

A TWO-MONTH VOYAGE TO SOUTHWEST GREENLAND (1890)

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by John Randolph Spears

I. ON BOARD A CRYOLITE SHIP.

Rapid Escape from a Sweltering City to the Ice Fields of the North—Launching the Ship, Full-rigged—A Landsman's First View of Icebergs—Almost Nipped in the Pack Off Cape Desolation—Whistling for Wind to Escape from a Storm.

A hot day was Saturday, the 2d day of August last. That, at least, was the belief of every one so unfortunate as to be cooped up in a hot office, in a hot tenement, or in the crowded cars of the elevated roads of this city. The sunny sides of the streets were deserted. The doors there were closed and the curtains and awnings pulled down to keep out the glare of the sun, while the shimmer of heated air rising up from pavements and walls was enough to give any one looking that way the headache. On the shady sides of the streets the air was only little better. The further down town one went the worse it seemed. There was no use trying to do business on such a day, and for once even the busiest men seemed to welcome the Saturday half-holiday, and, promptly closing their offices at noon, went trooping off with handkerchiefs tucked in around their necks to absorb the moisture.

At the hottest hour of that hot afternoon I started from THE SUN office to walk to Pier 18, a short distance below Fulton Ferry, where the steamship Winthrop was with steam up waiting to start for St. John, N. B. At the head of the pier I met an acquaintance who is engaged in business in that part of the town.

"Hello!" he said. "Going out of town eh?"

"Yes. I'm going to Greenland."

"Greenland? Gad zooks, that's a fine place to go to this weather. Say, you must have had a windfall, eh? Did you buy or charter a vessel to take you?"

"Nothing of the sort. I'm going on one of the Cryolite fleet, the regular Greenland line."

"Oh, you mean the whalers, eh?"

"No, I don't, I mean the ships that go after cryolite."

"Oh, that's it. But I haven't the faintest idea of what cryolite is. Will you take photographs of the Eskimo snow houses up there? Aren't you afraid you'll freeze, I mean aren't you afraid you won't after this day in New York? I'd ask you to bring me an Eskimo sweetheart, only I'm afraid you'd do it. Say, will you stop in Alaska on your way up?"

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On the pier I met an officer of the steamship, and said to him: "Is this the steamer to take to go to Greenland?"

I ge-uess so. Is it near Bar Harbor?"

No, it's some miles north of St. John."

Oh, yes. This is the boat. The purser will sell you a through ticket."

Under the awnings over the upper deck where there was a faint imitation of a breeze that made life less burdensome, I smoked with an old schooner Captain who had been in the coasting trade many years. He told me he was going to Eastport, and I said I was going to Greenland.

"Steamer?"

"No, a bark."

He shook his head doubtfully.

"I should not like to risk it," he said. "You are going to start very late. If you get froze in I fancy you won't enjoy life in a snow hut with the Eskimos, nor on board ship either should you be able to stay there. What do you load there? Oil and skins?"

"No, cryolite."

"Cryolite? What's that?"

The majority of even such well-informed people as the readers of THE SUN will be astonished when they are told that a very large quantity of the sal soda, the bicarbonate of soda, the alum, and the caustic soda used in their homes is dug out of a mountain in Greenland. The facts gathered about the natives, who, by the way, do not live in snow huts, and their white rulers, and about the only cryolite mine in the world, though less astonishing information will be, perhaps, still more interesting.

While the coast of Greenland is occasionally visited by American whalers, only one American firm trades regularly to that country, and that is the firm of McKay & Dix of this city. Their ships are unquestionably the strongest wooden vessels built on the continent, for they are constructed to sail through the drift ice that, with very rare exceptions, is found on the Greenland coast at every voyage. How these ships came to be built and what they accomplish will appear further on, but it will interest those who have read something of the history of the American merchant marine to know that the senior partner of this firm is Lauchlan McKay, who, as Captain of the Sovereign of the Seas, helped to make famous the clipper-ship era of American commerce, while Capt. Charles B. Dix, the junior, is a Yankee of the Yankees, a Bar Harbor boy who crawled in at the hawsepipes, worked his way aft out of the cabin portholes, and down the gang plank to a right snug berth on shore.

