

Railway & S. S. Lines

DOMINION ATLANTIC RAILWAY

Steamship Lines

St. John via Digby

Boston via Yarmouth

"Land of Evangeline" Route.

On and after Jan. 15th, 1912 the Steamship and Train Service of this Railway will be as follows (Sunday excepted):

Midland Division

Trains of the Midland Division leave Windsor daily (except Sunday) for Truro at 7.30 a.m. 5.35 p.m. and 7.45 a. m. Mon., Tues., Thurs., and Saturday and from Truro at 6.50 a. 3.20 p.m. and 12.45 noon Mon. Wed. Fri., and Sat., connecting Truro with trains of the Intercolonial Railway, and at Windsor with express trains to and from Halifax and Yarmouth.

Boston S.S. Service

BOSTON-YARMOOUTH SERVICE.

The Royal and United States Mail Steamship "BOSTON" sails from Yarmouth on Wednesday and Saturday on arrival of Express train from Halifax, arriving in Boston next morning. Returning leave LONG WHARF, BOSTON, at 1.00 p. m. Tuesday and Friday.

St. JOHN and DIGBY

ROYAL MAIL S. S. YARMOOUTH.

Daily Service (Sunday excepted).

Leaves St. John 7.45 a.m.

Arrives in Digby 10.45 a. m.

Leaves Digby same day after arrival express train from Halifax.

P. GIFFKINS, General Manager.

FURNESS, WITBY & CO., LTD.

STEAMSHIP LINERS

LONDON, HALIFAX & ST. JOHN, N. B. SERVICE.

From London. From Halifax

Table with columns for Steamer, Date, and Time. Includes Anapa, Rappahannock, Kanawha, and Shenandoah.

From Liverpool. From Halifax.

Table with columns for Steamer, Date, and Time. Includes Tabasco, Durango, and Almeriana.

FURNESS WITBY & CO., LTD. Agents, Halifax, N. S.

H. & S.W. RAILWAY

Table with columns for Accom. Mon. & Fri., Time Table in effect, and Accom. Mon. & Fri. Includes stations like Middleton, Clarence, and Port Wade.

Flag Stations. Trains stop on sign CONNECTION AT MIDDLETON WITH ALL POINTS ON H. & S.W. RY AND D. A. RY. P. MOONEY General Freight and Passenger Agent.

Big Icebergs Lurk in Fog

Vigilance Required to Avoid the Hidden Dangers of the Newfoundland Banks.

(New York Evening Post.)

It needed no such mishap as befell the Anchor liner "Columbia" to emphasize the danger that lurks in the huge masses of polar ice which, enveloped in fog banks, drift in summer across the northern transatlantic lanes. This is the open season for icebergs, and as every steamship approaches the Newfoundland Banks, the vigilance of the watch on deck is redoubled. When the fog blanket is laid across the sea, speed is reduced and whistle blasts awaken the wastes; when a sudden lowering of temperature presages ice in close proximity, the throop of the engine ceases at intervals, and you may hear the calls of lookouts and the answers from the bridge. These are trying moments of anxiety, for no one has yet devised an instrument that will penetrate a billowing cloud of sea mist. Navigators must keep control of their vessels and trust to their own good judgment.

The veterans of the North Atlantic lines are thoroughly familiar with the signs that indicate ice. Long before the berg is seen from deck, its "blink" or reflection may be noted in the sea and the navigator can easily fix its direction by watching the changing color of the horizon, which is usually much paler in the vicinity of ice. On a clear day, bergs can be seen a long distance away; at night, their effulgence proclaims them. In the fog, if a berg is visible at all, it will look black in comparison with the mist around it, but usually it is completely hidden.

One of the dramatic features of the "Columbia's" accident was the echo of her whistle against the berg she struck. When the first blast sounded and an answer came back, the men on the bridge were inclined to think they were near another fog-bound steamship; but when the second whistle was answered promptly, they realized that it was the mockery of the ice wall ahead. Seamen have long known that it is possible to detect bergs by the echo of the whistle or fog horn, and that by noting the time between whistle blast and echo, the distance of the object may be found approximately by multiplying by 550.

