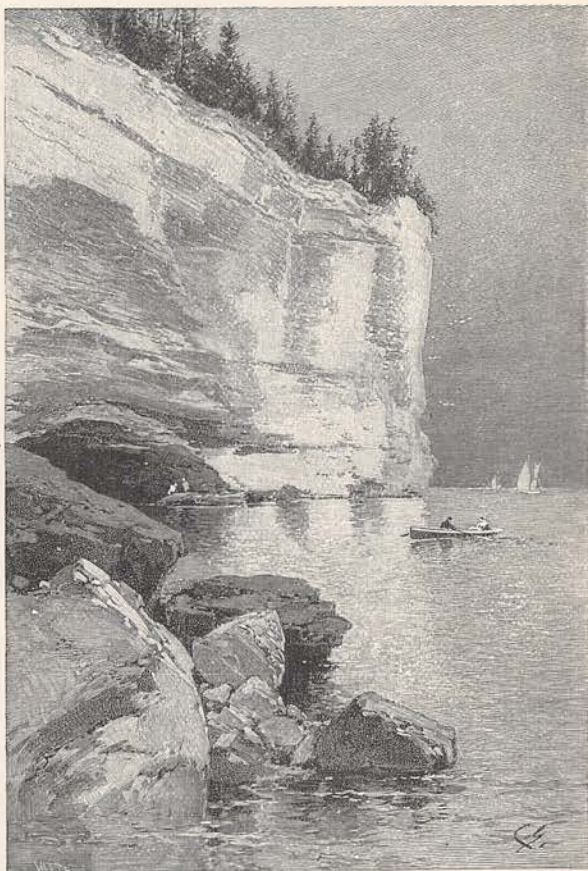


## "BROTHER TO THE SEA."

BY JULIAN RALPH.

YOU see Lake Superior best, as an incident in crossing the continent, when travelling over the Canadian transcontinental railroad, and of all the various "scenic wonders" that the different cross-continental railroads advertise, not one seems to me more grand or more grandly beautiful than this. For more than half a day the cars glide along the shore, whose irregularities provide a wide diversity of scenery, in woods, among rocks, and every few minutes close beside the closed ends of the great bays which spread out into an ocean-like endlessness of water. Each time that I have made the journey it has been my good fortune to see the lake clear, smooth, and brilliant, as if it were a vast mirror that Dame Nature might have been holding up to herself. And the lake, like a huge bowl of quicksilver, has each time caught and held the brilliant scene around it—the cloud-littered shining skies, the quiet stately forests, and the towering rocks, which rise in all the forms of turrets, pinnacles, ramparts, castellated heaps, and frowning walls, now green, now red, now purple, and anon dull brown or ashen.

Lake Superior is almost everywhere noble, grand, impressive, majestic. Its surroundings are, for the most part, far more suggestive of what one fancies the ocean should be than are those of the oceans themselves. Old Crowfoot, with his marvellous faculty for aptly nick-naming whatever new thing he saw, was never happier than when he tried to express in a phrase the impression Superior made upon his mind. The Canadian officials were bringing him on a sight-seeing tour to Montreal from the Blackfoot



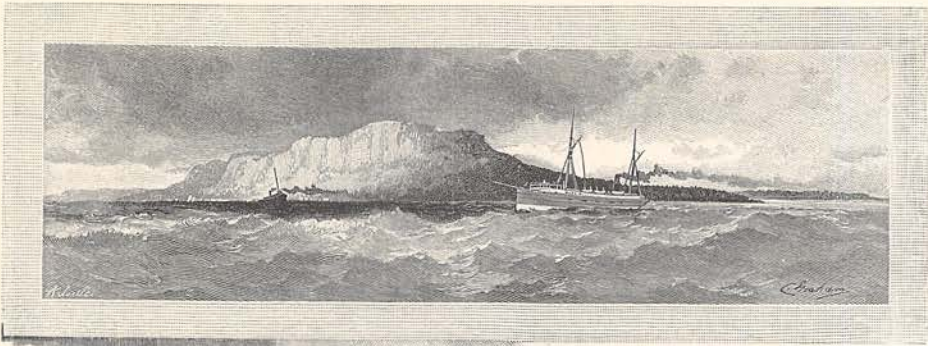
GRAND ARCH, PICTURED ROCKS, LAKE SUPERIOR.

territory on the plains, where he ruled the wildest Indians of Canada; and when he saw the greatest of all lakes, and saw it again and then again, until he comprehended its majesty, he said, "It is the Brother to the Sea."

It is the largest lake in the world, and the largest body of fresh water. It is 380 miles in length and 160 miles across in its widest part. Its watery area of 32,000 square miles proves it to be the size of the State of Indiana, or four times as big as Massachusetts.\* It is about 600

\* The United States Geological Survey makes its area 31,200 square miles, its length 412 miles, its maximum breadth 167 miles, its maximum depth 1008 feet, and its height above the sea-level 602 feet.





THUNDER CAPE, NORTH SHORE.



TRAP-ROCK CLIFFS, NORTH SHORE.

feet above the sea-level; but the government charts show that in its deepest part the water has a depth of 231 fathoms, or 1386 feet, so that there, at least, the lake is more than 700 feet below the surface of the sea as well as 600 feet above it. North of Keweenaw Point, on the south side, there is a depth of 1008 feet, and great depths, above 500 feet, are scattered all about the lake. Its shore line is 1500 miles in length.

One very dignified English authority terms Lake Superior "the head of and chief reservoir for the most magnificent system of inland navigation in the world," a system which, if taken to embrace the water route from the source of the St. Louis, emptying into the head of the lake, to the mouth of the St. Lawrence, is 2100 miles in length. Curiously enough, the same plateau in Minnesota wherein the St. Louis has its beginning is also the starting-point of the Mississippi and the Red River of the North. But Lake Superior owes little to the St. Louis. It receives the waters of 200 rivers, and drains a territory of 53,000 square miles exclusive of its own area.

The lake is practically the property of the United States. The Canadians own the beautiful north shore, but very little of the lake itself. The main body of the traffic on the lake is ours by a right that cannot be questioned, for it proceeds from our vastly greater population, and from our possession of the coal supply of the continent, which gives to American vessels the cargoes with which to return westward after having floated grain and ore eastward.

Lake Superior is a capricious monster, demanding skilled seamanship and the use of powerful and staunch boats, the majority of which are comparable with the vessels in our Atlantic coasting trade. The lake is a veritable womb of storms. They develop quickly there, and even more speedily the water takes on a furious character. It is always cold, and the atmosphere above and far around it is kept cool all summer. I have been told, but cannot verify the statement, that the temperature of the water in the open lake never rises above 46° Fahrenheit. As a rule, the men who sail upon it cannot swim. The lake offers no inducement to learn the art, and, alas! those who are expert swimmers could not keep alive for any great length of time in the icy water. When I was making inquiries upon this point, I found, as one almost always does, some who disputed what the majority agreed upon. I even found an old gentleman, a professional man of beyond seventy years of age, who said that for several years he had visited the lake each summer-time, and that he had made it a practice to



bathe in its waters nearly every day. It was chilly, he admitted, and he did not stay in very long. But many sailors, among them some ship and steamship

I asked one captain how long he supposed a man might battle for life, or cling to a spar in the lake. He answered, very sensibly, it seemed to me, that some



THE NORTH SHORE, LAKE SUPERIOR.

captains, confirmed my belief that few Lake Superior seamen have learned to swim, and that the coldness of the water quickly numbs those who fall into it.

men could endure the cold longer than others, and that the more flesh and fat a man possessed, the longer he could keep alive. "But," he added, "the only man



I ever saw fall overboard went down like a shot before we could get to him. I always supposed he took a cramp."

