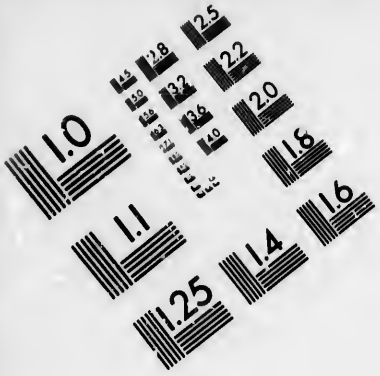

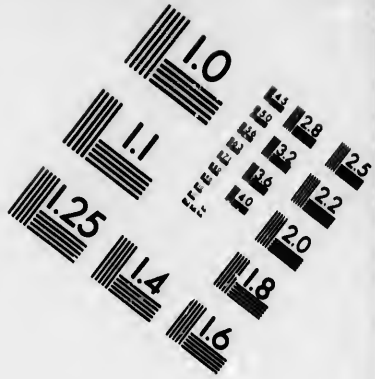

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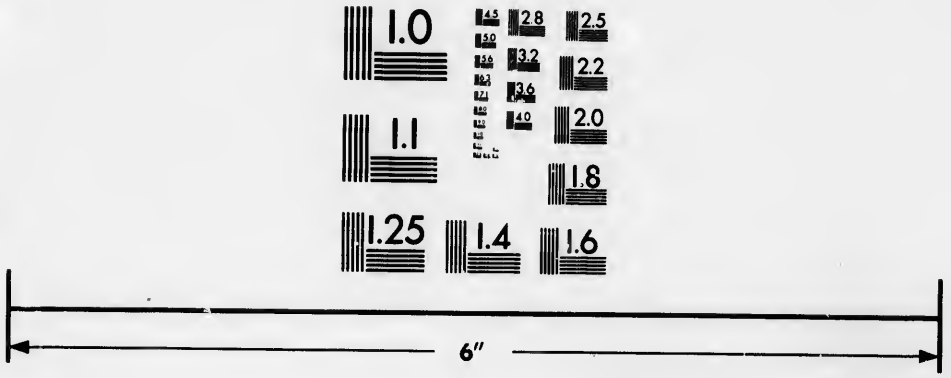

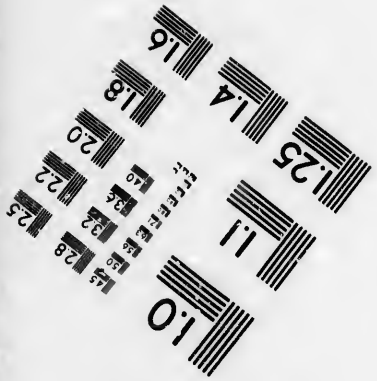

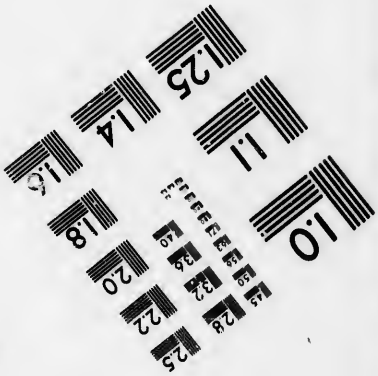

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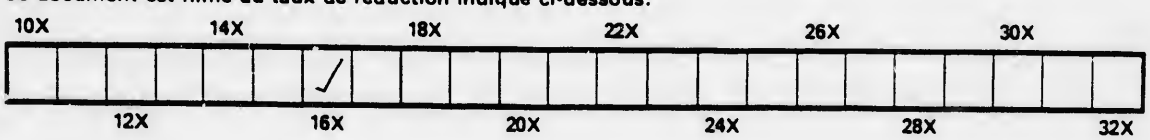

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From THE CANADIAN ENGINEER, *October, 1897.*

Baillairge's Marine Revolv

Editor THE CANADIAN ENGINEER.