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A COUNTRY ESTATE IN NOVA SCOTIA.

The night of Aug. 7 found me at Eatonville, Nova Scotia, still en route for Greenland. Eatonville is not on the regular route thither, but it has been the starting point of several voyages in the cryolite trade ; it was really the starting point of my voyage. Eatonville consists of a sawmill, a dozen houses, and a tram-road, located in the midst of a forest 35,000 acres in extent on Cape Chignecto, in the Bay of Fundy. The tram runs two miles and a half down a black brook swarming with trout to a shipyard on a narrow beach, between two beautiful tree-topped walls of red rock streaked with green, that tower in places 250 feet above the water. A more picturesque shipyard would be hard to find than that located here. I reached Eatonville at 8 o'clock on the night of Aug. 7, after a ride of thirty-two miles in a carriage along the upper shores of the Bay of Fundy and eight miles through the woods about my destination. It was a journey made interesting by the inspection of half a dozen different seagoing vessels in various stage of construction along the road, by oft-recurring views of Cape Blomidon and Cape Split and other points of Acadia land, by tales of bear killing and moose killing, by legends of treasure hidden by pirates in the old days, by stores of information about shipbuilding and sailors, all imparted by the driver, Mr. Fred Eaton, who owns the 35,000 acres of [land] and builds ships on the narrow beach at the mouth of the hook and enjoys life the year round as only a man who owns with other good things 35,000 acres of Nova Scotia forest with its large and small game can do, came at the same time with Capt. Dix of the Greenland fleet.

THE NEW SHIP.

We started off down the tram, walking the three-inch-wide wooden rails, slipping off now and then where the rails had a "winny" edge, feeling our way where the overhanging shrubbery made the roadway absolutely black, and feeling perfectly safe only where the roaring brook was crossed by a bridge with a board pathway for the horse. An hour's walk, however, brought us to a place where a bend in the roadway enabled us to see where the gorge opened on the water. The tree-covered mountains towered at the right and left, and the shadows of the giant cliffs were only less dark than those we had left in the underbrush behind us, but after a little we could distinguish the outlines of some of the shanties erected for the use of the workmen, while right in the centre of the gorge the outline of a ship showed plainly on the background of the starlit water. It was a somber but most attractive picture before us.

"There she is: that's the *Argenta*," Capt. Dix said, with enthusiasm.

Ever since the month of February a gang of men had been hewing, sawing, hoisting, boring, and mauling away at the timbers about the spot before us, and out of their labor had arisen the fair form—for it was a most beautiful model—of the latest addition to the Greenland fleet, and this was the vessel in which, when she was launched and fitted, I was to make my voyage to Greenland. People who know the difference between a main mast and a broom stick will be interested in a brief description of the *Argenta*, for that description will tell how a ship should be built that has to work its way at every voyage through from ten to

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seventy-five miles of field ice—vast rafts of floating cakes of ice—a collision with any one of which would crush in the bow of a common ship though she struck it end on in a zephyr. Although she registers only 588 tons, the *Argenta's* frames are 12x14 inches large—the size required for a 1,000-ton ship. She has five-inch planking, and her ceiling runs from seven to ten inches thick. Although what would be called a soft wood ship, that is one built chiefly of spruce, she has hard wood keel, keelson, two sister keelsons, and what might be called bilge keelsons for the ceiling strakes. These are a half thicker than required by builders' rules. The frames at the bow are solid—stand so thick as to touch each other. To give still greater strength there are a lot of pointers—diagonal timbers bolted over the ceiling at the bow and the stern. To illustrate her strength, it should be said that when 1,100 tons of cryolite—equal in straining power to a like quantity of iron ore—had been dumped down in the two big hatches with which she is provided, she did not leak any more than when in ballast. Of course, the cargo was not sent to sea in two big heaps, but was trimmed fore and aft so as to distribute its weight equally.