The bodies of the drowned are said not to rise to the surface. They are refrigerated, and the decomposition which causes the ascent of human bodies in other waters does not take place. If one interesting contribution to my notes is true, and there be depths to which fishes do not descend, it is possible that many a hapless sailor-man and voyager lies as he died, a century back perhaps, and will ever thus remain, lifelike and natural, under the darkening veil of those emerald depths.

The great, fresh, crystal sea never freezes over, and yet its season for navigation is very short. This is due to the ice that makes out from the shores, the points, and the islands, and closes some of the harbors. One captain told me he had seen ice five miles out from the lighthouse on Thunder Cape, and that is an island in deep water. In 1880 the season opened on April 5th; in 1888 it began on May 21st. In 1880 it closed on December 3d, and in 1883 there was navigation until December 30th. But those are extreme dates. As a rule, navigation opens in the middle of April and closes in the middle of December.

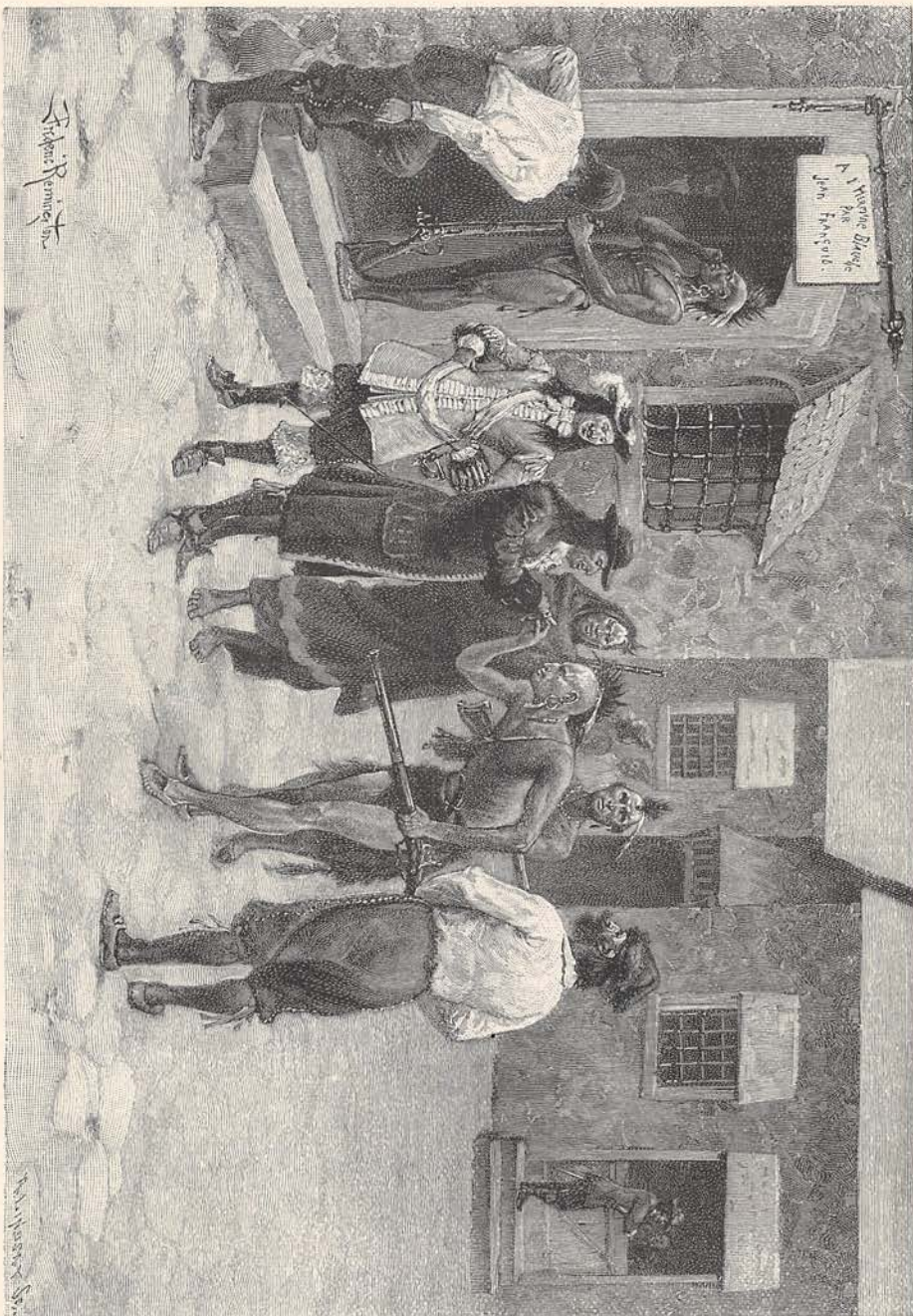
But there are two obstructions for which Lake Superior is notorious, and they rank next to the ice, and still farther limit navigation for some lines of ships. These evils are the fogs and the snow-storms, and of the two the fogs are the more numerous and the snow is the more dreaded. In the summer Dame Superior wears her fogs almost as a Turkish wife wears her veils. There is a time, in August, when the only fogs are those which follow rain; but the snow begins in September, so that the reader may judge of the sort of navigation the lake affords. The Canadian Pacific steamships (Clyde-built ships that are like our Havana and Savannah boats) are in service only between May and October, and it is the snow which curtails their season. It snows on the great lake just as it does on the plains, in terrible flurries, during the course of which it is impossible to see a foot ahead, or to see at all. Mark Twain did not exaggerate the character of these storms when he described the fate of men who were lost and frozen to death within pistol shot of their cabins. It has a way of snowing on Superior, by-the-way, as

late as June and as early as September; in a light and frolicsome way, to be sure, but it snows, nevertheless. As for the fogs, though they are light and often fleeting after midsummer, they are sufficiently frequent during the rest of the season of navigation to have given the lake a distinguished bad character in the minds of those who sail the warmer lakes, and I have had a captain tell me that he has made seven voyages in succession without seeing any lights on his route from Port Arthur to "the Soo."

But its charms outweigh all its caprices and atone for its worst faults. It is supremely charming, a vast nursery for exquisite effects, and a play-ground of beauty. Out on its broad bosom it imitates the sea exactly. There was no apparent difference in the immensities of the two bodies, and the view within the speeding circle of the horizon was that of the same deep blue field of veined and ruffled water. By day the patent log kept up its angry whistle, and the clumsy gulls, with their broken-looking wings, beat the air and sounded their baby treble in a soft shattered cloud over the vessel's wake. The sky was never to be forgotten, not soft like that over southern Europe, but of the clearest, purest blue imaginable, and yet a blue to which the sunlight lent an active living tone like that of flame diluted or transformed. On no visit did I ever see the sky free of clouds, and I cannot imagine it so, but Lake Superior fair-weather clouds, always cumuli, of course, are the softest, roundest, most feather-like vagrants that ever loafed like lazy swans in heaven's ethereal sea.

