

## HEALTH.

### How Long We are to Live.

According to the tables used by life-insurance companies in calculating rates of insurance, a person one year old may expect to live thirty-nine years longer; of ten years, fifty-one; of twenty years, forty-one; thirty years, thirty-four; forty years, twenty-eight; fifty years, twenty-one; sixty years, fourteen; seventy years, nine; eighty years four. Our readers will easily gather from the above tabulated statement the number of years to which their lives, according to the law of averages, may reasonably be expected to extend.

### Health of the Mind.

Miss Alcott used to relate the following concerning Emerson: "When his library was burning in Concord, I went to him, as he stood with the firelight on his strong, sweet face, and endeavored to express my sympathy for the loss of his most valued possessions; but he answered cheerily: 'Never mind, Louisa; see what a beautiful blaze they make! We will enjoy that now.' The lesson was never forgotten; and in the varied losses that have come to me, I have learned to look for something beautiful and bright."

### The Way to Rest.

To understand this, is of more importance than to know how to work. The latter can be learned easily; the former, it takes years to learn, and some people never learn the art of resting. It is simply a change of scenes and activities. Loafing may not be resting. Sleeping is not always resting. Sitting down for days with nothing to do, is not restful. A change is needed to bring into play a different set of faculties, and to turn the life into a new channel. The man who works hard, finds his best rest in playing hard. The man who is burdened with care, finds relief in something that is active, yet free from responsibility. Above all, keep good natured, and don't abuse your best friend, the stomach.

### Tomatoes are Wholesome.

The widespread and silly prejudice against tomatoes, a superstition for which the exploded doctrine of signatures is responsible, ought now to have received its death blow. Writing to the *London Times* on behalf of the medical committee of the Metropolitan Cancer hospital, its chairman, Dr. Alexander Marsden, states that he and his colleagues, during the last two years, have been inundated with letters of inquiry as to whether tomatoes are an exciting cause of cancer. The answer, which he publishes for the behoof of such as are anxious on the subject, is "that tomatoes neither predispose to nor excite cancer formation, and that they are not injurious to those suffering from this disease, but, on the contrary, are a very wholesome article of diet, particularly so if cooked."

### A Strong Diet.

Those who imagine that grains and farinaceous foods are what is commonly called a "light diet," or are lacking in the elements calculated to produce bodily strength and vigor, will be surprised at the following, which we quote from a recent writer believed to be authentic:—"The Japanese have made a race of giant men—a race of wrestlers. These wrestlers often weigh 200, 300, and 400 pounds. At the Imperial hotel, in Tokio, they brought their champion wrestler to my room. He was prodigious in size and as fat and fair as a baby. He was a Hercules in strength, but looked like an overgrown cherub of Correggio."

### What do you eat? I asked.

"Rice—nothing but rice."  
"Why not eat meat?"  
"Meat is weakening. Beef is 70 per cent. water. Rice is 80 per cent. food. I ate lean beefsteak once, and my strength left me. The other man ate rice and threw me down."  
"My courier said: 'This wrestler is the Sullivan of Japan. No one can throw him.'"

### Paræsthesia, or Numbness.

The sensations of creeping, crawling, and prickling, and a variety of other sensations which are known to neurologists as "paræsthesia," are of very little consequence as regards the question of paralysis. They are very often present in those forms of paralysis in which there is a destruction of the tissues in the spinal cord, but not present when there is no such destruction going on in the spinal cord. They are not, in themselves, indicative of disease. I have met perhaps a thousand cases where persons have said to me, "Doctor, I am going to have paralysis; my hand is numb; one side of me is numb; my face is numb." These symptoms are very seldom indicative of paralysis.

When a patient says this, I apply an aesthesiometer (an instrument having two points which can be approached or separated, so as to indicate sensibility.) It is possible to feel these points separately, in a state of health, at certain distances. For example, if the skin is sensitive when these are approached to within one tenth of an inch, the patient's condition is nearly normal; but if the points must be separated one fourth of an inch before they can be distinguished as two points when the eyes are closed, there is a loss of tactile sensibility. But the condition to which we have referred is simply one of morbid, perverse sensation, and these perversions of sensation frighten many people: they fear they are going to have paralysis.