The *Argenta* depends on sails for motive power. Sailors can imagine that she is rigged to make an ambitious Captain famous when it is known that she carries double topgallant sails, her upper topgallant yard being 43 feet long; that her main yard is on the level of the lower topsail yard of the ordinary barks of her register; that her rigging is of crucible steel wire; that her rigging sets up with steel screws instead of lanyards; that she carries a steel bowsprit and jib boom, and that everything aloft is about 25 per cent. stronger than the regular rules require. In several of these features she is the first vessel built in the Dominion of Canada to have them.

"I do not see how such a vessel can leak," a committee of insurance experts said when examining another vessel of this fleet, and that is the conclusion to which any one must come after looking the *Argenta* over.

LAUNCHING DAY.

It had been proposed to launch the *Argenta* on Aug. 9, when the spring tide, which rises sixty-five feet at Eatonville, would serve, but farm exigencies prevented. Nearly every ship carpenter or ship mechanic in Nova Scotia is a farmer as well. They began at the ship in February, but they had to go home in May to get in potatoes and oats. They came back afterward, but the grass matured in July and the oats had to be harvested; the ship builders might growl and the owner protest, but the crops had to be attended to. Besides there were eighteen different vessels building along the little stretch of Bay of Fundy coast between Parrsboro and Apple River, and hands were scarce.

However, when on Tuesday, Aug. 19, the sun rose in a Bay of Fundy fog, which was quickly burned away, there was bustle about the gravel and shavings in the Eaton ship yard such as is never seen except on launching day. The anchors and chains were on the ground under her bows, but they were snaked in to the tune of "Hooray, Santa Anna." The cabin furniture and outfit were in the storehouse, but were carried on board by otherwise useless boys and would-be passengers; the spare spars were scattered, but a crane hoisted them to the deck. Two fat steers and two fat calves and six fat sheep and a dozen fat geese bound for the mine

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in Greenland were taken on in like manner, the men in their haste spilling one of the steers out of the hoisting gear, but fortunately without damage to the steer.

Meantime another gang was at work getting the cradle and launching ways under the ship, pouring melted grease on the timbers that composed the ways, driving great wedges between the cradle and the ship, and incidentally howling vigorously at the small boys who persisted in jumping over the greased timbers and scattering gravel there in a way that might interfere with the launching.

Then the spectators began to arrive—men and women and boys and girls—such hosts of pretty girls one may not hope to see elsewhere. They say it's the fog, but for some reason the young women—and they are young until they are grandmothers—of Nova Scotia have such complexions and features and forms as make the unaccustomed spectator gasp. A ship launching in this community, where the entire population is interested in some way in ships, is the great holiday of the season. Some of the spectators came thirty miles to see the *Argenta* launched. The pretty girls came in troops. They climbed over the timbers, they sat on the drift wood, rocks and pebbles of the beach, they peeped out from under parasols and behind fans, and all in a way to distract all but the very oldest and most hardened men in the yard. Then came a brief interval for dinner, when the workmen hastily swallowed their food in the cook house and the visitors picnicked under the cliffs, but when the meal was over the swirl and rush in the yard was greater than ever.

About 2 o'clock the workmen gathered under the ship and the spectators gathered on the end of the pier. Then, while some of the workmen chopped and knocked away the shores that steadied the ship in her place, others crawled under her to split out the blocks on which she rested so that her weight would come on the greased timbers of the ways. The talk and jabber, and laugh and giggle that had filled the air were hushed; the mothers soothed their crying babies; the bosses stopped giving orders, and only the click of maul and wedge were heard. When the last block was reached, everybody leaned forward—click—click—for the time had come.

Capt. Dix, standing on the poop deck, waved his arm. Some men jumped into the vessel's rigging and shook it. Then they jumped down and began passing the end of a hawser aft.

"By the great horn spoon ! She's stuck !"

A small boy, who wanted to see me photograph the moving ship, said it. And so she was. The pretty girls who had their handkerchiefs ready to wave had to put them away. There was yet one hope, however. The hawser was run to a tug that had come from St. John to tow the vessel over to that city for a crew and some stores. The tug steamed around until just astern of the ship and getting a strain on the hawser pulled vigorously, but without effect. It backed up and then went ahead with increased vigor.