One peculiarity of Lake Superior cannot be too strongly dwelt upon or exaggerated. That is its purity, the wonderful cleanness and freshness of it, and of its atmosphere and of its borders. It must become the seat of a hundred summer resorts when the people visit it and succumb to its spell. Think what it is! A volume of crystalline water in which all Scotland's surface could be sunk like a stone—of water so clear and translucent that one may see the entire outlines of the vessels that cleave its surface, so pure that objects may be distinguished on the bottom at a depth of 20 feet; 45 feet they call it who have to do with the lake, but I was unable to see through more of it than 21 feet. Fancy such an expanse of





NAKED INDIANS IN MONTREAL.



water so clear, and then picture it bordered by 1500 miles of balsamic forests, which extend backward from the lake to distances that overreach States and provinces. Travellers accustomed to frequent transcontinental journeys look longingly forward in the summer to the time when they shall be passing the great lake, either to the northward or southward, certain that the daylight hours will be pleasant and that the night-time will be cool. Cleanliness—perhaps I should say tidiness—is everywhere the characteristic of Superior. Its famed and stately walls of rock delve straight downward into it and rise sheer above it without giving nature the slightest chance to make a litter of rocks or dirt at their feet. While other rocky shores of other waters stand apart or merely wet their toes in the fluid, these monsters wade in neck-deep, and only expose their heads in the sunlight, fathoms—sometimes 200 fathoms—from the bottom. Terrible prison walls these become to shipwrecked drowning mariners, for they extend in reaches sometimes 25 miles long without offering a finger-hold for self-rescue. Tourists who have seen the Pictured Rocks will understand this feature of the lake's boundaries.

Again, Superior's waters lend themselves to the most exquisite effects, to the most opulent coloring, by their surroundings and in themselves. Those extravagant chromatic surprises in nature which cause the Western people to rave over the charms of their most beautiful resort, Mackinac, are at the command of all who visit Lake Superior at any point around the spectacular sea. A thousand lovelier Mackinacs are there. The same charms, the same mysterious colorings, the same gorgeous effects, illuminate the view from the coal-docks of Duluth, the cottages at Marquette, the wharves of Port Arthur, the decks of the steamers that cruise among the Apostle Islands, or the canoes of tourists or half-breeds who fling their fly-lines or haul their nets in the lonesome caves and neglected harbors where nature's is the only other presence. To begin with, the Lake Superior water is always green where it is comparatively shallow. If you are observant, you will notice that it is green in your pitcher, green in your washbowl, and green in your shaving-mug wherever you put up on the shores. It is not a repellent green; it is the green of the pea-vine, of

thinned chartreuse—the lively, beautiful green of a thick cake of pure ice.

Everywhere, then, the edge of the water is of this beautiful emerald hue, showing its color against the pink sand, against the brown and red rocks, against the dark green forests. At a distance it insensibly deepens and changes into blue, but by such degrees that the indigo of the greatest depth is approached through slight changes beyond the first sky-color to the turquoise, and from that to the deeper hues. With every change in the atmosphere the views change. A strong sun will lave great fields of the water with a flood of salmon-colored light; and a brilliant moon, which at times silvers a wide swath upon the surface, will yet, under other conditions, tinge the water with a blush of pink.

Fit and true it was for Longfellow to fix in Lake Superior the mysterious climax of his legend of Hiawatha. The lake has impressed itself deeply upon whatever of religion is felt by the Indians upon its borders—and those of all the Algonquin family, whose tribes reach from the Rocky Mountains to the coast of Maine. Every here and there, upon the rocks which the Chippewas treat as altars, or in the swift currents that race between them, the red men offer gifts to the spirits which they fancy are domiciled there. As far as I have been able to comprehend their favorite legend of that Minnebajou (or Nana-bejou) who seems to have been the creator and yet subordinate to God, it was in Superior that he sought his yet enduring rest after he had constructed the present earth in the waters that swallowed a former one. There are several of his homes in various parts of the lake. And well may Superior breed mysticism in the minds of savages, for it is given to startling tricks. The mirages that are seen upon it have bestowed upon it a peculiar and distinct fame. They are known to the people of the lake only as "reflections." I have heard many sailors describe the wonderful ones they have witnessed; I would give another journey out there to see one. Men have told me that they have seen Duluth when they were 185 miles away from it—upside down and in the sky, but distinctly Duluth. One sailor said that at one broad noonday he suddenly saw a beautiful pasture, replete with an apple-tree and a five-rail fence, shining green





IN THE HARBOR AT DULUTH.

and cool before him, apparently close at hand. The effect the clear air produces by apparently magnifying objects seen upon the lake is most astonishing. To illustrate what I mean, let me tell what happened the very last time I saw the lake. I was on a tug-boat, and upon coming out of the cabin I saw ahead of me a tremendous white passenger steamer. The boats were approaching one another at right angles, and this new-comer loomed up like a leviathan among vessels, bigger than one of our new naval cruisers, high above the water as a house would look. I called attention to it, and a companion, familiar with the lake, replied,

"I wonder what boat it is; she's a whopping big one, isn't she?"

Something distracted my attention, and five minutes afterward, when I looked at the approaching vessel again, she had passed the mysterious point at which she was most exaggerated in apparent size, and had become an ordinarily large lake steamer. But that was not the end of the trick. She began to dwindle and shrink, growing smaller and smaller in size, until the phenomenon became ridiculous. In time the elastic boat had become a very small passenger propeller, and I found myself wondering whether she would be discernible at all by the time we were abreast of

her. But at that the optical frolic ceased. A small screw steamer of the third class was what she proved to be.

Lake Superior was once a great deal deeper lake than it is now. All along the Canadian shore any one may see the former coast levels that now form pebbly terraces hundreds of feet above the present water. At Duluth the beautiful Terrace Drive above the city lies along a former coast line that was 470 feet higher than the present level of the lake. Perhaps the most compact picture of the first dawn of Lake Superior upon the ken of white men, indirectly through their relations with the Indians, is drawn by Washington Irving in his *Astoria*.

"It was the fur trade," he says, "which gave early sustenance and vitality to the great Canadian provinces." As the valuable furs became more and more scarce near the settlements, the capital among which was Montreal, the Indians went farther west upon their hunting expeditions. "Every now and then a large body of Ottawas, Hurons, and other tribes who hunted the countries bordering on the Great Lakes would come down in a squadron of light canoes laden with beaver-skins and other spoils of their year's hunting. . . . Montreal would be alive with naked Indians running from shop to shop, bargaining for arms, kettles, knives,



blankets, bright-colored cloths, and other articles of use or fancy, upon all which, says an old French writer, the merchants were sure to clear at least 200 per cent." Thus came into existence a new class, called *coureurs des bois*, or rangers of the woods. They were men who had originally gone abroad with the red men on hunting expeditions, but who saw how a point could be gained upon the merchants at home by going out among the Indians or meeting them in the forests, there to peddle necessaries and ornaments from well-stocked canoes in exchange for peltries. In their track went out the missionaries; for none but an Indian ever went farther than the traders in those days, and eventually the Hudson Bay men—a still later growth—crossed the continent in advance of the solitary and devout clergy. When we have considered these actors upon the scene, and have understood that the *coureurs des bois* came to live with the red men, and created a body of half-breeds who were destined to be both white and red in their affiliations and their neutral influence, we may imagine that we can see the vanguard of the host that in time reached Lake Superior.