Some time ago a gentleman came to me as a patient who had been having sensations of this sort for ten years. "Doctor," said he, "I am in imminent danger. I have been having these numb, creeping, crawling sensations for ten years. I have never told my wife or children about it, but for the last ten years I have lived in constant expectation of being paralyzed at any moment. He had been very brave; he had kept all his burdens and fears to himself; and yet, the poor man was simply frightened. There was nothing in the world the matter with him but a dilated stomach.

A dilated stomach affects the sympathetic center which is at the back of the abdominal cavity, and produces these perverted sensations through an irritation of this great sympathetic center, and by a reflex action of the sympathetic center causes an irritation of the sensory center in the brain or spinal cord. These sensations, however,

do not indicate a diseased condition of the nerve center, they mean a diseased condition somewhere else. A vast number of cases of these reflex actions of the nerve centers come from disorders of the bowels, stomach, and spleen.

### THE FLIGHT OF BIRDS.

#### The So-Called Horizontal Motion is Really Undulating.

Navigation of the air is a leading problem of the age, and in spite of the practical difficulties remaining unsurmounted there is confidence that man's inventive genius can devise some plan of conquering the domain of the earth's atmosphere. An explanation of the mechanics of bird-flight clearly points to the conclusion that aerial navigation depends for its satisfactory solution on application of the same principles. Flight involves wing-surfaces (pressure-surfaces) which must be both large and light. For example, a body weighing 150 pounds will require approximately 12 square yards of wing-surface. The wing-surfaces of birds are supporting-surfaces, lifting-surfaces, and, relatively, gliding-surfaces. These wing-surfaces are approximately about one two-hundredths of the weight of the bird. The down-stroke of the wing is rapid and resisting, the up-stroke slower. There results a quick lift, and as the upper surface is very smooth and gently arched, the up-stroke meets with less resistance. From the effect of the down-stroke results the possibility of rising—the lifting power. A drawing of a bent bow shows the wing position with the action suspended during flight. As the wing-surface from the beginning to the end of the stroke makes a shovel-shaped or scooping movement, scooping the air from above forward, and striking it downward and backward, by which the wing-surfaces describe a partial twist on the long axis—identical with part of a screw-stroke—there results a combination of two operations, a raising and a forward pushing movement, which constitute together one operation of flight: (1) The so-called horizontal flight is not actually in a straight line, but is undulating. Supposing the bird rises from the ground, he holds his body obliquely, and rises in an oblong course by rapid strokes of the wing. On reaching a desired height he brings his body to the horizontal direction by means of his steering appliances, and pursues his horizontal course, accelerated by the influence of gravitation. The bird is continuously subject to this force, which it overcomes with every stroke of the wing, and the quicker the operation the more rapidly the bird shoots forward. For an intelligent horizontal flight the steering appliances of the bird are, however, of first-class importance. These are the head, the neck, and the tail, and, if the last is wanting, the outstretched legs. These together balance the body for horizontal flight. (2) Linear horizontal sailing without beating of the wings is only the continuous motion following powerful wing-strokes which give the body a forward impulse, in which it is supported by the stiff out-stretched wings gliding over the volume of air which presses upward against it. The direction of sailing is only apparently horizontal and persists only so long as the force of propulsion overcomes the attraction of gravitation. The bird must then renew his stroke or he will glide gradually downward. If a bird floats a considerable distance without beating his wings or descending, it is in consequence of a resisting current. From such simple principles is gradually being worked out the problem of air navigation. A dirigible flying machine, it is thought by many scientists, can be constructed, provided, of course, there be an intelligent application of the flight-generating force of rationally constructed pressure-surfaces.