"Oh, pshaw !" Capt. Dix was vexed, and he waved his arms at the tug man in a way that meant business. Thereat the tug man backed her until it looked as if his wheel would strike the beach, and then he started her ahead, and threw the valve wide open. The water boiled

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astern, and flew from the bow in a lengthening roll. The slack of the hawser flew over the stern as if alive, and then the last flake stretched out in the water, clove its way to the surface, and leaped screaming in air. For an instant the timbers on tug and ship creaked under the strain, and then a cloud of smoke burst from the bits on the tugs as the hawser rendered around them, and all was over. It was interesting, but it was not launching.

Two days later, when the ship had again been wedged up and the ways soaped, as well as greased, the blocks had not all been split out before she settled down and slid off into the water with all the grace and dignity suitable to the occasion, but lacking in the *éclat* which a great throng of spectators only can give, and before 10 o'clock at night was safely anchored in St. John.

Because it illustrates a prominent Nova Scotia characteristic I must relate, that when I first walked about the shipyard, the workmen showed marked respect for me, some of them even touching their hats as I passed. It was a novel experience: it was also pleasing. A day or so later they stopped saluting and exhibited a hail-fellow-well-met air of familiarity that was pleasing but not novel. When I was well acquainted I backed a bright young fellow into an angle between the blacksmith shop and the stable and asked how it happened.

"Huh !" said he, "when we first saw you with Capt. Dix we thought you was the master of the new ship, but, when one of us asked what the name of the new skipper was, he said you wasn't nothin' but jest a writer or a reporter or suthin' like that, ye know."

The great men of Nova Scotia are shipowners and shipmasters.

SHIPPING THE CREW.

At St. John came the shipping of the crew. We got a mate, Thomas H. Bartlett, before we left Eatonville. He had been shipped by the vessel's St. John agent and sent over on the tug. He was 52 years old, tall and lean, with a beard almost all over his face, not sparing even his nose, a voice that could roar above the heaviest gale, and a fist that had done service of one sort and another in many ships and seas. He said he had "folks in St. John and a wife in Liverpool," and was recommended as the best man for the job in St. John. Next we got a cook, John Clinton of Liverpool. He was a deprecatory shadow of a man who had an abscess on the liver, had "had an operation for it wo't done a power o' good," and he was in "'opes a v'yage to Greenland 'ud be beneficial to me 'ealth, sir," until one day before the ship sailed. Then the prospect of ice brought on a relapse, and the Captain, although under no obligations to do so, paid him and let him go. It was well enough to let him go, but when it is considered that he deliberately stewed a fine beefsteak sent on board for a dinner, and then, when remonstrated with on the subject, served another one fried over a slow fire, any one with taste for beef must regret that the use of the cat has been abolished in the merchant marine, not to mention the exasperation of paying a man for such work.

On the same day came Spud Murphy, alias Jim Miller, "the only gentleman in the hull lot" of sailors' boarding-house bosses in St. John, to quote his own words, bringing Mr. Anderson, the second mate. Mr. Anderson was a young and ambitious sailor in two ways—he wanted

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to earn promotion and to raise a moustache, and an impartial observer remarked at the end of the voyage that he had good reason for expecting promotion.

The shipping of a crew was interrupted for two days on account of a most important event in the social circle of which Spud Murphy was "the only gentleman." It should be said first, however, that Spud, who had the contract to furnish the *Argenta* with a crew, did sign three able seamen and one ordinary seaman on Wednesday. On Wednesday night Spud's oldest daughter was married to the mate of a bark then in port.

"It was a most respectable time we had, all nice respectable young men, the sons of 'longshoremen and pilots and their ladies, there weren't no sailors allowed," said the barmaid in the saloon next door in describing the affair. "And to think them sailors he'd signed on the new bark should ha' jumped the house in the middle of it!"