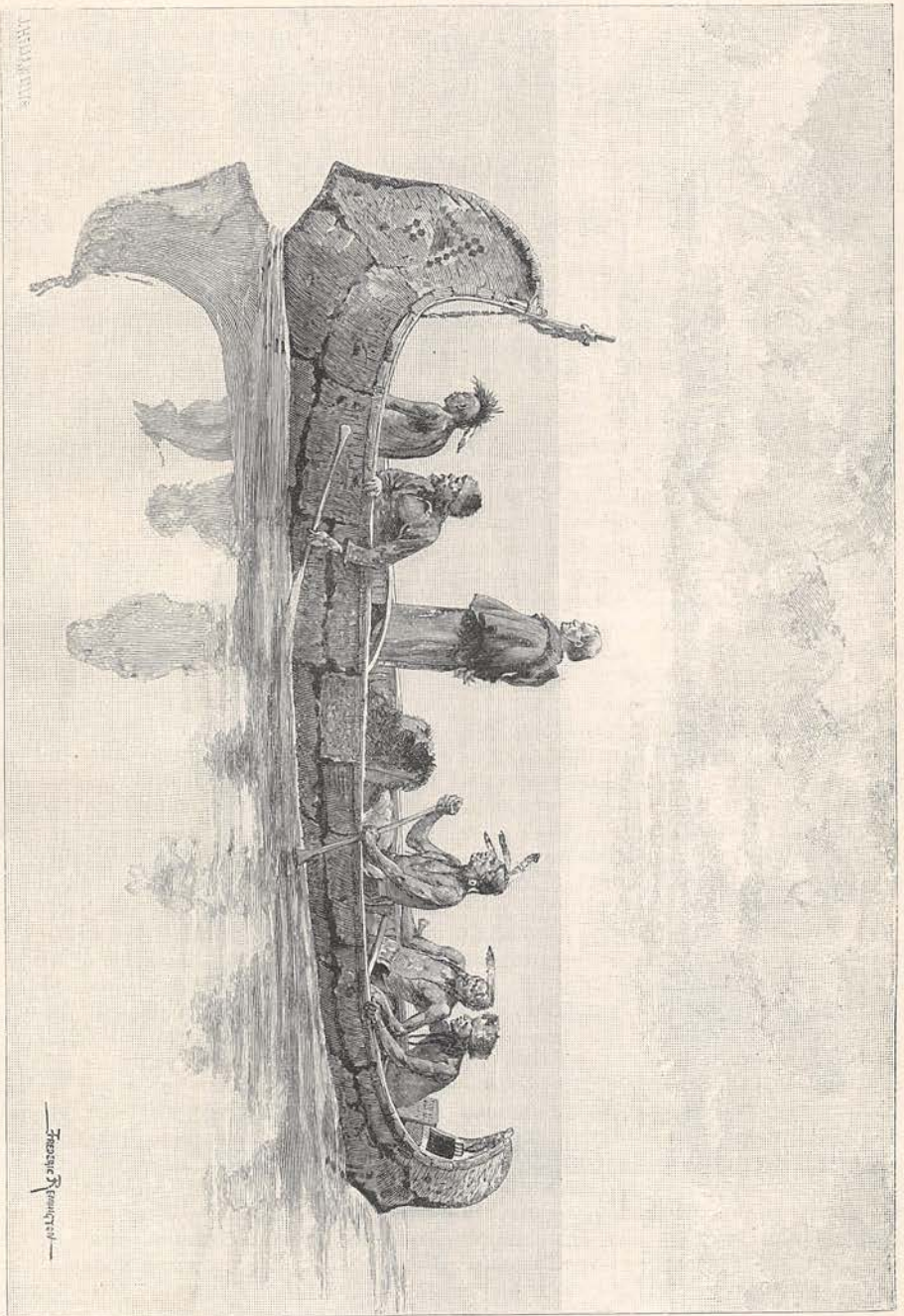
The first white men to see the lake were *coureurs des bois*, it is safe to say, but the first recorded visits are mainly those of missionaries of the same stock that are to-day living adventurous and solitary lives in what is left of the wilderness, now shrinking closer and closer to the arctic regions. "The Soo" was first visited by the missionaries in 1641, and they honored the brother of their king by calling the rapids the "*Sault de Gaston*." Nineteen years afterward Père Mesnard conquered the rapids with his canoe, and found himself out upon the great waters of Superior. That was in 1660, and what they then called the lake I have not learned; but in 1771, in a map published by the Jesuits, it is inscribed "*Lac Tracy, ou Supérieur*." In that map the neighboring lakes are named *Lac des Illinois* and *Lac des Hurons*. In 1668 there arrived Père Marquette, that saintly man whose name lives anew in that of a progressive lake port, and whose memory is honored by every intelligent man in all that vast region. He was accompanied by Claude Dablou when, having brought his wasted body there to end his days, as he thought, in a brief attempt

to spread the gospel, he landed at the place which he renamed *Sault Ste. Marie*, and founded there the first settlement in Michigan. Messrs. Chanart and d'Esprit (sieurs des Radison and des Groselliers) have left a record of their visit to the western end of the lake in 1661, six years before Père Allouez and a company of traders reached there, and eighteen years before Du Lhut arrived with a band of *coureurs des bois* to make the neighborhood of the city that bears his altered name his place of residence for several years. After these, by a great stride over the slow-making pages of history, we come to find the great Hudson Bay Company, and its rival the Northwest Company of fur-traders, conducting a systematized business on the north shore of the lake; while in time the American Fur Company, under John Jacob Astor's management, copied the methods of those corporations on the south side. Trading-posts grew into fortified places, trails spread into roads, and settlements around mission houses developed into villages. Then, two hundred years after its discovery, Lake Superior stood still for many years—for nearly forty years—so that its present history, solid and certain in its promises as it is, resembles the record of a mushroom.

The date of the last enlargement of the lock of the Sault Ste. Marie Canal is the date upon which to base all computations of the age of the present lake traffic and its consequences. That lock was enlarged and newly opened in 1881. Marquette, "the Queen City of Lake Superior," is an old place of former industry, but it is a mere baby in its present enterprise. Superior dates from 1852 "on paper," but from 1881 in fact, while Duluth is only a few years older. Port Arthur, the principal Canadian port, owes itself to the Canadian Pacific Railway, now about seven or eight years of age, and many of the cities of the future are not yet discovered, while of great resorts that are to be, like Munising and Nipigon, only those two are known, and they are known only to the most enterprising sportsmen.

The men of the Lake Superior region will in time form a new conglomerate, if I may use a geologist's term. The sailors of the great unsalted sea are a very nautical-looking lot of men—as spare of flesh, as bronzed and leather-skinned, as if they were from Maine; but the surprising





AMERICAN

THE MISSIONARY.

Frederic Remondet



thing about them, so far as I may trust my observation, is that they all obtained their training on the lakes. I did not find one who had ever seen the ocean, and I thought I detected among them a tone of contempt whenever they spoke of the genuine sea, as if they were of the opinion that the Atlantic is a sort of juvenile campus for playing at sailing, whereas it requires grown men to battle with the lakes.