SEALS TELL A TALE TOO.

Another indication of icebergs is the crack and thunder of falling boulders, while the absence of swell or wave motion carries its meaning, too. Still another sign is the appearance of seals or flocks of birds far from land. The temperature of the ocean sometimes is lowered, when ice is near by, and there is, of course, the chilly breath that strikes the face when ice is almost aboard.

Peculiar conditions near Newfoundland are responsible for the fog banks that sweep over the transatlantic lanes. Here are two currents, the Labrador, cold and moving south from the Arctic, and the Gulf stream, warm and flowing northward from tropical seas. When south winds pass over the Gulf stream and encounter the Labrador current, they are chilled and reduced to the dew point, thus producing fog. Among the rolling banks drift crazy bergs, field ice, and "growlers," or the little lumps that accompany the greater masses.

The bergs usually originate in western Greenland. Everywhere, according to a bulletin of the Hydrographic Office, Greenland's mountainous belt is penetrated by deep fiords, which reach to the inland ice and are terminated by the perpendicular fronts of huge glaciers, while in some places the ice comes down in broad projections close to the margin of the sea. All of these glaciers are making their way toward the sea, and as their ends are forced out into the water, they are broken off and set adrift as bergs. This process is called calving. The size of the pieces set adrift varies greatly, but a berg from sixty to one hundred feet to the top of its walls, whose spires or pinnacles may reach from two to two hundred and fifty feet in height and whose length may be from three to five hundred yards, is considered to be of ordinary size in the Arctic.

"These measurements apply to the part above water, which is about one eighth or one-ninth of the whole mass. Many authors give the depth under water as being from eight to nine times the height above. This is incorrect, as measurements above and below water should be referred to mass and not to height. It is even possible to have a berg as high out of water as it is deep below the surface, for if we imagine a large, solid lump of any regular shape which has a very small sharp high pinnacle in the centre, the height above water can easily be equal to the depth below. An authentic case on record is that of a berg grounded in the Strait of Belle Isle a sixteen fathoms of water, that had a thin spire about one hundred feet in height.

THOUSANDS SET ADrift.

Bergs are made all the year round, but in greater numbers during the summer season; and thousands are set adrift each year. Once adrift in the Arctic, they find their way into the Labrador current and begin their journey to the southward. It is not unobstructed drift, but one attended with many stoppages and mishaps. Many ground in the Arctic basin and break up and disappear entirely, while others get safely past and reach the Grand Bank. The whole coast of Labrador is set up by numerous islands, tays, and headlands, shoals and reefs, which makes the journey of all drift a long one, and adds greatly to the destruction of the bergs by stoppages and by causing them to break up.

It is the greatly increased surface which the fragments expose to the melting action of the oceanic waters that accounts for the rapid disappearance of the ice after it has reached the northern edge of the warm circulatory drift currents of the North Atlantic Ocean. If these processes of disintegration did not go on and large bergs should remain intact, several years might elapse before they would melt, and they would never be present in the transoceanic routes. In fact, instances are on record in which masses of ice, escaping the influences of swift destruction or possessing a capability for resisting them, have, by phenomenal drifts, passed into European waters and been encountered from time to time throughout that portion of the ocean which stretches from the British Isles to the Azores.

They assume the greatest variety of shapes, from those approximately to some regular geometric figure to others crowned with spires, domes, minarets, and peaks, while others still are pierced by deep indentations or caves. Small cataracts precipitate themselves from the large bergs, while many icicles hang in clusters from every projecting ledge. They frequently have outlying spurs under water, which are as dangerous as any other sunken reefs. For this reason it is advisable for vessels to give them a wide berth, for there are a number of cases on record where vessels were seriously damaged by striking when apparently clear of the berg. It is generally best for vessels to go to windward of them, because the disintegrated fragments will have a tendency to drift to leeward while open water will be found to windward. Serious injury has occurred to vessels through the breaking up or capsizing of icebergs.

