

This is not a warship; it is the "Ontario No. 1," a Canadian built vessel, which carries Railway Cars across Lake Ontario, from Cobourg, Ontario, to Genesee Docks near Rochester, N.Y.

AN EXPERIMENT IN LAKE FERRIES

Which Inaugurates a New Era in Lake Transportation

COMMONLY a ferry is a short haul between the banks of a river. At various places, along the rivers forming parts of the boundary line between Canada and the United States, there are ferries which take railway cars from one shore to another. Coteau, Prescott, Windsor and other points have these facilities. A large and bolder ferry is that which carries railway cars between Cobourg, seventy miles east of Toronto, and Charlotte, the lake port of Rochester, New York. This ferry runs all the year round, and indeed is the only boat on the Great Lakes which is operated continuously through the year, with the exception of the ferries between Windsor and Detroit and those at Mackinaw. In the latter cases, only short distances are covered.

The first question which arises naturally is "Why do not the cars go around by Niagara Falls instead of being hauled across the Lake in a ferry-boat?" The answer is clear. The Buffalo, Rochester & Pittsburg Railway carries coal from Pennsylvania to Rochester, which is only 45 miles farther than to Buffalo. A run across the Lake of 62 miles, lands the coal in Cobourg and effects a saving of at least a hundred miles of haul. This coal is, from Cobourg, distributed throughout Eastern Ontario. The Niagara entrance to Canada is crowded; the lines from Niagara to Toronto are burdened with traffic; the Rochester-Cobourg route gives the Grand Trunk great relief. That is the main explanation.

Again, there is considerable pas-

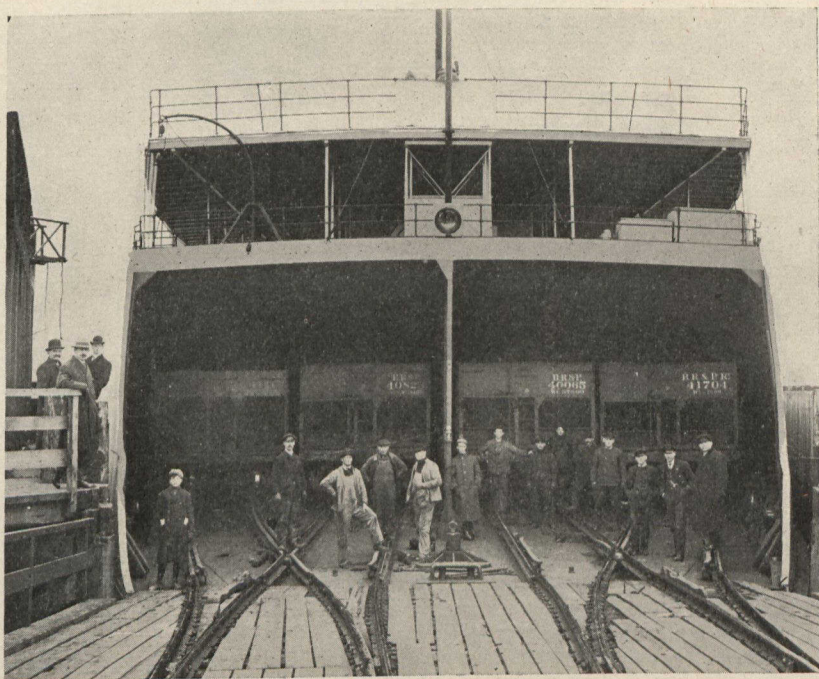
senger and packet-freight business between Rochester and other New York State cities and Canadian towns. The ferry which carries the coal cars back and forth, also takes care of that business. Cobourg is a Canadian summer resort which is quite popular in certain parts of the United States. The "Ontario No. 1" carries thirty loaded cars, and still has room

for one thousand passengers. It is a huge boat 317 feet in length, and built so that she looks as if one-third of the stern had been removed. The open stern, through which the cars travel on and off, gives the big vessel a look of having had a "huge bite" taken out of it. When the "Ontario No. 1" backs into her slip, an adjustable apron with tracks on it allows the cars to be run on and off by the yard locomotives.

