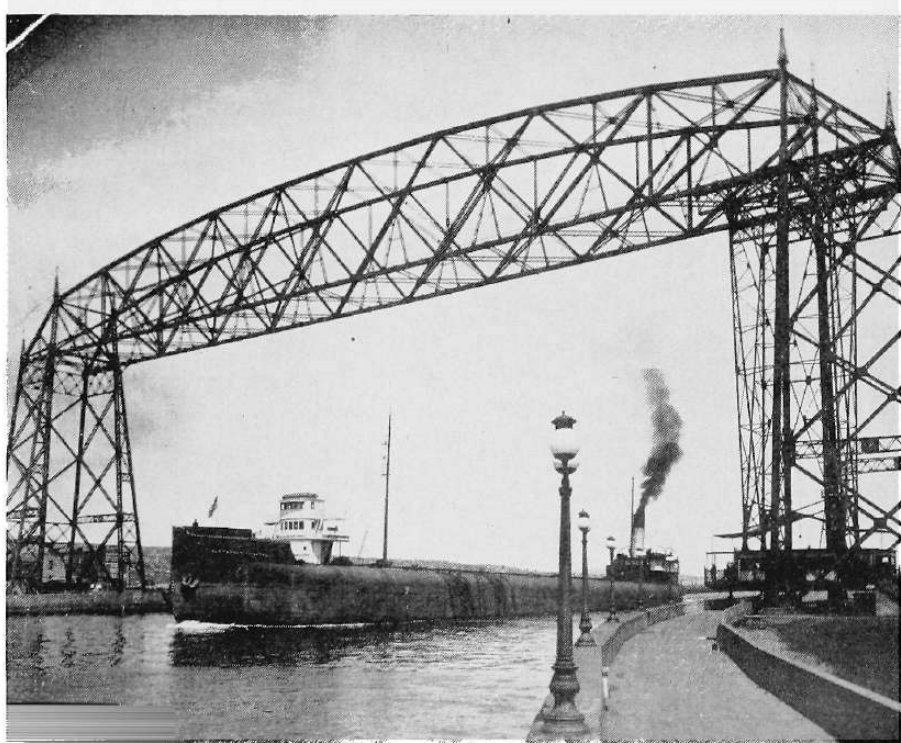
Such bulk cargoes as ore, coal, grain, sand, and stone are the backbone of present-day Great Lakes shipping. Around the turn of the century, however, a group of steamers known as "package freighters" churned up and down the lakes hauling a great variety of produce. At the turn of the century every major railroad touching the Great Lakes owned and operated package freighters. Maintaining regular schedules, these trim, fast ships were the trucks of the lakes.

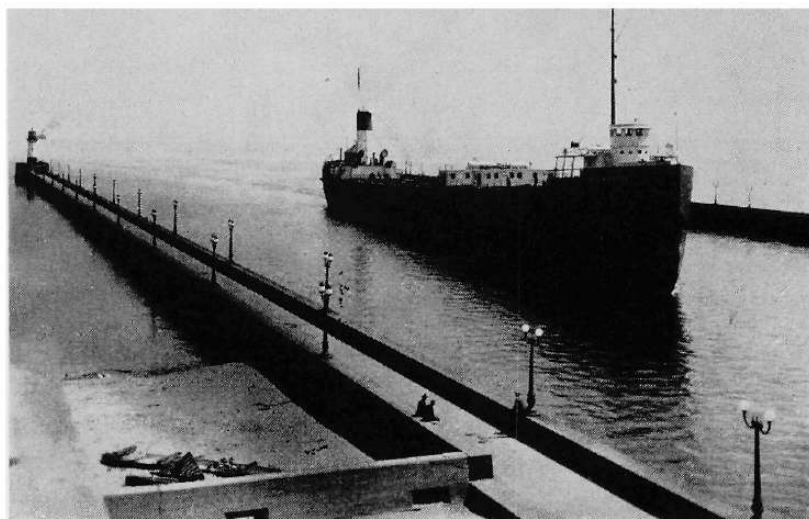
With the development of hard-surfaced roads, however, package freight cargoes disappeared, and the ships were left without business. Among the last to give up the ghost was a fleet of fine steamers belonging to the Anchor Line and named for railroad presidents. Another concern, the Minnesota-Atlantic Transit Company, hauled package freight well into the present century in its Poker Fleet — so called because the ships were named "Ace," "King," "Queen," "Jack," and "Ten." The line even had a little boat called the "Nine."

During World War II the government sent most of the package freighters to salt water, where some were involved in exciting incidents and even were lost in action with the enemy. Others came through the conflict safely, and here and there around the world are still plodding their weary

THE *whaleback*
"Alexander
McDougall"
approaching Duluth

Spring 1954





ORE carrier
entering
the Duluth canal

ways. As an American enterprise, however, the package freight business on the lakes has ended. Since some sections of Canada are not yet served by a network of fine highways, package freight steamers flying the flag of our northern neighbor still operate on the Great Lakes and on the St. Lawrence River.