Such was the fact. Spud got so hilariously drunk over his daughter's wedding that the three able seamen he had signed for the *Argenta* were able to escape from their room, climb the rear fence, and go, no one would tell where, although Spud felt very well satisfied that they were concealed by the young women in a part of the city called Califat, a section said to contain "the scrapings of hell, bedlam, and Newgate." Not only did Spud lose the \$5 blood money which the ship would have paid on each of the three men and the \$21 which would have been paid to him as advance wages for each, but he was out something like \$50 for board furnished them since they had left the last ship. The news that they had fled not only spoiled Spud's pleasure on the night, it sobered him, and for the next thirty-six hours he searched for the runaways and refused to be comforted.

Meantime Capt. Adam Smith, the master of the new ship and commander of the fleet, had arrived. When Spud looked for the runaways Capt. Smith looked for Spud, but not until Saturday morning could Spud be found. The sailors never were found, and recourse was had to three other crimps named Ramsey, Costigan, and Johnson. Ramsey had one man named Laufer, whom he described as "one of the finest able seamen" he'd ever seen. Laufer was accepted without inspection for Capt. Smith, because the season was now really late, had reached a state of mind where a less conscientious man would have thought of the shanghai method of getting sailors. Costigan had an able seaman and an ordinary, who, though young and of light weight, appeared to be intelligent. Then came Johnson, and he played a game that filled the breasts of sailors' boarding-house keepers with delight. He knew the *Argenta* wanted four men, and he had four excellent seamen. He came around where the Captain was as if he had just happened along there. A friend pointed him out as one who had sailors. The Captain spoke to him about them at once.

"Oh, yes, I have a house full. Come to me in the morning and I can fill you up. If you had come to me first you would have been gone two days."

That night he put the outfits of three good men on board. The next morning he pointed out the men and then said: "I had to promise these men coasting wages, you know, to get them to go to Greenland."

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That's all right—\$21, eh?"

"Oh, no. It's \$21 in schooners, but \$24 in square-rigged vessels."

The Captain had seen the outfits in the forecastle, the men were good ones, and the wind was fair. He saw that he was held up for \$3 a month on each, but he could not haggle, and four men were signed. That added \$12 to the crimp's plunder out of the first month's pay (the advance), and in the end \$3 to the wages of each man. Meantime I had signed articles as purser at twenty-five cents a month. The Queen's officer in the Custom House fixed the rate after seeing the purser. Passengers are not carried on ordinary merchant ships.

OFF FOR GREENLAND.

At 3½ o'clock Johnson came in a boat with his four men and a cook. The tug to tow us out into the bay was ready, with steam a-wheezing violently through the safety valve.

"Here's yer drunken sailors," shouted the crimp, and up they tumbled, followed by a lot of clothing and such knick-knacks as soap, towels, oilskins, and a whiskey bottle. The crimp followed the men to the forecastle, and there gave them what he said was left of the month's pay they had received in advance. Then they jumped to the windlass, while the crimp walked aft and drank some of the Captain's whiskey and the Captain smoked one of the crimp's cigars. Before the cigar was half burned the anchor had been tripped, the tug began to pull, and the purser took the wheel. The jib and spencer halyards were manned and the sails set. Partridge Island and the most lubberly bell buoy on the American coast were passed, and with "I give you a good passage, Captain," the tug man sheered off, and the *Argenta's* first voyage to Greenland was begun.

How, because of fogs and head winds, we were more than thirty-six hours going down the bay; how a fair wind then came to us and remained with us for more than four days; how the skipper looked for a southeaster and got a northeaster instead that lasted three days and drove him off his course across the banks of Newfoundland; how the second mate, a newly married man, kept a small timepiece running on St. John time, so that he could tell at any hour what his wife was likely to be doing in their little home in that city; how the sailors had to look over a lot of riggers' work, and found much that was not done but should have been; how the purser's camera proved to be a most exasperating affair for such a journey by refusing on two important occasions to bring fresh films before the lens, taking a half day each time for repairs; how the sailors were delighted to find an abundance of meat and cabin (soft) bread in the mess kids at every meal, real hash every night, and sea pie twice a week; how even real hash and sea pie palled on the taste of the unaccustomed landsman; how Laufer, the "fine able seaman" furnished by Crimp Ramsey, proved to be unable to either steer or make fast the royal—all these need only be referred to as incidents in life at sea on a merchantman of the first class in these days. It was a most interesting study of sailor life—of the work that sailors have to do. The cattle, sheep and geese in the hold had to be fed and watered twice a day. Shelves had to be put in the galley and in the cabin for the accommodation of cook and Captain. The cattle pens were wrongly constructed, and had to be rebuilt. Lest the water supply for the cattle prove inadequate, a