COLLISIONS HAVE DECREASED

A few years ago collisions of steamships with icebergs were reported frequently. That such accidents have diminished is due not to a decrease in the number of bergs—they are plentiful as ever—but to the remarkable development of the science of hydrography. The wireless also plays an important part in relaying from ship to ship information regarding obstructions of all types, whether they be fugitive buoys, derelicts, floating spars, or dangerous bergs. Hanging on the wall of the Hydrographic Office in this city is a pilot chart, with red symbols marking the positions of bergs and other obstructions as last reported. Nearly every day the office is visited by shipmasters and junior officers, who either bring reports of drifting objects they have seen or seek the latest news from the transatlantic lanes. They examine the charts, copy the daily memorandum of obstructions issued by the Washington office as well as the daily log of the Maritime Exchange, and receive the weekly hydrographic bulletins, which tell all about drifting objects and give other facts of interest to seamen. All of this information is given without charge, and the office has no secrets. Its object is to aid the men who are responsible for the safety of valuable ships and thousands of passengers.

As a consequence, a liner's master when he leaves port, knows approximately what he is likely to encounter on his voyage. He is more than likely to add to his stock of information through wireless conversation with old friends on the high seas. His chief concern is fog, icebergs, unless they are submerged are not regarded with awe, except in foggy weather, for rarely does a ship strike one when the atmosphere is clear. The record of collisions with ice proves the truth of this statement.

You judge a man not by what he promises to do but by what he has done. That is the only true test. Chamberlain's Cough Remedy judges by this standard has no superior. People everywhere speak of it in the highest terms of praise. For sale by druggists and dealers.

Pekin, China, was given over to anarchy on March 1st. The destruction of property by fire is put at \$15,000,000. The trouble began by a mutiny of soldiers.

The Sugar Beet Industry

THE SOUTHERN CALIFORNIA SUGAR COMPANY.

The increased use of sugar as food combined with the more active development of the beet sugar industry in Southern California has brought the great enterprise into more than ordinary prominence in the industrial and commercial world, mainly through the operations of the Southern California Sugar Company, which was incorporated in the month of May, 1908, with factory and offices established at New Delhi, on the line of the Pacific Electric Railway, one mile south of Santa Ana, in Orange county.

The modern factory of the company with capacity of six hundred tons daily, was completed in July, 1909, and has been in successful operation through three successive campaigns—1909, 1910 and 1911. The past year the capacity of the plant was 770 tons daily, and averaged 760 tons daily during the season of plentiful delivery of beets.

When it is recalled that the annual production of sugar beets and the refined product in the county of Orange is approximately \$10,000,000, the reader will realize the vast importance of this industry to Southern California, the State and the nation, serving as it does to cut down the heretofore heavy importations of sugar and serving also to defeat the efforts of the sugar barons to boost prices to unreasonable figures, to the loss of the consumers.

The Southern California Sugar Company, through the enterprise and faith of its managers, has done more to open the beet lands of Orange county to successful cultivation, by bringing the growers' delivery stations within easy wagon haul, than any other company, or through the operation of any other method conducive to speedy and convenient marketing of the beets. Another potent factor in further development of the beet sugar land was the opening up of the Pacific Electric Railway between Santa Ana and Huntington Beach.

The manufactured product of the Southern California Sugar Company is sold in Chicago, St. Louis and in other big markets of the East. During all of the past summer, at the time of the sensational advance in prices, the sugar of the company, which is of the highest quality, sold at a reasonable figure, and held the market down one cent a pound.

With regard to John Arbuckle's assertion that if the duty on raw sugar were repealed every consumer in the land would be benefited. The Chairman of the Executive Committee of the United States beet sugar industry has this to say: "Beet sugar is the only competitor the refiners have, as from it they can exact no toll, and every pound of beet sugar produced means one pound less for them to refine. Their purpose in seeking its destruction is clear."