### An Electric Race Track.

One of the most attractive of the many popular features of the Frankfort Electrical Exhibition of 1891 was the electrical race track, on which dummy horses were propelled at a speed of about ten miles an hour, and which afforded the riders much of the excitement of a contest with living mounts. An electric race track, for which this installation has served as a model, has been constructed in Montreal, where it has greatly taken the public fancy. Practically, it is a kind of glorified "merry-go-round," with the added attraction of uncertainty in the relative position of the horse of the rider until the winning post is actually reached, but its construction has involved the working out of many important details. The track consists of an oval wooden platform about 150 feet long by 100 feet wide, and 4 feet above the ground. Extending around the platform is an oval track some 30 feet in width, divided into eight parallel courses, upon each of which are two large hobby horses coupled together, one behind the other. These horses are propelled by electric motors around the track along their particular courses, the movements and speed of each pair being under the control of an operator stationed in a small building at one side of the track. Each pair of horses moving independently of its neighbors seems to be taking part in a real trial of speed. At one moment a certain pair is ahead, then another takes the lead, and this, in turn, may be passed by some other horse. In this way the excitement and amusement of an actual race are provided for both riders and spectators. The horses are mounted upon trucks, which are under the platform, by means of upright iron bars, the truck consisting of an oblong iron frame provided with two wheels, one before the other, as in a bicycle. Upon each circular track there are two trucks coupled together. Upon the foremost of each pair is an ordinary two and one-half horse-power series electric motor, which drives one of the truck wheels by means of a single reduction gearing connected with the pulley by a belt. Current is conveyed to the motors by copper wires fastened to the lower side of the platform, contact being made by an ordinary trolley wheel, mounted on a short arm, and the rails are used for the return. A 100-volt shunt-wound generator supplies the current.

### DIED IN THE DUNDAS MARS.

An Old Soldier Supposed to be Murdered. A Dundas despatch says:—The rumor that the body of a man has been found today in the marsh near this town, proves to be only too true. The unfortunate man was an old resident of the town, Mr. Welsh, and an old soldier who has been through the American war.

The body will be brought to town and an inquest held, as there are rumors of marks on the neck, supposed to be, perhaps, tradable to foul play.

## NOTES ON SCIENCE AND INDUSTRY.

An interesting explanation has been made to the British Association of Science by one of its members of the Fresnel lens for transmitting light in one beam horizontally, and now, of the construction of a glass apparatus, which by reversion serves as a diffuser of light. Experiments show that the amount of light absorbed by ribbed glass is ten per cent., and by clear glass eight per cent.—that is only two per cent. difference in the obstruction of light between a double thick German clear and a fine-ribbed plate of the same thickness. New, through plain glass no diffusion is obtained—the light falls directly on the floor, and the clear sunlight falls upon the looms or flames in a factory, making dark shadows, while with the ribbed glass a diffusion is secured without a glare, no window shades being needed and there are no dark shadows. Thus in the practical use of light, there is obtained a vast deal more from ribbed glass without window shades than is possible from clear glass with the window shades which are required on the south side. This principle has just been applied it seems to a conical glass for placing under the arc light, thus doing away with glare and shadow. The dispersion of light through ribbed glass is found to be, relatively 64 per cent. in horizontal planes to 0 per cent. in plain glass.

The introduction of another cement is mentioned, of specially valuable properties for steam pipes, in filling up small leaks, such as a blow hole in a casting, without the necessity of removing the injured piece. The cement in question is composed of five pounds Paris white, five pounds yellow ochre, ten pounds litharge, five pounds red lead, and four pounds black oxide manganese, these various materials being mixed with great thoroughness, a small quantity of asbestos and boiled oil being afterward added. The composition as thus prepared will set hard in from two to five hours, and possesses the advantage of not being subject to expansion and contraction to such an extent as to cause leakage afterward; and its efficiency in places difficult of access is of special importance.

The segmental wire gun is the latest novelty in the line of artillery science, the construction presenting the striking feature of the substitution for the usual solid tube in high power cannon of a number of longitudinal steel segments, around these being wound strips of metal layers of square steel wire subjected to a constant tension of 130,000 pounds to the square inch, and which, so held together and covered with an external jacket of steel, form the tube of the gun. The claim made for this method is that the inner core of the gun allows of a higher physical condition and degree of special elasticity than it is possible to produce in the larger masses of metal heretofore used. In the breech block of this gun a continuous thread is used, and, when the block is thrown open for charging a latch locks it, so that it cannot be turned until it enters the breech. This ensures proper centring of the threads under all circumstances, and a consequent minimum of wear. At the breech of the gun the steel segments are covered by more than thirty layers of the square wire, the number increasing as the muzzle is reached. The ordinary charge will generate 50,000 pounds' pressure, and 60,000 pounds per square inch can be reached with entire safety.