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batten was put around the cabin roof so that it would catch rain water. The table linen, the towels, and the cabin curtains had to be hemmed. Certain iron dogs placed beside shieves in the masts were found to have such sharp edges that the ropes rove through the shieves were being rapidly cut through. These dogs had to come down and have their sharp edges chipped off and filed smooth. The capstan began to show signs of rusting and had to be painted. The landsman reading this might say these things were proper work for cowboys, carpenters, blacksmiths, seamstresses and painters, but it is a poor sailor man who cannot turn his hand to all sorts of shore work, as well as to the knotting, the splicing and sail-making, the reefing, and the steering necessary in fitting and navigating a ship. As I look over my diary, however, I find much more space devoted to the head winds that prevailed than to the manifestations of sailors' peculiarities. After rounding Cape Race we had not more than thirty-six hours of really fair wind—wind from abaft the beam; indeed, we were mighty glad when able to lay within a point of the course close hauled.

And so the landsman walked the decks, very much wearied with the delay, and thinking how much better he could have handled the ship than the skipper, who had thirty years' of experience in those seas.

THE FIRST ICEBERG.

But Sept. 12 brought a break in the monotony. It was a sunshiny day, with a breeze that permitted the ship to lay almost a good course, but everything went on as usual until 1½ in the afternoon, when the mate reported an iceberg on the lee bow. It had great blank rectangular walls of snow ice. Although at a distance of three-fourths of a mile it was to the landsman not much larger than a white block of wooden tenements in Williamsburgh, the Captain said it was much taller than the top of the flagstaff on the Produce Exchange, and about as big as a ten-acre lot. It was not very much of an iceberg, either, but any landsman would have noticed that one corner had been sculptured into a tolerable representation of a dog's head, and that on one face was a curious white spot near the centre, from which creases radiated in all directions, forming a semblance of a sunburst that was delightful to the eye. Later in the day two more were seen to windward, and the mate came into the cabin after an overcoat, saying, "There's a proper stepmother's breath offen them bergs t'windward." It was, perhaps, somewhat ominous of what was to be found further on, for bergs are rarely seen in that place at that season. We had sailed from St. John, thinking that little or no field ice would be found off the Greenland coast, for it is seldom seen there in September in any quantity. We were to find our thoughts in this matter very much out of the way.

THE FIELD ICE.

Before seeing the bergs the weather, though cool, had been tolerable to the men with one suit of flannel underclothing on, but it grew colder steadily as we went north. We were not surprised, therefore, when, on the afternoon of Thursday, Sept. 18, while we were almost heading our course and were beating along about 10 miles southwest of Cape Farewell, the lookout reported, "Something white on the lee bow." Only one man on the ship, the Captain, had ever sailed among field ice. The "something white" was a long row of little white dots

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and peaks that could just be distinguished on the line of the horizon when the ship rose on a wave. The Captain got his binoculars and went up to the fore crosstrees and remained there a long time looking not only on the lee bow but dead ahead and to windward. The he came down, walked aft, and said in a voice to be heard fore and aft:

"Ready about !"