This declaration of Mr. Hamlin is in direct line with the opinions held by the management of the Southern California Sugar Company. Some time ago an attempt was made by the United States government to establish reciprocity terms with regard to sugar produced in Cuba, and pending the decisions the building of fully eighty beet sugar factories in America was held up. The proposition is still unsettled. But for that move the factories would have been erected and put in successful operation, and enough beet sugar would have been produced to have supplied all of the consumers of the United States with the possibility of a residue for exportation.

Southern California is leading in the beet sugar industry, each year making a larger showing in the amount of the output and total number of acres under cultivation. The Southern California Sugar Company plans to further enlarge its operations in Orange county. "The cultivation of sugar beets is one of the most profitable occupations for the farmer, the factories paying the growers about six dollars a ton for this product, besides providing every possible convenience for the economical handling of the crop from season to season. It is related by an expert that for five months the sugar beet stands in the soil when it is harvested. The farmer has at the close of the season cleared and cleaned his land and then when spring planting comes, he's unburdened in the rapid work of seeding, which must be done without delay once the proper season arrives. This, in California, runs all the way from February 1st to an indefinite point in late spring—perhaps the middle of May. Four to six weeks after the best seed is placed in the ground, which is done with drills, and at the rate of twenty pounds to the acre, "blocking" and seeding must be done, and in the maturing of the cane many details are enacted, but none so wearisome as that of growing grain

in the East.

Thousands of farmers in California are engaged in raising sugar beets. It is not an uncommon thing for a farmer to produce from two to three hundred acres of sugar beets. The tests in most cases run twenty tons to the acre, and the price is around six dollars a ton, or a return of one hundred to one hundred and fifty dollars per acre for a season.

The California beet grower is to reap large returns on his crop when he comes to understand the value of the by-products and freely makes use of them. The good roads in Orange county permit of easy hauling. The Southern California Sugar Company was the first factory in California to erect a pulp drying plant. This it did, installing a steam drying plant at a cost of over \$100,000. The dried pulp is a most excellent stock food and is readily handled and shipped to a distance with small expense. Pulp has been one of the most valuable by-products of a beet sugar factory, and the dryer has made it practical to place this food article in the hands of all who desire to use it. Heretofore, pulp came from the factory, containing ninety-five per cent water, has been too expensive to handle to make it available to those living some distance from the factory. Dried beet pulp is a valuable food product for all forms of stock, and chicken food, as well as having been found in Southern California the most valuable of all food for ostriches.

It is already being used extensively as feed for cattle and horses. Another by-product, molasses, is very valuable as a feed for horses, and when added to damaged or inferior hay or other food stuffs, makes one of the best possible articles of diet for them, and is eaten readily. The lime waste from a beet sugar factory forms one of its extensive and staple by-products, and will come into universal use as a fertilizer on all farm lands. Truly, it may be said, in by-products the California sugar beet farmer finds an as yet unrealized opportunity.

THE LATEST SEA MONSTER

The Titanic Now Ready For the Water.

Only the other day the "Lusitania" and the "Mauretania" were the world wide wonder sisters of the briny. Now they must yield the palm to a new pair of marine twins—the "Olympic" and the "Titanic." This pair has just been filled out by the completion of the "Titanic," the "Olympic" being already in commission.

The "Titanic" which is lying at the dock at Belfast preparatory to her trials, is 522 feet long and of 32 feet beam. She is nearly 100 feet longer than any other ship in the world except her sister, and her tonnage—52,300—is 13,000 in excess of that of the largest of rival liners.

Her engines, 50,000 horse power, are both turbine and reciprocating, are expected practically to eliminate vibration. She has accommodations for 3,400 passengers. She cost \$7,500,000. The "Titanic" is not a speed marvel, she makes but twenty-one knots as against the "Mauretania's" twenty-five, but she is the last word in the way of comfort and luxury in trans-Atlantic travel. She will go on the New York-Southampton run in the White Star service.