That vast and important public work, the Siberian Railway, is now in process of construction—the Baikal line, as it is termed, being the commencement. It starts from the flourishing town of Tomsk, situated on the navigable river Ob, proceeding from here to the Government town of Tobolsk, thence to Krasnojarsk, and from here approaching the Chinese frontier to the left of the forest mountains of Sajan, which are so rich in gold and other metals; next it touches at Balagansk, then it proceeds to the prosperous town of Irkutsk, and in its further course will connect with a great many other business localities and rivers. The undertaking, though remarkable in its character, presents, according to the Russian engineers, absolutely no difficulties, as there are no swamps of importance, and the rivers which have to be bridged over are but few in number. The cost of construction at a moderate calculation, is placed at 29,000 roubles per verst.

Successful application appears to have been made in some of the Pennsylvania mills of jets designed with a special view to overcoming the smoke nuisance. In one case the difficulty is met by a jet somewhat of the Bunsen burner type, satisfactorily operating on two batteries of flue boilers—the jet being placed above the fire doors and immediately below the boilers—and, though the fuel is slack, yet almost no smoke is visible, even during heavy firing. In another case, steam jets of a different, but effective, design have been applied to puddling and heating furnaces. In these the ash pit is made tight, the steam and air enter below the grates, the furnaces being also of the usual type, except that special openings are made for air above the fire and through the bridge wall, and, when the fire doors are closed no black smoke is visible while the steam jets are in operation; the smoke appears above the stack whenever the fire door is opened, but disappears immediately on closing the door. Each puddling furnace has two jets of steam, and each heating furnace five jets, all about one-tenth of an inch in diameter. With this arrangement hot coal can be used in the heating furnaces and slack in the puddling furnaces instead of as formerly, lump in both—the quantity of fuel required being also much less.

The new system of refrigeration by means of carbonic acid gas seems likely to come into quite general favor as a substitute for the processes heretofore resorted to. The apparatus, in its improved form, consists of an evaporator, of coils, within which the liquefied carbonic acid is caused to evaporate, being afterward drawn into a compressor and raised to the liquefaction pressure; it then condenses into a liquid within the coils of a condenser, whence it flows into the evaporator, and so on in a closed cycle. Liquefied carbonic anhydride evaporates under atmospheric pressure at about one hundred and twenty degrees, F., below zero. In the machine, however, it is evaporated at ten degrees, F., according to the temperature it is required to produce, cooling the brine surrounding the evaporator coils to within a few degrees of itself; the brine thus cooled circulates in the freezing rooms, chill rooms, cold stores, or between the ice moulds in ice factories, abstracting also the heat from the water or goods to be frozen or chilled. The coal consumption

and the weight of machinery required are vastly less than in any other system, and, besides this, the carbonic acid gas employed is unattended with danger, is inodorous, and non-poisonous.

### ICE AT NIAGARA.

#### A Wonderful Display. Unique in its Character and Extent.

Rarely indeed is Nature in a mood of lavish display like that to which this Winter she has abandoned herself at Niagara. The scene about the great cataract is sublime, and it is unique. Other aspects of nature in other quarters of our wonderful earth may present pictures of beauty and grandeur. But their very permanence, whether in mountain, or forest, or sea, robs them of certain fascination which we feel in looking upon the fleeting splendor with which Winter has clothed Niagara. If every recurrence of the season of frost brought the same conditions, we might not be so moved by them. But not once in a decade is there vouchsafed to us so grand a spectacle—a glimpse so suggestive of the age of ice.

The American Fall is 164 feet high, and piled up before it, so that the sound of its thunder is muffled, is a huge barrier of ice. Between the inclined railway and the edge of the fall a round hill of ice rises, quite 100 feet in height, white and glassy. Farther along and nearly opposite Luna Island rises another mound of solid ice and snow, quite 135 feet in height, and of immense thickness. Between these are other hills and hummocks only less majestic. Near the foot of the Horseshoe, on the Goat Island side, is a dome of ice, some 200 feet long and wide, hundreds of icicles hanging from its under side.

These are but the prominent features of the ice formations. As one enters Prospect Park, or walks through Goat Island toward the brink of the fall, the trees present the appearance of trees anywhere in Winter. But once get to Prospect Point, and look back, or to the walk that leads over the Horseshoe Rocks from Goat Island, and look up, and every tree stands out pure white. The ice takes on the texture of the special tree to which it clings. If it is an elm or chestnut, the ice shows the creases of the elm's or chestnut's bark; if it be a maple, or beech, or ash, the ice is smooth and polished. Everything stands out glistening, and where the spray has formed on spruce and pine it has gradually taken the shape of the evergreen feathery fronds, and the tree looks like a strange exotic, the production of a botanist delighting in fantastic growths.