There was ice not only on the lee bow but dead ahead—a compact field that even the best fortified ships could not enter. Hitherto the *Argenta* had seemed to be a marvel of strength, but now I began to wish she had been fortified at Eatonville instead of waiting until she reached Philadelphia to have that important addition made to her bows. Not only do the Greenland ships have bows made enormously strong by the use of extra and thick timbers, ceiling, and plank: but a second planking of hard wood is spiked on over the first, a process that is called doubling, and then over this outer doubling broad strips of iron are bolted, covering the stem and bows so that when the ice is of ordinary solidity the striking of a piece at moderate speed would do no damage whatever to the ship. But the *Argenta* had not been fortified. Her master had said that "with tidy care" she could be sent on one voyage at that season without striking ice. So away she went, having only five inches of spruce with which to bore through the packs that were drifting with the current that rounds Cape Farewell.

We tacked ship and went toward Labrador, and then we tacked back again, and by noon the next day (Friday, Sept. 19) found ourselves about ten miles nearer our destination in the Arsuk Fiord, but with that same pack ahead of us. There was no help for us, and away we went again, to come back again on Saturday, the 20th, and find ourselves heading for the ice as before.

Then the wind came fair, and for many hours we ran due west by south to get around the ice, covering, according to the patent log that whirled on the taffrail, 100 miles, but here the wind came dead ahead and blew a gale nearly all night.

A DAY IN THE ICE PACK.

I turned in, discouraged: I awoke to find the air as buoyant and invigorating as on an October morning in the Adirondacks. The sea rolled down from the northwest in long undulations that were little more than wrinkled by the gentle breeze that followed them, while every little heap of foam, where tiny white caps burst through the green-blue surface, flashed and sparkled in the sunshine.

The Captain was coming aft, having been to the fore crosstrees.

"There's ice ahead, but it's open, and I guess we can get through after breakfast," he said.

Here was luck, for the fiord was only 100 miles away. Half an hour later the Captain, with his glasses in one hand, mounted the forecastlehead. In spite of the surroundings I could not help noticing the comical figure he made. He had on a cap with heavy wool earflaps, a

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big muffler around his neck, an aged blue overcoat that had been mended with palm needle and sail twine, dark trousers that were stowed inside of very long-legged socks—socks that just reached to the bulge in the trousers made by three very thick and marvelously long-tailed shirts—sea boots, and, with all, a pair of gold spectacles over his nose fit for a college professor. But I soon forgot about his dress. Mounting the forecandlehead with him I looked about. On every hand, gleaming white, rising and falling over the long dark rollers, smashing the tiny white caps into spray that spouted in sparkling showers above them, were the cakes of ice. Although wide apart on either beam, the breadths and lanes of water between them grew narrower and narrower before us, until at last they seemed to gather in a solid mass scarce three miles ahead. In a dozen directions huge bergs rose up, bathed in the glorious sunlight. It was a wondrous scene—brilliant, fascinating, thrilling—as radiant and as cold to the eye as a broad electric arc—and as dangerous. Every soul on board save the man at the wheel and the cook gathered forward to gaze upon it.

With top-gallant sails bellying to a freshening breeze, with a curl of foam under her bows, and with a swirling, eddying wake astern, the *Argenta* was dashing ahead at no less than six knots an hour straight at the centre of the pack. To strike even a small cake at that speed would make such a hole in her bows as would sink her before even one boat could be made ready.

In a few moments a great cake threatened on the weather bow. Waving his hand, the master said: "Port your wheel, port !" and Jimmie Bruce, with an animation born of the surroundings, made the spokes fly.

"Steady."

The group under the break of the forecandle deck held their breath as the ship dodged the danger and resumed her course. A few minutes later she was luffing till her sails shivered to escape another flow.

"Port !"

"Steady !"

"Port !"

"Steady !"

"Starboard—let her luff a little."

"Steady !"

"Port—port—port—now down with her—starboard—hard over—hard a starboard."

"So—steady."

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After a while, with the wind a point free, she headed into a narrowing, tortuous lane that seemed to end just short of open water. It was the wildest, most terrifying, most delicious race with destruction I ever dreamed of. I could have shouted with glee and screamed with terror in a breath.