Along-shore one meets with a queer hodgepodge of men. On the United States side the Scandinavians are very numerous. They are highly spoken of by the Americans. They are bankers and merchants there, as well as laborers and household servants. They have spread themselves over all parts of the new field with wonderful assimilative capacity. They are a sturdy, shrewd, thrifty, and ambitious people, as a rule. They make the strangest mess of speaking English at first, and we may expect a new touch in dialect literature when writers who understand them begin to treat of them. Yet they are sufficiently important to render a knowledge of their native tongue very advantageous to Americans, and I found the general passenger agent of a great railroad in the lake region assiduously studying Swedish. There are many Welshmen in that country, but I only heard of them in the mining regions. For the rest, the people are American, with all which that implies; that is to say, some have an American tree with roots two centuries old, and some carry naturalization papers.

Over on the half-deserted Canadian side the rulers of Canada—who are the Scotch first and the English second—are conspicuous in the towns, settlements, and heavier industries. But the hunting and fishing are still so good that the red Chippewyan servants of the Hudson Bay Company still patrol the streams in canoes and traverse the winter snow fields with sledges dragged by “huskies,” those ill-used Eskimo dogs whose fare is said to be “one part fish and nine parts clubbing.” Gaunt and tireless prospectors, axe in hand and pack on back, walk northward among the rocks, far ahead of civilization. Hudson Bay factories are yet the stations, as the waterways are yet the only roads, once you get beyond the rails of the transcontinental road skirting the very edge of the lake.

The lake and a vast region around it is a sportsman's paradise, and a treasury of wealth for those who deal in the products of the wilderness—furs, fish, and lumber. At little Port Arthur alone the figures of the fishing industry for the market are astonishing. In 1888 the fishermen there caught 500,000 pounds of white-fish, 360,000 pounds of lake trout, 48,000 pounds of sturgeon, 90,000 pounds of pickerel, and 30,000 pounds of other fish, or more than a million pounds in all. They did this with an investment of \$3800 in boats and \$10,000 in gill and pound nets. This yield nearly all went to a Chicago packing company, and it is in the main Chicago and Cleveland capital that is controlling the lake's fisheries. The white-fish is, in the opinion of most *gourmets*, the most delicious fish known to Americans. The lake trout are mere food. I am told that they are rather related to the char than to the salmon. They are peculiar to our inland waters. They average five to ten pounds in weight, and yet grow to weigh 120 pounds; but whatever their weight be, it is a mere pressure of hard dry flesh, calculated only to appease hunger.

But I find that on both shores of the lake there is a growing feeling that, in spite of the millions of “fry” the Fish Commission dumps into that and the other lakes, the vast reservoirs of delicious food are being ruined by the same policy and the same methods that make our lumbermen the chief criminals of the continent. Men who have spent years on the lakes solemnly assert that not only are the annual yields growing smaller and smaller, but that the sizes of the fish caught are growing less and less. Worse yet, they assert that illicit practices, or those which should be made illicit, result in the catching and destruction of millions of fish which are too small to market. I do not believe that any man of leisure could find a more benevolent or worthy cause in which to enlist than in that of a crusade against the use of small-meshed nets in Lake Superior. I will not, on my present knowledge, say that the planting of fish fry is a waste of time and energy, but it certainly is regarded by many as ineffectual in the present crisis. Government had better direct its energy to that ounce of net-cutting that is better than a ton of fry.

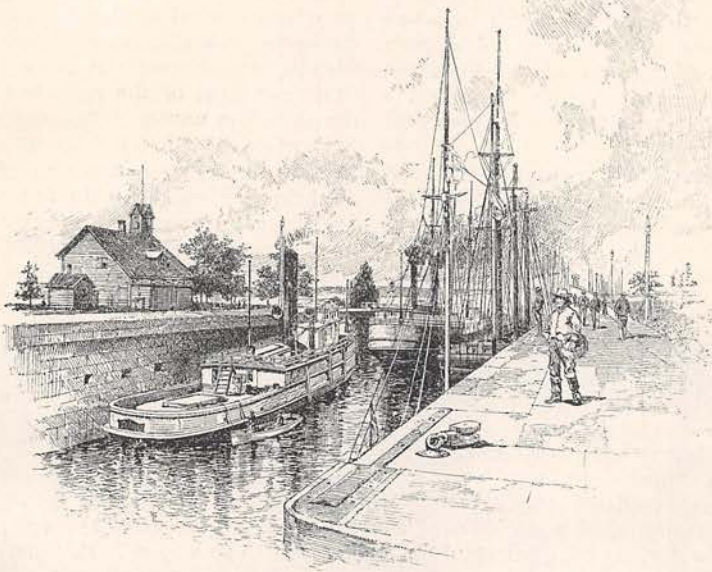
At present there are trout a-plenty in



the streams that flow into the great lake through the beautiful forests which clothe that enormous tract, in which, south of Superior alone, there are said to be between 500 and 600 little lakes. Exactly like it, from the sportsman's point of view, is the region north of the lake, where the land looks, upon a detailed map, like a

is a railroad, the Duluth, South Shore, and Atlantic, which dissects this entire region from point to point of the lake along its southern coast. The best sport is found south of the railroad rather than between it and the lake.

Of the ports and lake-side cities of the "great unsalted sea," I have already, in a



THE LOCK AT "THE SOO."

great sponge, all glistening with water, so crowded is its surface with lakes and streams. In the north are caribou, and all the animals that the fur-traders of the Hudson Bay Company value. South of the lake there are no animals larger than deer, but deer are abundant, and bear are still numerous. In the fishing season a man may feast on trout, black bass, pickereel, muskallonge, partridge, venison, and rabbit; and he may, if he has the soul of a true sportsman, revel in the magnetic, wholesome qualities of the air, and in the opulent and exquisite beauties of the woods. For good sport, however, let him avoid the famous places. There are half a dozen streams near the celebrated Nepigon that are better than they have been for years, while on the south side it is better to go to quiet regions, like Munising or the streams near the Ontonagon, than to whip the more noted waterways. There

previous article, described the two leading ones—Duluth in Minnesota, and Superior in Wisconsin. They lie side by side at the western end or head of Lake Superior.

The city of Marquette, on Iron Bay, in the centre of the most picturesque part of the south shore, gets importance as a shipping port for ore and lumber, but it occupies the most beautiful site and is the most beautiful town, as seen from the water, of all those that have grown up on the lake. It has a large and busy trading district on the sandy shore of the lake, but the finer residence districts surmount a high bluff which half encircles the town. Ridge Street, 200 feet above the lake, may easily become one of the finest avenues in America, and already it numbers among its appointments some of the most artistic and costly houses in the Lake Superior region. With its drives and neighboring forests, its fishing-



streams, and the beauties and pleasures offered by the lake, Marquette would naturally rank as a summer resort, but the addition of Presque Isle Park will, when the park is developed, raise it to the first rank among the idling-places in the West. This park covers a bold promontory formed of enormous piles of stone like the Pictured Rocks, which are themselves not far away. The water has eaten several caves into the foot of the sheer wall of forest-capped rock, and into one of these a boat may be rowed. The park is best seen when approached from the lake. The deep pellucid waters in the shadow of its walls form a famous fishing-field.