For a Duluth audience, no discussion of freighters would be complete without mentioning the "Mataafa." That ship has been well known here since November 28, 1905, when it was wrecked in Duluth harbor. Nine members of the crew lost their lives. Both the "Mataafa" and the "Nasmyth," a barge it was towing, were loaded with ore, and both had cleared the harbor and started down the lake when they encountered a severe storm. In attempting to return to port, the "Mataafa" cut loose the barge, which anchored out in the lake and there safely rode out one of the fiercest storms ever to hit the Great Lakes. The "Mataafa," however, came to grief after entering the harbor when, caught by wind and waves, it swung around out of control and "fetched-up" stranded. The vessel was later salvaged, and it is now hauling automobiles.

ALTHOUGH the future of freighting on the inland seas looks bright, it is a matter of

regret that passenger ships have almost disappeared from these waters. Only one passenger line still operates the entire length of the lakes. Its two ships — the "South American" which touches Duluth, and the "North American" which runs on the Chicago division — offer the only remaining opportunity to spend a grand vacation going by water from Buffalo to Duluth.

A few other ships still carry passengers between certain points. Smaller steamers and Diesels operate between Mackinac Island and the mainland each summer. Lake Erie boasts the "Pelee," crossing between Sandusky, Ohio, and Leamington, Ontario, and a fleet of Diesel passenger ships operates between Sandusky and Put-in-Bay Island. A line of Canadian passenger ships operates out of Owen Sound on Georgian Bay to other bay ports and points on the northern shore of the Soo, and the Canadian Pacific still continues its delightful lake run between Fort William and Port McNicoll with the big steamers "Keewatin" and "Assiniboia."

The car ferries that cross Lake Michigan have delightful passenger quarters. Two new steamers, the "Spartan" and the "Badger," have just been added to the fleet of the Chesapeake and Ohio on that lake. Ferry steamers owned by the state of Michigan carry millions of people each year across the

Straits of Mackinac, and a new and elegant ship, the "Vacationland," recently began operations on these waters.

Toronto, too, has its ferry boats. In the summer of 1953 a resident of that city took it upon himself to put the excursion steamer "Cayuga" back into operation on Lake Ontario. He formed a corporation and sold stock at five dollars a share. Then he issued certificates elevating each stockholder to the high office of admiral of the ship. Undoubtedly the "Cayuga" will have a record number of admirals, but the stunt saved it from the scrap pile and it is now being readied to sail once more.

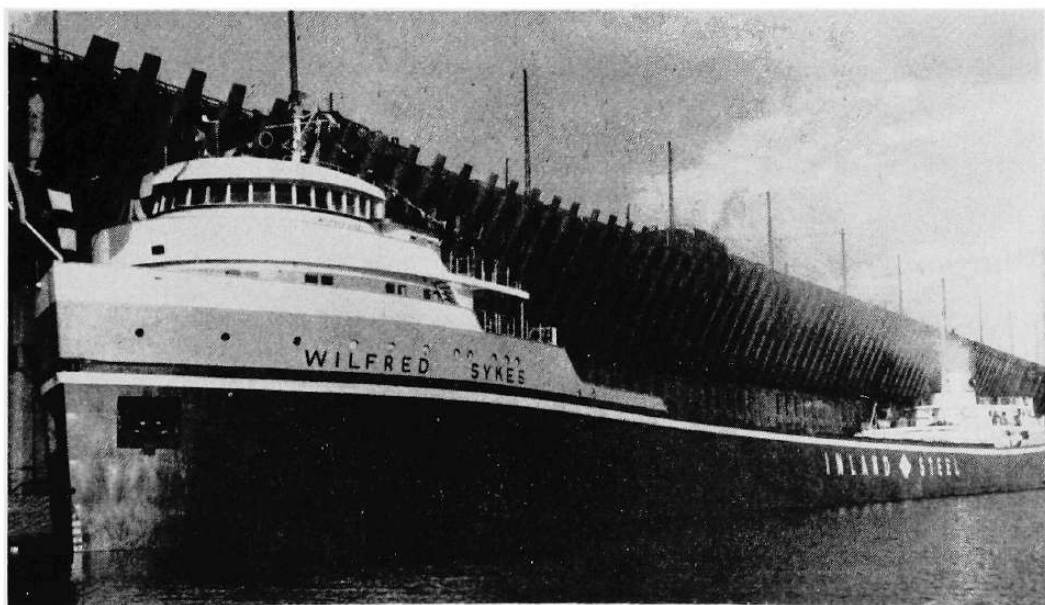
Excursion steamers are still operating on the lakes only in the vicinities of Buffalo, New York; Detroit, Michigan; and Hamilton, Ontario. The "Canadiana" runs between Buffalo and Erie Beach, Ontario, and the city of Hamilton operates the "Lady Hamilton" in the excursion trade there. Detroit has its two Bob-Lo excursion boats, the "Columbia" and the "Ste. Claire," but recently that city lost the passenger steamer "Put-in-Bay," which was intentionally burned and dismantled. For the lake enthusiast, it is a sad sight indeed to see the ships of the Detroit and