SIR,—Marine Revolving Steam Express is the name of a vessel conceived by the undersigned, now some forty or more years ago. How the idea struck him or was originated in his mind, was from observing the rotation of a wheel under the impetus given to it by the feet of a squirrel. He imagined that such a wheel, if inclosed all around, and partly up the outer periphery of the ends or sides towards the centre or axis, and if then laid to run on any smooth surface or ice, would thus move with great velocity by the constant displacement of its centre of gravity by the motor inside of it. The same effect would, of course, obtain on any liquid surface as that of water, in which case it might be advantageous to put paddles around the vessel or cylinder to guard against any tendency to its slipping, and consequent backward or less speedy forward motion, though upon trial such paddles might prove to be of no necessity.

The diagrams on the accompanying plate are merely intended to be suggestive of the mode of steering such a vessel, by a rudder attached to it in a way to allow the vessel to revolve without carrying the steering apparatus with it in its revolution; as for instance, by tying it by a chain or belt around the vessel in a groove in the keel, said groove set with a series of friction wheels to ease the motion, and the rudder itself made heavy enough, without any tendency to sink, or while buoyant enough to float, too heavy for the vessel to lift out of the water; the steering gear being as shown, fixed to an outrigger extending each side through the open ends of the vessel, and supported by the engine, or as well as the passengers and freight on, or from a platform attached to the engine, or forming portion of the construction thereof. The smokestack of the engine, if driven by steam; or of the generator, if by electricity or compressed air, would

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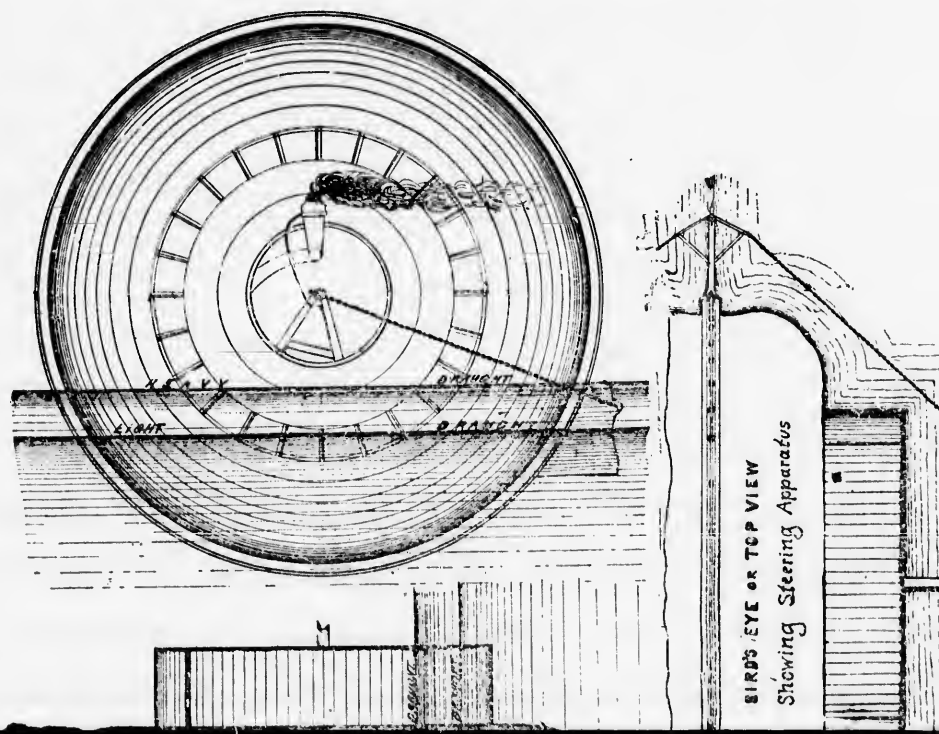