The greatest commercial activity around the lake is due to the mining. On the north shore gold has been found in the Port Arthur district. The quartz-bearing rock has been followed and the land

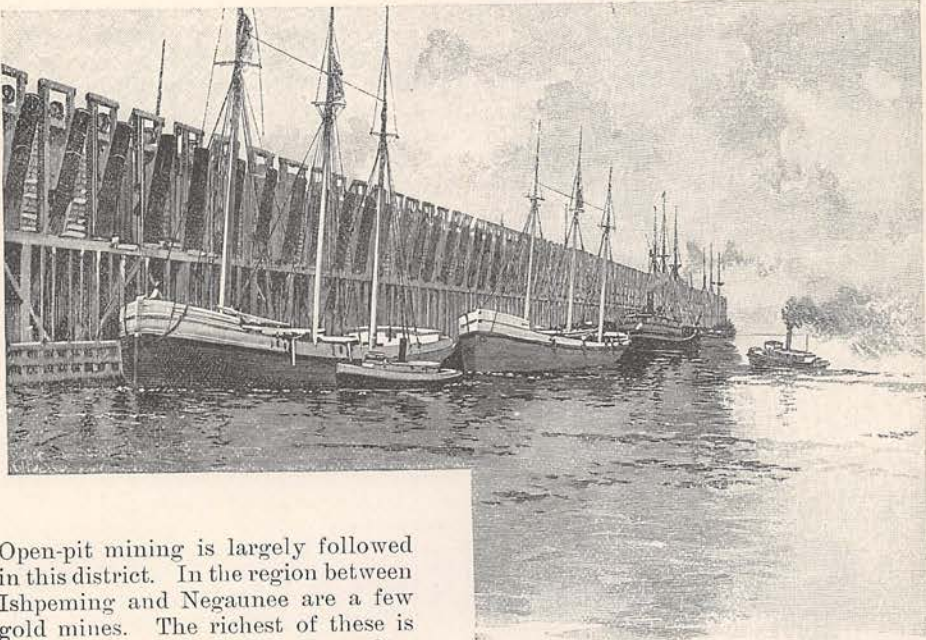
pre-empted along several veins, but there has been no systematic mining. Silver has been very profitably and extensively mined, the famous Silver Islet Mine having yielded \$3,250,000 worth of the metal. There are very many other mines in the district, many of which have proved failures, and a few of which are prosperous, while still others give promise of good futures.

But, either owing to the greater enterprise and capital of the Americans or to the more valuable and widely diffused metalliferous deposits, it is on the south side that most of the notable mining is found. The names "Calumet and Hecla," "Gogebic," and "Marquette," distinguishing great mines or districts, are doubtless of world-wide fame. There are seventy-three iron mines on the Marquette range, and their output for 1890 was more than four millions of tons.



TROUT-FISHING.





Open-pit mining is largely followed in this district. In the region between Ishpeming and Negaunee are a few gold mines. The richest of these is stopped by litigation, but one profitable mine is being worked. The great copper region of Keweenaw peninsula—a broad, long area of land thrust out of Michigan into the middle of the lake—abounds with copper in the form of conglomerates, or mineral mixed with rock. The census report upon the district declares that 117,800,000 pounds of this mineral yielded 87,445,000 pounds of ingot, showing the percentage of copper to be 74.24. In the census year, 1890, the amount of rock crushed was 2,137,653 tons, and this yielded 86,604,283 pounds of ingot copper. Silver is said to be found in the copper region. The famous Gogebic iron region, or range, marks the western limit of Michigan's 150-mile-wide mineral section, from which, exclusive of gold, copper, and silver, between five millions and eight millions of tons of ore is annually sent away. The logging or lumbering industry, especially on the southern and western ends of the lake, is a gigantic calling, but it is not within my ability to summarize its extent with figures.

All the commerce of Lake Superior that is sent to or from it must pass through the Sault Ste. Marie Canal, until the Canadians finish the parallel waterway, which they are building in order to be in all respects independent of us. Nature made the waters of Superior to flow into Huron

ORE DOCKS AT MARQUETTE, THE LARGEST IN THE WORLD.

by means of the St. Marie River, but in doing so they drop to Huron's level, which is somewhat lower than that of the king of lakes. They make eighteen feet of the descent suddenly by the rapids which give to the artificial waterway built to avoid them the name of the Sault Ste. Marie Canal. "Soo" and "Soo Saint Mary," or "Susan Mary," as it is often called, are Western forms the words take. Commercially speaking, this canal added Superior to the great lake system or route, connected it directly with the Atlantic and the world at large, and shortened very greatly the railroad carriage of ore and grain to the East, and of coal and general merchandise to the far West. The canal accommodates an amount of traffic which for years has been greater than that of the Suez Canal. In 1886 the freighting through the great African canal amounted to a gross tonnage of 8,183,313 tons; but it has decreased, if I am not mistaken; while the tonnage that passed "the Soo" in 1890 was 9,041,313. It is interesting to note that of this sum the proportion of freight carried by Canadian vessels was only six per cent. in



1888, and four per cent. in 1889. It is also worth while to note that of the nine millions of tons floated through the canal in 1890, about 4,500,000 were east-bound, and 2,600,000 were west-bound.

But the canal is inefficient; wofully so in the opinion of the extra-energetic shippers at the Lake Superior ports, who assert that its inability to pass the largest vessels fully laden operates to the advantage of their great rival, Chicago. The depth of water in the canal in 1890 ran from fourteen feet and nine inches to fifteen feet three inches, and during the

great commerce that strains toward development on the lake is not the "Soo" canal. That will soon be as large as it needs to be. The trouble lies in the inadequacy of the canals far to the eastward—the Welland and Lachine canals. Instead of furthering the ambition of the West, they hold it at the throat and choke it. Until they are enlarged, or belittled by larger canals, the lake commerce with Europe will continue to be greatly limited. It is true that the whaleback steamer *Wetmore* went to Europe from Superior with a load of grain, but had she been



LIGHT-HOUSE AT MARQUETTE.

first half of 1891 it varied between thirteen feet and ten inches and fourteen feet five inches. Such vessels as are now being added to the lake service draw sixteen and a half feet, and in view of the present depth of water in the canal it will be seen that they lose several hundreds of tons a trip by carrying only partial loads. The government is awake to the situation, and the new lock which it is now building, at a cost of more than four millions of dollars, will be 100 feet in width, 21 feet deep, and 1200 feet long.

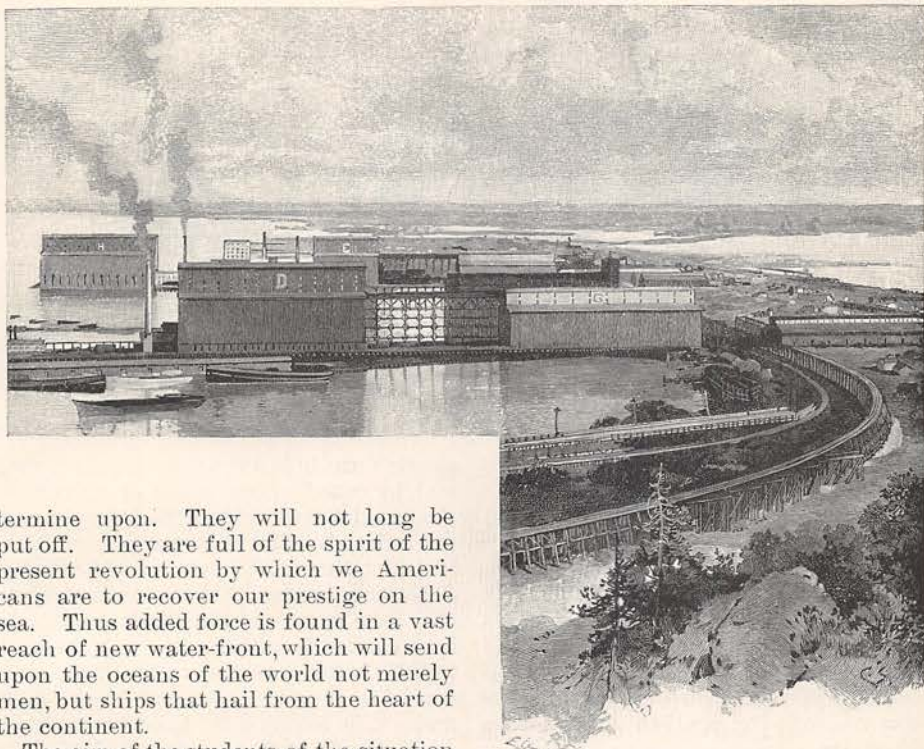
The fact that the canal does more business in seven months than the Suez Canal effects in a year does not give so clear an idea of its importance as is gained from the consequences of a slight accident to the lock year before last. This necessitated closing the canal temporarily, but it cost the men and companies who use the canal a loss of about one million dollars. There were at that time 183 vessels waiting to pass out of Superior, and nearly as many going in the other direction.