The trip across from Cobourg to Genesee Docks, 62 miles, is made in about four hours, the vessel having an average speed of about sixteen miles an hour, finding no trouble in making way regardless of the weather or of ice. The trip embraces three miles of the Genesee River from the Charlotte break-water up to Genesee Docks, the high bank of the river with the attractive town of Charlotte at the entrance of the river lending variety.

The passenger accommodations of the steamship "Ontario No. 1" are all on the upper deck, a permanent canopy covering the entire deck affording clean and roomy sitting out or promenade advantages, which makes the boat an ideal one for large excursion parties, and frequently during the past season the city of Rochester has loaded the boat to its full capacity for the round trip to Cobourg.

The boat started operations on November 20th, 1907, and has run regularly ever since. The ice conditions last winter, more severe than any season for a number of years, tried the boat thoroughly and no difficulty was experienced in making the trips.



This is the rear view of "Ontario No. 1," as she appears when backed into her slip and joined to the dock by a movable "apron." Note the two tracks on the dock and the four on the boat.

Alexander Graham Bell's New Airship

By WALDON FAWCETT

WITH everything in readiness at Baddeck, Nova Scotia, for the initial flights of Alexander Graham Bell's new aerodrome, it is hoped that some significant results will be attained with this most novel of aerial craft ere weather conditions compel the abandonment of experiments for the season. The "Tetrahedron," as the inventor of the telephone terms his latest creation, is but an elaboration of Prof. Bell's former sky craft, constructed on the tetrahedral kite principle, but the present machine exemplifies for the first time such a kite structure working as a flying machine under motor power.

The interesting experiments at Baddeck are under the direction of the Aerial Experiment Association—undoubtedly the most important organization of experimenters now working conjointly to promote the progress of aviation on this continent. For all that Dr. Bell is so energetic mentally and physically at an advanced age, he is a great believer in youthful enthusiasm and accordingly his associates are young men. The membership of the

Aerial Experiment Association now consists of Prof. Bell, F. W. Baldwin, J. A. D. McCurry and Glenn H. Curtis—the latter famous as the inventor of the motor for the U. S. Army Dirigible No. 1 and other important airships. The late Lieut. Thomas Selfridge was a member of the Association up to the time of his death in the aeroplane accident with Orville Wright at Fort Myer, Virginia.

The common object of Dr. Bell and his co-workers is the construction of a practical aerodrome or flying machine driven through the air by its own motive power and carrying a man. Already the Association has fostered two successful aerial craft, Lieut. Selfridge's "Red Wing" and F. W. Baldwin's "White Wing," tests of which were made at Hammondsport, N. Y., the winter headquarters of the Association. Now as the third contribution to aeronautical science comes Alexander Graham Bell's unique Tetrahedron.

Last year Prof. Bell's operations progressed to the point of constructing a large tetrahedral kite known as the "Cygnet," which in December, 1907,

successfully carried Lieut. Selfridge up into the air to a height of 168 feet above the waters of the Bras d'Or lake. At the conclusion of the flight the Cygnet alighted gently on the surface of the water and floated there uninjured. Prof. Bell, his theories confirmed by the success of this machine, set to work early in the present season to construct a larger Tetrahedron, and this aerial craft is now complete. It has 5,000 tetrahedral cells whereas the Cygnet had but 3,393 tetrahedrons. Moreover, the new airship will not have to be towed on the kite principle heretofore adopted in Dr. Bell's experiments, but will be able to navigate the air under its own motor power. A space about six feet square in the centre of the aerodrome provides space for the motor and the aviator.

The Bell Tetrahedron, like the Wright Brothers' machine and almost all successful aerial craft thus far designed, requires a "flying start." The approved plan for the trials at Baddeck contemplates the placing of the Tetrahedron—one of its unique characteristics is found in the fact that it is to arise