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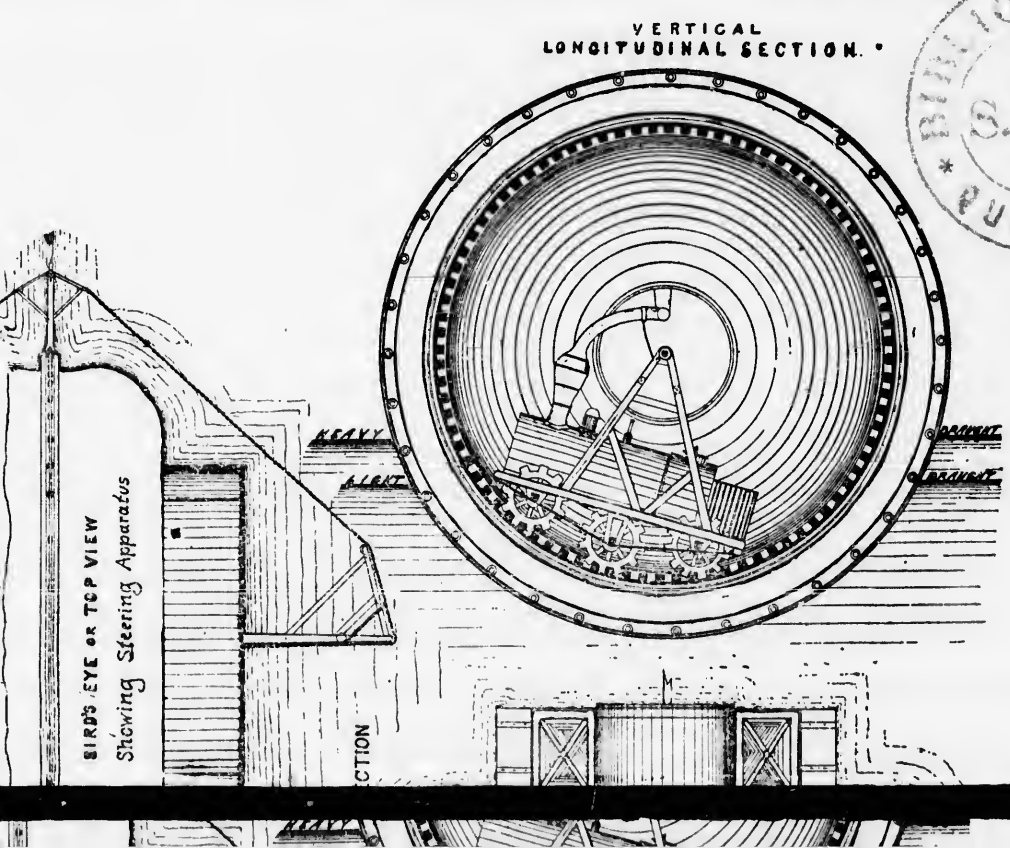
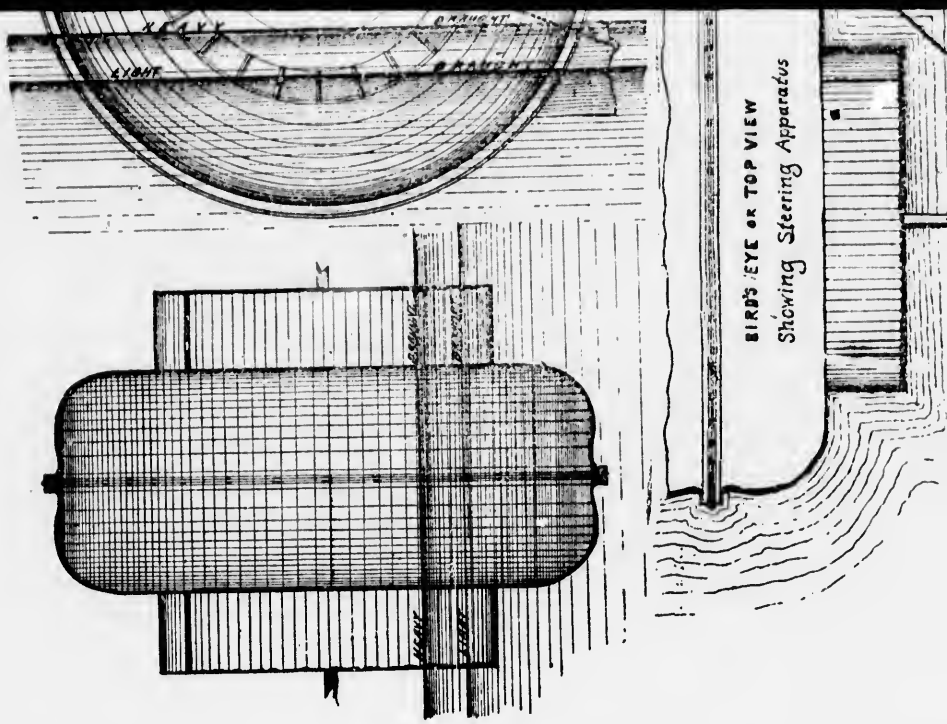
since it was made so many years ago, and at the time considered in advance of the age, though at the New York "World's Fair," held at the same epoch—sometime, I believe, before the war of secession (1853, I believe)—and at which it was on exhibition, though it, of course, attracted the less attention on account of its coming from such an end-of-the-world sort of place as Quebec, another invention purporting, as the papers then said, to be of the same description, had been exhibited by some minister of the gospel of a mechanical turn of mind, showing how two persons, who have never met may be similarly impressed, as with Adams' and Leveries "After Neptune." And now I see, by a paragraph in a recent issue of the Quebec *Daily Telegraph*, that some other individual, one F. A. Knapp, of Prescott, Ont., has also been similarly taken hold of. This fact it is which has awakened me to the possibility of there being something in it after all, and that the time has come when the invention can be carried out, which I heartily leave to Mr. Knapp to do, without even hinting at the possibility or probability of his having ever heard of my priority of conception. Again, I say, two or more persons may at the same time or at intervals of years be imbued with the same ideas, as in the case of the first artesian well at Grenelle, in France, while many such had existed in China from time almost immemorial, and in the same manner as suspension bridges had been conceived as new in Europe, while centuries ago to be found in Asia.

