

Mr. Angstrom. The Niagara Company had always had the good-will of the people, and he thought deserved it. When any concern went ahead of the times the general tendency was to pitch into it, but so far the company had escaped unreasonable criticism. It had been a moderately successful concern, content to go on paying steady, reasonable dividends, not like the banks. (Hear, hear, and laughter.) He thanked the railways of the United States for most loyal support, and said it was largely due to the encouragement received from them that the boat had been built.

Mr. D. R. Wilkie proposed the continued prosperity of the Canadian Shipbuilding Co. and its officers. He thought Toronto might become one of the greatest shipbuilding ports of the world. Canada was not now building a navy, but in a few years could no longer shirk the duty she owed, and then would have an opportunity of sharing in the defence of the Empire.

Mr. A. A. Angstrom, the manager of the company and architect of the boats, modestly disclaimed any credit for his work, saying he was only the representative of an organization, and alone could do nothing.

In proposing the toast to Miss Mary Osler, who named the new steamer, B. W. Cumberland referred to the appropriateness of the names of the company's steamers. The first was the "Chicora,"—the pretty flower—named from the Indian territory of and around Florida, followed by the "Cibola." This steamer was burned, and was replaced by the "Corona," after the bright ring seen when the moon is in eclipse—an appropriate name under the circumstances. This was followed by the "Chippewa," another Indian name, and now they had added the "Cayuga," after one of the five nations associated with the country surrounding Lake Ontario.

H. J. Pierce, of Buffalo, answered the toast of "Allies and Friends." He spoke of his own company constructing an electric railway from Niagara Falls to Buffalo over their own right of way, which would shorten the time between those two points by half an hour.

B. W. Folger responded to the toast of "The Management." As for the new boat, he said he did not see how any person could not love a boat. It was because of this love that the craft was generally called she. We love any enterprise that will float. The shipbuilding company a year ago was practically without an order. Now it had six orders to fill, and both yards were working full capacity. A unique feature about the "Cayuga" is that everything for her is to be made in Toronto.

We are indebted to our esteemed contemporary, "The Marine Review," for the following lucid description of the "Cayuga":

The "Cayuga" is a departure in many respects from the other steamers of the Niagara Navigation Company, the most important being that she will be propelled by twin screws instead of paddle wheels. The general outlines of the other steamers are followed as far as possible; and the internal arrangements are planned on the most modern lines to afford the greatest accommodation and conveniences for the passengers. Her dimensions are: Length, 317 ft. 6 in. over all; beam of hull, 36 ft. 6 in.; over guards, 51 ft. 8 in.; depth, 15 ft. moulded; draught, 10 ft. The hull is of steel and is divided into eight water-tight compartments by seven bulkheads; thus rendering her practically unsinkable. She will be driven by twin screws, power being supplied by two sets of engines, of the vertical inverted, direct-acting, quadruple expansion type, balanced on the Yarrow, Schlick & Tweedy system, having cylinders, 17½ in., 25 in., 36 in. and 52 in. diameter by 30-in. stroke. Steam will be supplied by seven Scotch marine boilers 11 ft. diameter by 12 ft. fitted with two corrugated furnaces. The Howden heated draft will be used. The engines are designed to develop 4,300 H. P., which is about 30 per cent. in excess of the Richelieu & Ontario Navigation Co.'s steamer "Montreal," at present the largest and most powerful passenger steamer navigating Canadian waters, and is exceeded by very few vessels on the United States side of the Great Lakes.

The vessel is planned on the lines of the day service observation type of steamers, having four principal decks, namely: main deck, promenade deck, upper promenade deck, and lower or orlop deck below the main deck. There will be three gangways on each side, the forward ones for passengers and express, the middle ones for passengers' baggage and the aft one for passengers only. This latter will lead directly into the entrance hall on the main deck,

where will be found the purser's office, a parcel checking room and other offices with which passengers have to come in contact. Here also will be the ladies' retiring room, which will be specially fitted for the comfort and convenience of ladies, and will include a number of new features. There will be a staircase 7 ft. wide to connect the entrance hall with the promenade deck above. The dining room will be on the main deck, and will be fitted with large observation windows on each side, so that an uninterrupted view may be had. It will have a seating capacity of 150. The main deck will be of steel covered with wood, and interlocked rubber tiling will be used as a flooring in several parts of the vessel devoted to passenger accommodation. On the promenade deck the principal feature will be the general saloon, which will extend the full width of the steamer. It will be a particularly handsome apartment, and the sides, instead of being straight, will consist of a series of bow windows, so that views may be had ahead and astern as well as straight out. At each bay seats will be provided so that small parties may keep together. Two of the bays will be finished as private parlors, which will be available for letting to parties who desire to be alone. The upper promenade deck, which will be reached by a stairway from the general saloon, as well as by stairways from outside on the promenade deck, will extend over the whole vessel, instead of ending just forward of the wheelhouse as in most vessels of this type. The rail will be inside the lifeboats, and the entire width of the deck will be available for passengers. The captain's quarters, the wheelhouse, and the pilot's room will be on this deck. A light shade deck amidships will give shelter over this deck. The space over the engine room, instead of being closed in with steel plates, will be surrounded with a framework in which plate glass sides will be fixed so as to enable passengers to have a view of the machinery. On the lower or orlop deck will be found the crew's quarters, kitchens, smoking room, engine and boilers, etc. In working out the details there may be some slight changes from these arrangements but nothing material. The whole of the interior has been planned so as to provide the greatest accommodation for the passengers, and for the convenience of the crew in working the steamer.

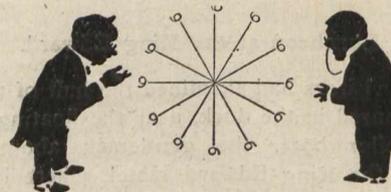
The decorations will be particularly striking. The entrance hall will have a heavy beam ceiling; the main stairway will be in cathedral oak; the dining room in mahogany, and other portions of the passenger accommodation in weathered and quartered oak. The designs show some very fine effects and will present a rich and artistic appearance. The furnishings of the various rooms will be in harmony with the general decorative design and color scheme.

The steamer is expected to be completed for the opening of the current year's traffic, and it is hoped to have her running on June 15, when a full service of six trips a day will be given. The steamers to be put on the run will be the "Cayuga," "Chippawa" and "Corona." The "Chicora" will probably be used as a spare steamer, or put on some other route.

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#### PERPETUAL MOTION AT LAST.

I submit herewith a drawing of a model of a perpetual motion machine. I know how other inventors who have worked along this line have been made fun of, and the fear of ridicule has for many years kept me from making my invention public. In fact, I invented it while still a small boy, and I think a single glance at the drawing will show how simple both the machine and its inventor are.



The machine consists of a number of radial arms, to the end of which is attached a weight, the whole revolving on an axis. The machine revolves from right to left. As it turns, the weights attached to the ends of the arms gradually change from 6 to 9 pounds each, the transformation being reversed as the weights begin to rise. This may seem complicated—even absurd—to some; but every great invention has been laughed to scorn by the ignorant and fatuous populace. Besides, a single glance at my drawing will show that in spite of what physicists may say, the weights on my machine do act in just that way.

I am not looking for any financial reward. I shall be satisfied if no one throws a brick.—I. N. Vantor in the "Technical World."