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BRAKE THE EARTH

Magnetic Storms Are Robbing Our Planet of Motion.

MAY STAND STILL SOME DAY

Then One Side of the World Will Be a Desert Furnace, the Other a Black, Loyal Waste, and Mankind Will Find Itself in Cramped Quarters.

The world is slowing down in its daily rotation, and the days are getting longer, according to Professor Louis A. Bauer of the Carnegie Institute, Washington. Magnetic storms are putting a magnetic brake on the earth, and if they continue to constrict this brake, at the rate measured for the past ten years, in just 3,320 years this good old earth will no longer be turning on its axis, but will settle down with one side in perpetual sunshine, blasted by withering heat, and the other side in endless darkness and cold, corresponding to the extreme frigidity of interstellar space.

Clearly it is not claimed that the earth positively will come to a standstill in this year 5231 A. D., but simply that it is being subjected to a brake that may stop it by that time. Probably most scientists would argue that magnetic storms will be less violent in future, that other forces will intervene and that the stopping of the earth will be postponed a great many years beyond the date named.

But all scientists will acquiesce in the statement that the earth is slowing down and sooner or later will come to a stop. When the earth stops turning the side toward the sun will become over-heated, and water will dry up, and blistering deserts will cover the surface. Near the edge of the sunlit side there will be a temperate zone, where the sun will always be one hour high or thereabouts, remaining at the same height above the horizon year in and year out. Every hour will be like 6 o'clock in the morning of a summer day. To this delightful region the world's population will flock.

A little removed from the hot area will be the twilight zone, also quite habitable, with the sun unending at the horizon. Though life in the torrid or hot zone will be insupportable, as a rule, yet on the outer edges, where the sun is but two or three hours high, people may live in a temperature of 100 to 140 degrees by means of various cooling contrivances.

On the dark, cold side of the earth all the water will be frozen solid. Even mercury will freeze in that awful chill. It will be impossible for human beings to penetrate more than three or four hundred miles into the dark and frigid zone, which will be far more inaccessible than are now the polar wastes.

The fact that all the water on the cold side of the earth will be frozen and all the water on the hot side dried up and evaporated will tend to cause a great disturbance of the continents and oceans of the globe. There must be some sort of rearrangement, and it would seem that the oceans would tend to seek the habitable temperate zone, which would then be the equator's equivalent. Since the earth's surface contains very much more water than land it is extremely probable that the temperate zone will not contain nearly enough land to satisfy the population and that there will be continuous struggles for possession of valuable soil. It is even conceivable that a large portion of the people may be driven to seek permanent residences in sailing vessels or steam craft, subsisting by fishing.

During the period when the earth's days are lengthening perceptibly great social changes must come about, due to the difference in hours. When the days get to be forty hours long it will surely be necessary to arrange for a period of rest and sleep in the middle of the day.

As the days lengthen until they exceed a week's duration all sorts of complications will ensue, and the days, weeks and months will become hopelessly mixed. Scientists agree that the lunar month will lengthen as the day lengthens, though the day will increase more rapidly. According to Professor Ernest W. Brown of Haverford college, who has given special attention to this subject, there will come a time when the month and the day will both be of the same duration.

As the earth's day gets longer and longer the time will come when a day is a year long. Then there will be no more days and nights, no weeks and no months. The earth always will have one side to the sun, and the moon will have one side to the earth, and the two will turn around the earth once a year as if fixed on a rigid bar. There will be no more seasons on the earth—no spring, summer, autumn or winter. The weather of the several seasons can be experienced only by traveling to and fro between the hot and cold zones.

It is clear that property values in more than half the planet will be wiped out. Cities and farms throughout the "dark half of the globe" will be buried under perpetual glaciers. Correspondingly values will rise enormously in real estate on the inhabited strip that lies just on the cool edge of the hot hemisphere. No one knows, no one can calculate at this time, what part of the earth will be included in this habitable strip or belt any more than he can predict which half of the world will be hot and which cold.—St. Louis Post-Dispatch.

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