The worst brake on the wheels of the

least bit longer she could not have gone through the Welland Canal, around Niagara, and she had to dodge the St. Lawrence canals by shooting the rapids of that river. Were she to return to Superior she would have to be unriveted and pulled through the canal in two parts. Thus it was that the steamships of the Canadian Pacific Company plying on the larger lakes were brought from the Clyde.

It was a valuable experiment, that with the *Wetmore*. It demonstrated the pluck of the far Western navigators and merchants, and it accentuated the demand of the people of the entire Northwest for a practicable water route to the Atlantic. The people of the region around the Great Lakes are chafing and fretting under the chains that bind and hinder them. They demand the means of reaching the Atlantic either by the St. Lawrence or the Hudson, and they will not be satisfied with less than "twenty feet of water from Duluth to the sea." That is the battle-cry of a people with the will and persistence to achieve whatever they de-





termine upon. They will not long be put off. They are full of the spirit of the present revolution by which we Americans are to recover our prestige on the sea. Thus added force is found in a vast reach of new water-front, which will send upon the oceans of the world not merely men, but ships that hail from the heart of the continent.

The aim of the students of the situation is not only to keep beyond the constant reduction of railroad rates, but also to secure the carrying of the products of Asia. They argue that the Pacific Ocean currents naturally set toward Puget Sound, and put San Francisco out of the natural course of shipping, and also that the Puget Sound coast is six hundred miles nearer the north Atlantic ports than is San Francisco.

There are two sides to the contention for improved internal waterways, and I propose to present both sides, because both together reflect the influences that are building up the new West, and show the strides that have been made toward the perfection of transportation facilities.

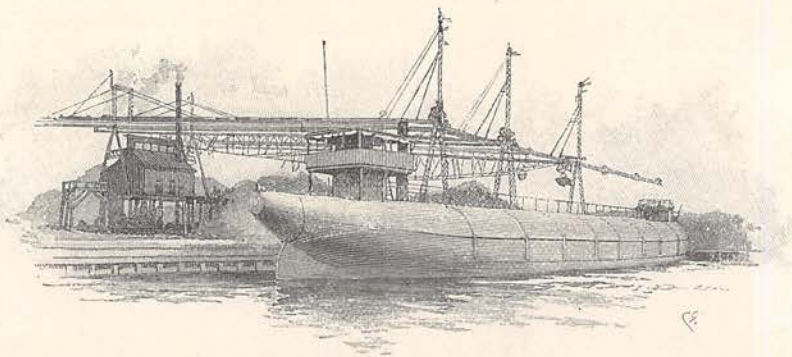
There is a conspicuous railroad man in the West who argues that water rates will cease to influence rail transportation when the development of railroading reaches the near point toward which it is hastening. For a time in 1891 the freight rate from Chicago to New York was seventeen cents a hundred pounds, and he says that this forced the lake rate down to one and a quarter cents. He argues that when the railroads make a twelve-cent rate, as they must in time, the boats

ELEVATORS AT DULUTH, WEST SUPERIOR IN THE DISTANCE.

on the lakes will not be able to earn their operating expenses.

The form of railroad progress which attracts every one's attention is that which is marked by the improvement of the palace cars through the introduction of baths, barber shops, and libraries. But the progress which affects earning capacity, and which is constantly lessening the cost of railroad service to the public, is that which comes of the improvement of the road-beds of the trunk lines by the creation of direct lines from point to point, the reduction or abolition of grades, the easing of curves, the increase in the weight of the rails, and the enlargement of locomotive power and car capacity. The outgo and the income of the railway business are found by considering the train mile and the ton mile as the units or bases of calculation. The cost of running a train a mile is the unit of expense. The amount obtained per ton per mile is the unit of income. The difference be-





LOADING A WHALEBACK BARGE.

tween the two is the profit. The resistance, which must be reduced to a minimum, is the law of gravity. But for that a child might drag a train of cars with a piece of twine. But, as the Western railroad man remarked, "the law of gravity is like the poor, whom we have always with us, and the railroad men must see that it is not further weighted by steep grades, weak rails, sharp curves, and indirect routes. Originally railroads were laid on the surface of the ground; now they must find a level, and keep to it, as water does."

The modern railroad must also avoid all possibility of obstruction that can be avoided; and we see in the sunken track of the New York Central Railroad in New York city an example of the lengths to which the best railroads must go to obtain guaranteed freedom from obstruction. With the same aim, this railroad is to pass through Rochester upon an elevated structure, and through Buffalo on a sunken track. Yet, in spite of these strides toward the perfection of railroading, with a consequent lessening of rates, President Depew does not predict the destruction of lake traffic. On the contrary, he says that it will always be carried on. The railroads themselves find it of service; and all those trunk lines which have lake ports on their routes now either own steamers or have made contracts with steamship lines. President Depew says that although his railroad company once opposed the canals, he lives at peace with them, his argument being that the lake boats bring to Buffalo more business than the canals can handle, and the surplus goes to the railroads. Moreover, the

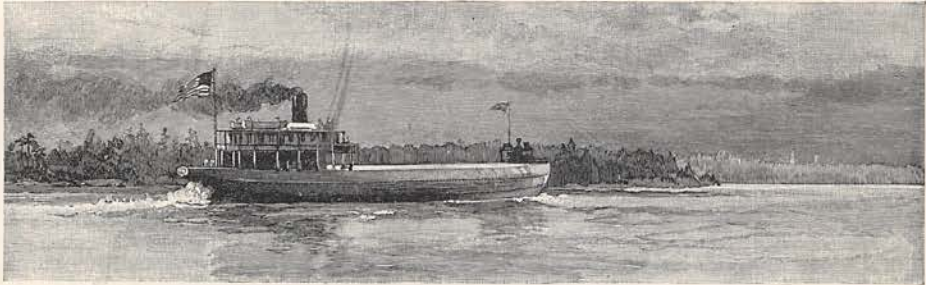
canals form highways through the State, and, by contributing to the prosperity of the canal towns, add to the prosperity of the railroads. Mr. Depew adds, nevertheless, that the canals are no longer formidable competitors with the railroads, as they once were. In the old days a canal-boat carried as much grain as a train of twenty 10-ton cars; but now a train may consist of fifty cars, each one carrying 25 tons. The locomotives have grown from a weight of 30 tons to a weight of 90 or 100 tons, the cars have tripled their capacity, the rails that weighed 56 pounds per yard have been replaced by 80 or 90 pound tracks; and with all these improvements has come a reduction of 50 per cent. in freight rates in the time that he has been interested in railroads.