Perhaps the most complete view of all that combines to make Niagara splendid in Winter may be had from the stairs leading from Goat Island to Luna Island. Looking over the railing one can catch a glimpse of the great fissures or wells of ice into which the river pours its divided torrents, with wind and spray beating against the scarred inner walls of the barrier, while jets and clouds of mist shoot upward and are borne away by the wind to rain down and freeze again on the crust of the ice mountains beyond. At a distance, beyond the American Fall, is Prospect Point, with no black, moving specks of humanity. Behind these rises the white-robed wood, shading off to brown in the distance. Back of the glistening trees is the sky, as purely blue as ever it bent over Venice or Florence, while between, rising from the misty cavern at the fall's foot, and arching upward across the river, across the distant clump of ice-clad trees, against the deep blue of the sky, and fading away just under the gibbous moon, is a bow of the richest prismatic hues, now deepening, now becoming faint, and that such is the scene, not always with the moon a feature of it, at Niagara in the clear afternoons, when the atmosphere softens and subdues all the hues.

### Prohibition in Britain.

The Gladstone Government has kept its pledge to the friends of prohibition in Great Britain. Sir William Harcourt has introduced a bill providing that the question, whether, or not, licenses to sell liquor at retail shall be issued in a given community, shall be submitted to the voters of that community. Until we see the text of the bill, we cannot say how the areas in which the right of local option is to be exercised are defined. We presume, however, that in rural districts the unit will be the parish, while a borough or city, no matter what its population, will be permitted to determine whether liquor can be sold within the municipal precincts. To divide a city or borough for the purposes of a Local Option act would obviously fail to meet the wishes of the prohibitionists. This bill takes no account of the agitation, which of late has acquired considerable momentum, in favor of adopting in England the so-called Gothenburg system, under which all retail sales of liquor are made by municipal officers for municipal account. Although most conspicuously associated with the Swedish town of Gothenburg, this plan has been tried in many other centres of urban population, both in Sweden and Norway. The evidence about the workings of this plan, and especially regarding its effect on drunkenness and crimes traceable thereto, must be admitted to be conflicting; but it is perhaps fair to recognize a preponderance of testimony on its behalf. The social benefits of the system would have to be unmistakable and impressive, to counterbalance the political objection to a tremendous increase of the powers vested in municipal and parish authorities. We may be sure that this objection would outweigh all counter considerations in the mind of an adherent of the *laissez-faire* principle in government such as Sir William Harcourt is known to be. He bases his argument, however, for the direct reference of the prohibition question to the voters of a community, on the non-existence of any local authorities competent to decide it. He pointed out that the present Licensing Boards did not command popular confidence, and the County Councils, in his opinion, could not properly deal with the matter of licenses—apparently because their jurisdiction extends over too wide an area.

### Gold in France.

At the beginning of 1893 there were 1,701,000,000 francs in gold and 1,257,000,000 francs in silver in the vaults of the Bank of France. It would require 683 cars of a capacity of ten tons each to move the metals.

## HERE IS A MODERN JAPHET.

### For 18 Years He Has Been in Search of a Father.

A Salesman in the Employ of the Canada Paper Company Tells a Vague Story About Himself.

S. B. Cousins, a salesman for the Canada Paper Company, who resides at 247 Brunswick avenue, Toronto, would like to find his papa.

Mr. Cousins appears to be about 20 years of age, is a blonde and a little peculiar and vague in his manner and statements.

He said: "I do not know who I am. I remember one time to have been playing in a street with my brother, when two men asked us to take a ride in a wagon. After they had gone a little way they stopped and sent my brother away, but took me on with them, and some time afterwards I was turned over to a man with ginger-colored whiskers, who kept me, and with whom I traveled in various parts of the world. His home seemed to be in France, as we stopped there longest, and there I was baptized. The man's name was Cuzzin or Cousin in English, and he had two sons, whom I called brothers, and I, of course called the man my father. After much wandering from place to place we came one day to Eastbourne in England, where we stopped at a hotel. During the day a company of soldiers came marching through the town, and in my boyish enthusiasm, I followed them out of the city, being completely lost, and was at last picked up by the police in a town 18 miles distant. I was at that time perhaps 11 years of age. I was sent by the police to a photographer in Hastings, England, named Thomas, at 45 George street, that photographs might be made of me and sent to various other cities so that, if possible, I might be returned to Mr. Cousins. The photographer kept me, and as no one came for me I was given in charge of Mr. Williams, who brought me to Canada. Mr. Williams now lives just above Hamilton, and with him I made my home until I came to Toronto a few years ago.