Finally, if my idea of so many years ago was then before its time, as was also the "Great Eastern" when built by Brunel, and as the latter is now, or vessels almost as big as it, beginning to be utilized, so may my apparently impossible-of-realization conception of 1850 become a reality, and I wish Mr. Knapp all success in making it so.

In this age of rapid transit the world is ready for something sen-

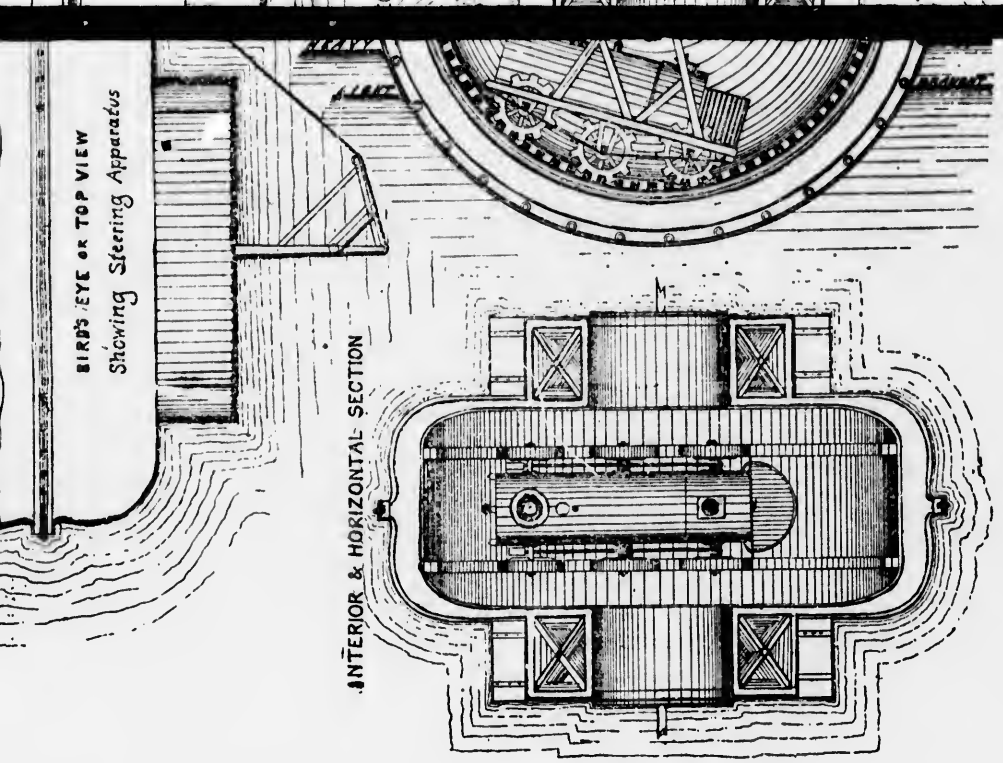




of course have to be also taken out at the ends or at one of them, unless by dividing the outlet it were found, while balancing weight on each side, to accommodate itself better to the direction of the wind, shutting off one side while opening the other, or by both sides simultaneously if found advisable.

Now this idea or mere element could be multiplied or extended as required, so that the vessel which as per design might be suited to a mere lake or river with no wind blowing of sufficient force to overturn it, or as a mere water bicycle, could be adapted to rough water, to hold more passengers and freight by extending the vessel or cylindrical hull in length, while the diameter remained the same, or extending both in any required ratio. The hull or cylinder, for instance, might be of length to accommodate two or more motors climbing up its side together, when the two or three or more might be joined by one passenger and freight-carrying platform pivoted in a manner to remain in a horizontal position, as has been proposed for the dining room or saloon of an ocean vessel, in a way not to rock or pitch with the vessel. Again, the outriggers protruding from the ends of the vessel might be so braced from the non-revolving platform as to give them strength enough to suspend therefrom, as a car from a balloon, a circular or other water-tight receptacle, boat or vessel for outside passengers wherefrom to enjoy the view and air and such that, with any rolling of the hull or cylinder, the buoyancy of the outrigged boats, hanging as if from davits, would on striking the water help to right it and return it to its normal position. The diagrams show no other light penetrating openings than the open ends of the vessel, which in rough weather it might be necessary to curtail or partly enclose; but it is of course evident that any number of windows or lights might be introduced all around the hull or cylindrical surface, precisely as in an ocean steamer, and of course it could also be easily lighted up at night, as the want of sufficient daylight could be supplemented by gas or electricity with equal facility.

This plan has remained rolled up, out of sight and out of mind



sational of the kind, an advance on Martin's boat on wheels, while in this instance the wheel itself is the boat, and the boat revolves. Every one knows the piece of mechanism called a horse-power, where a horse without any forward motion of his own causes an endless chain or wheel to revolve under his feet. Now, let the horse be placed within this endless wheel or chain, and made to tread its under inner surface instead of its outer upper periphery, and a correct idea will be formed of this rotating vessel; since the horse-impelled wheel would evidently advance, if not debarred from doing so by being made a fixture.

The idea is also illustrative of how such a wheel may be looked upon in the light of a revolving tramway, or railway track, or track for any other vehicle, or for any man or animal on foot, and by which said man, or animal, or vehicle or engine might be said to lay its or his own track as he or it advances, or to carry his or its track with it; thus smoothing or levelling the way itself in a manner to avoid rough or bad roads, or to avoid sinking into deep snow, or mud, or mire, or as a man on a bicycle might be supposed to do by running forward on or up the inner periphery of a wheel of larger diameter encircling him and his bicycle, and rotating and moving forward with him, and in a manner so to say, to lay his own track as he went along over soft or boggy ground or snow, into which his bicycle might otherwise have a tendency to sink and retard his motion, while also increasing his labor of pushing through. The lights necessary in such a vessel to satisfy the rules of navigation and prevent collisions and accidents by night, would of course be established at the extremities of the non-rotating outriggers. To these salient extremities of the non-rotating axis or shaft of the vessel, might also be attached circular signboards with the vessel's name painted thereon as on a medal, and arrangements could also easily be made by which a flagstaff might be erected at each end, and with halliards for working the colors as required.

Truly yours,

C. BAILLAIRGE.