The leading men of the lake ports admit all this; in fact, they make out a strong case for the railroads in order to emphasize the need of facilities by which those great regulators of transportation rates, the freight-boats, may meet the new conditions. Those who have made the arguments for the various lake ports show that whereas in 1868 the rail rate on grain from Chicago to New York was 42.6 cents a bushel, it was 14 cents in 1885. The water rate in that period fell from 25 cents a bushel to 4.55 cents. It has kept between 25 per cent. and 67 per cent. lower than the rail rate. The value of the waterways to the public is illustrated in a startling way by making use of the government records of the Sault Ste. Marie Canal traffic for 1889. There passed through that canal 7,516,022 tons, carried an average distance of 790.4 miles, at 0.145 cents a ton a mile. The railroads



would have charged 0.976 cents, and the business would have cost the public fifty millions of dollars more if the railroads had transacted it than was charged by the boatmen.

system will be complete. It will only need enlargement to make it serve the requirements of the near future, but, even as it is, it will serve, in case of war, for the introduction of gunboats and torpedo-



A WHALEBACK DESCENDING THE RAPIDS OF THE ST. LAWRENCE.

In pressing upon the attention of the country the value of a twenty-foot waterway to the sea, the lake-port business men assert that not only did the Lake Superior traffic through the Sault Ste. Marie Canal amount to three-quarters of a million tons more in 1889 than passed the Suez Canal, but the lake business which was transacted in the Detroit River was more than 36,000,000 tons of freight, or ten millions of tons more than the total tonnage of all ocean and gulf ports of the entire coast line of the United States. In view of that fact they ask what would be the growth of this business if, instead of taking this freight out of 3000-ton ships to put it into 200-ton canal-boats, it could go directly and without change of vessels to the sea. As to the expense of the improvements that are asked for, Mr. S. A. Thompson, of the Chamber of Commerce of Duluth, asserts that in all time the Federal government has expended upon all the lakes above Niagara Falls only \$28,038,590, so that the saving at the Sault Ste. Marie Canal, on the business of one lake, amounted to a return of \$1 85 to the people for every dollar the government spent upon the lakes.

From the stand-point of the people of the lake ports we have not been either as liberal or as long-sighted as the Canadians, who have a well-defined system of waterways, completed by canals wherever navigation is hindered by nature. They are building a canal around the St. Mary's Falls, and when it is finished their

boats by way of the St. Lawrence into those lakes on which we are prevented by treaty from maintaining a squadron. We have upon the lakes only the old wooden sloop of war *Michigan*, and can put no other war vessels there in case of danger, unless we have the time to build them at some lake port. England, on the other hand, has fifty gunboats and other war vessels of sufficiently light draught to pass through the canals into the lakes.

It is not necessary to weigh the various plans which are offered for a national highway from Duluth to the sea. One looks toward the deepening of the canal between Oswego and Syracuse, New York, and of the canal between Syracuse and the Hudson River. Another plan leaves New York city out of consideration, and proposes direct communication between Duluth and the ocean, or the world at large, by means of a duplication of the Canadian canal system on the American border. Both these plans necessitate the building of an American canal around Niagara Falls.

The provision of twenty feet of water in the new Sault Ste. Marie lock, now undergoing construction, will make possible the employment of vessels carrying 6000 to 8000 tons, in place of the present largest-sized lake boats, which cannot carry their complement of 3000 tons. Such carriers, it is said, can cut down the present cost of water transportation fully fifty per cent. and leave a profit for the ship-owners.



In view of the enormous field awaiting development in the Northwest, and in view of the steady lowering of railway rates, the ardor with which the people of the lake ports urge the creation of an American twenty-foot water system, at least as far east as Oswego, does not seem unreasonable.

Upon the 1500 miles of the lake's shore there are living now less than 150,000 persons, and these are mainly in bustling cities like Duluth, Superior, and Marquette, in industrial colonies like Calumet and Red Jacket, or in struggling little ports like Fort William and Port Arthur. Even there the wilderness and primeval conditions are face to face with the robust civilization which is shouldering its way as capital is accustomed to do rather than as natural growth usually asserts itself. Not that it is not a wholly natural growth which we find at all points on the lake shore, for it is all in response to the inexorable laws of supply and demand. Yet the communities there have sprung into being far apart from well-settled regions in answer to these laws.

Thus it happens that to-day one may ride in an electric street car to the starting-point for a short walk to a trout stream, or one may take the steam railroad, and in an hour alight at a forest station, breakfasting there, but enjoying for luncheon a cut of the deer or a dish of

the trout or the partridge which he has killed for the purpose. It is, so to say, a region wherein the wholesale fisherman with his steamboat disturbs the red man who is spearing a fish for supper, where the wolf blinks in the glare of the electric lamp, and where the patent stump-puller and the beaver work side by side.

The strange condition is most startlingly illustrated by a recent occurrence in Michigan, in the same region. Close to a watering resort which is crowded in summer by persons from all over the West, some men were cutting timber in the winter. Two brothers were among them. One hit himself with an axe, cutting open an artery in his leg. The other hurried away for surgical help. When the messenger returned, nothing but the bones of his brother were left. Wolves, attracted by the scent of his blood, had eaten him up.

It is thus that there is forced upon the comprehension the practical newness of this giant fresh-water sea, which geologists would have us believe is millions of years old, and which even history mentions in detailing the exploits of men who died in the seventeenth century. But with the youth of this new civilization have come the vigor and enterprise needed to develop industries and to rear cities of which all the people of all the States, new and old, may well feel proud.

## LA CABANE.

BY WILLIAM McLENNAN.

ONE winter me an' Xiste Brouillette we make 'mos' six 'undre' dollar wid de skin w'at we take, an' de nex' winter after dat I'll say I'll not 'ave no pardner, jus' 'ire two men for work. One of dose men is Injun feller from de Mission call' Alexis, an' de h'odder was de *métif* call' Joe.

I'll never go so far on de woods for camp like dat time. We was take five days for get h'up after we leave de settlemen', but we 'ave de bully place, an' we buil' good big cabane, an' we do pretty good biznet for de firs' part de winter.

One Sunday morning—I'll make 'eem some time near Chris'mis—I'll get h'up, light my pipe, an' go h'out for see de wedder. Dat was fine col' day; de sun was show strong, an' de sky was col' an' blue widout no cloud. Den I'll get de bucket,

an' go down on de river for get de water, an' w'en I'll get near de 'ole, I'll see de moose track h'all fresh an' new, jus' like 'e was pass on de 'ole for drink.

Bagosh! I'll 'ave nodding but my knife, I'll be in my shirt, an' no *raquettes*, but I'll can' 'elp 'eem, dat track 'e was too strong for me, an' I'll drop de bucket an' start.

De snow was pretty t'ick, an' I'll know de moose can' be far h'off, an' I'll run so 'ard I'll can; but w'en I'll come on de place w'ere de tree was t'in, I'll see de moose 'way on de middl' of de clearin', an' dere's no chance.

Bagosh! I'll feel bad; but dere's no good. Den I'll fin' myself wid h'all my win' gone, an' so tire' I'll feel like de h'ol' man. Den w'en I'll be done call dat moose some bad name, I'll start for go back, an'