"After residing here some time I was invited to the home of Mr. George E. Stephenson, barrister, through church associations, and during the evening in answer to an inquiry as to my parentage I told him what I knew of my past life and my abduction from home. He was much interested and told me the story of Charley Ross, which until then I had never known.

"After some time Mr. Stephenson concluded to write to Mr. Ross, and tell him the story of my life, which seemed to coincide in so many particulars with that of his son. Since then Mr. Stephenson has had several letters from Mr. Ross. I have also corresponded with him myself, and I have concluded best to take a trip to Philadelphia and if possible solve the mystery of my parentage."

### Ocean Steam Navigation.

A very interesting paper by Mr. Sandford Fleming on ocean steam navigation appears in the proceedings of the Canadian institute. Mr. Fleming refers to accounts given by Mr. Archibald Campbell of Quebec and Mr. Kivas Tully of Toronto on the passage of the Atlantic made by the steamship *Royal William* about 60 years ago. From these and other sources of information Mr. Fleming regards it as established that the *Royal William* was the first steamer to make the voyage. It was a distinctively Canadian enterprise. It was designed by Mr. James Goudie of Quebec; it was built by a joint stock company in the yard of Campbell & Black in Quebec, in 1830-31; the engine, boiler and machinery were furnished by the Montreal works, St. Mary's foundry, whereof Chas. William Grant, Baron de Longueuil, was proprietor; and the baron's descendants say that he put about \$40,000 of his private means into the venture. Among the owners were the Cunards of Halifax, and a great number of Canadians held stock. The vessel was launched at Quebec in 1831 in presence of the governor of the province, and of his wife, Lady Aylmer who christened the vessel after the reigning king, William IV. The dimensions, of the boat were:—Length, 160 feet; hold, 17 feet 9 inches; breadth outside, 44 feet; breadth between paddle boxes, 28 feet; builder's measurement, 1,370 tons; there were three masts, schooner-rigged. The accommodation was for 60 passengers, but on its first voyage it carried only seven. The *Royal William* left Quebec for London on August 3th, 1833, called at Pictou, N. S., to receive coal and overhaul machinery, and set out thence again on August 18th. Off the banks of Newfoundland there was a terrific gale, which disabled one of the engines; and the voyage from Pictou to London occupied 25 days. After a short service under the Portuguese government, the vessel was sold to Spain, and under the new name of *Isabel Secunda* was employed against Don Carlos. The late Mr. Alexander Somerville said that the *Isabel* was the earliest steamer of war in the history of nations to deliver a hostile shot. Being sent, after some years' service, to Bordeaux for repairs, it was found that her timbers were somewhat decayed, and the hull was left there, but the engines were good, and were transferred to a new *Isabel Secunda* to form part of the Spanish navy. This, according to Mr. Campbell, Mr. Tully and Mr. Fleming, was the pioneer steamer of the Atlantic. It has been claimed that an American steamer, the *Savannah*, made the voyage at the much earlier date of 1818. But the three gentlemen named have come to the conclusion that the *Savannah* was simply a sailing ship, and that the paddle wheels driven by steam were minor aids to navigation. The wheels were taken off when the wind was favorable, and the *Popular Science Monthly* says that in a voyage of 29 days 11 hours, from New York to Savannah, steam was used for only 80 hours. Further, it is declared that the *Savannah's* effort not only did not encourage but discouraged steam navigation, and thereafter there were built the magnificent "clippers," sailing vessels purely, which often made the voyage in less than half the *Savannah's* time; while the *Royal William* was the forerunner of the Cunard line, and "as such she was equally the forerunner of the 34 lines which to-day run regularly between America and Europe." With the year ending 1st of October, 1892, the Atlantic was crossed by steamships no fewer than 3,800 times, an average of more than ten per day. Mr. Fleming thinks that in the parliament buildings at Ottawa there should be some enduring record of the voyage of the Canadian vessel which led the way to this great system of navigation.