Cleveland Navigation Company's fleet lying idle along the shores of the Detroit River. What is to become of this fleet is anyone's guess, but as the days go by it appears probable that the ships will never sail again and that the colorful and romantic days of Great Lakes passenger boats have slipped away forever.

OF THE BUILDING of new and larger lake freighters, however, there seems to be no end. Immediately after World War II, some dozen or more were built to carry bulk cargo. Because they were larger than anything previously built and sailed on the lakes, sailors appropriately called them "super-dupers."

One of the most modern freighters on the lakes is the "Wilfred Sykes." When it was launched before hundreds of invited guests and interested spectators at Lorain, Ohio, on June 28, 1949, it was the largest ship on the Great Lakes — 678 feet long overall, with a seventy-foot beam. It is reported to have cost its owners, the Inland Steel Company, over five million dollars. It can run sixteen and a half miles per hour loaded, and seventeen and a half light. This speed enables the ship to make forty-four round trips a year be-

A modern Great Lakes freighter, the "Wilfred Sykes"



tween the Head of the Lakes and Indiana Harbor, Indiana, while the average for the fleet as a whole is only thirty-four trips. It was the first lake ship built to burn oil, and its steam turbine engines are capable of developing seven thousand horsepower. At the time of its launching, the next most powerful lake vessel could develop only forty-five hundred horsepower.

The "Sykes" propeller is eighteen and a half feet in diameter with four blades, each weighing more than three tons. Its ballast tanks can hold 12,310 tons of water, more than the average lake vessel's total cargo capacity. It is fitted with all the newest safety devices, including a network of watertight side tanks and collision bulkheads.

Living quarters on the ship are extremely comfortable. All licensed officers have private staterooms and baths. Crew members are quartered two men to a room with bath. Four guest staterooms and a lounge will accommodate eight visitors. All living and working space on the ship is air conditioned. There are two recreation rooms, and laundry rooms with automatic washers and driers. The galley has complete electrical equipment — dishwasher, garbage grinders, refrigerators, frozen food lockers, and similar conveniences.

When it was launched, the "Wilfred Sykes" was twenty-nine feet longer and three feet wider than any other ship on the lakes. At full draft it could haul 21,700 tons, while the average freighter hauls only 11,000 tons. Constructed with an eye to the future, its draft fully loaded is too deep for present channels and it does better carrying 20,000 tons.

Since 1949, almost every shipping line on the lakes has launched a vessel that compares favorably with the "Sykes." The honor of being the longest ship on the inland seas passed quickly, and at present the "Joseph H. Thompson" of the Hanna fleet, which is over seven hundred feet long, claims that distinction.

Giant carriers like these are difficult to handle in the harbors and in the twisting

rivers leading to many Great Lakes docks. There they rely upon the services of the doughty tug, a useful little ship, that has flourished throughout the transition from sail to steam. Even these small craft, however, have recently taken on a new look. Yesterday's tug puffed heavy clouds of black smoke and white steam as it struggled to get a freighter into a channel or up to a dock. Today the heavy smoke and the steam are gone, but the tug is many times more powerful than before. The Diesel engine has turned the trick.

Not a great many years lay between the windjammer and the Diesel-engined giant lake freighter of today, but those years have seen technological advances that have led to greater efficiency in many phases of Great Lakes shipping. The struggle for something better — larger and faster freighters, deeper channels, and faster loading and unloading docks — has never stopped. It goes on almost frantically, although sometimes world conditions step in and slow things down for a time. The depression of the 1930s, for example, held the big ships in their berths for several years. I recall one ship sailing during that period with five captains aboard, four of them serving in lesser positions than their papers warranted. But iron ore is king of Great Lakes tonnage, and since steel is of prime importance in the nation's economy, shipping always recovers and bounds quickly ahead.

In recent years the demand for iron ore has been tremendous. Lake freighters hurry up and down the shipping lanes establishing new records in the movement of this valuable resource. Old records are shattered almost every month of the shipping season, and when the figures for 1953 are complete, they may reach almost a hundred million tons. And it all began a scant century ago with the shipment of six humble barrels of red ore!

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