A little round boulder of ice, apparently five or six feet in diameter, floated in the lead we were following. It was so small that it received no attention, and yet when it struck the bluff of the starboard bow it cut four inches deep into the spruce planking—left only a single inch of damaged wood between us and the sea. And all this time our channel was growing narrower and more tortuous. It made the unaccustomed fairly gasp, but the worst was to come. All at once the channel turned to the right and narrowed to a space scant six fathoms wide between two cakes as big as City Hall Park, and through that channel the ship must go, for there was no longer any room to turn around. Leaping into the fore rigging for one good look, the Captain jumped back again to his place and shouted, with not so much as a tremor in his voice—

"Hard aport ! Hard up !"

"Hard a port, sir !" answered the wheelsman. She was whirled around in a trice: she was met by the helm at the exact instant needed, and then, with the cake to port, just scraping a little of the paint of the planks next to them, and a scant three feet of water to starboard, the *Argenta* passed through into comparatively open water. It's a handy ship with a right good man at the wheel that can safely navigate Greenland waters.

Having now a breathing spell, so to speak, the Captain went aloft again "to see what like it is." He came down with a sober face. Our dash through the pack had been for naught. We were not through, but only in an open space called a hole. Worse than that, the side of the pack toward the land was solid: nothing but a well fortified steamship could have bored through it. There was only one thing for the *Argenta* to do, and that was to hasten back into open water before a shift of wind could set the ice around and nip her. And when this had been accomplished every one on board breathed freer than at any time before.

ICE AS SEEN BY AS A LANDSMAN.

It is impossible to tell of every form of ice cake and iceberg seen on that morning, let alone describing the infinite variety seen before the Greenland coast had been left behind on the homeward voyage. Not even all the really curious forms may be described, but if any one would like to see a rude similitude of the form of an ordinary ice cake on the Greenland coast in September, when they are all well worn by the sun and waves, let him take a score or two of cauliflower heads and put half of them in an oval group on the table with the heads down and then put the others on top with the heads up. A better picture still would be obtained if a group were formed with the heads up on a great mirror. The warm weather on the surface of the sea cuts horizontally into and through the cakes of ice at the water line, leaving pillars that look like cauliflower stems to support the upper surface. Of course these pillars might be compared to stalactites and stalagmites in a cave, or to the pillars left

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to support the roof of a coal mine, but after seeing the glorious radiance of an ice cake dancing on a sunlit sea, such comparisons are abhorrent.

The bergs, too, are of unnumbered varieties, but ninety-nine out of a hundred are simply rectangular blocks, with blank forbidding walls rising vertically out of the sea. I could not look at one without thinking of the utterly hopeless condition of a man adrift on one of them. And yet at times they afford most magnificent spectacles. Standing as many of them did, from 200 to 300 feet above the water, they seemed to be affected no more by even the largest waves than are the iron cliffs of Nova Scotia, but now and again one was found with a side so shaped and turned to the waves that an occasional great roller would rise up and up and up until at last it broke in a cloud of spray more than a hundred feet above the highest crest—more than four hundred feet above the level of the sea.

Among the fantastic shapes seen was a very good imitation of a gingerbread seaside cottage—gingerbread in form only, however, for the wretched colors of the cottage were replaced by snowy white. Another berg was like a coal scuttle standing on one side. Could it have been turned over, its capacious interior would have held all the coal in the Hoboken pockets. Another was a perfect Prince of Wales crest. There were scores of tiny cakes, which looked like swans, with necks from three to eight feet long, rising above the water.

Quite as interesting as the forms of the icebergs were the colors. Of course they were generally white, but many had great red and black and brown blotches. The blotches were probably due to iron ore and earth blown on the bergs from surrounding mountains while yet the bergs were parts of the original glaciers of Melville Bay and Kane Basin. Curiously enough, too, we occasionally saw very large rocks bedded in the ice, one that I noticed in particular being no smaller than forty feet across. It was held in the ice nearly 200 feet above the sea, and must have soon have melted loose and fallen into the water.

But more interesting still were the few bergs composed of what whalers call fresh water ice. All bergs are composed of fresh water ice, but these are very different in appearance. The ordinary berg is white, like snow: these were blue. When I saw the first one I thought that the reflection of the sun might have caused the blue color, but three sides of it proved that the color was due to the kind of ice. It was a small berg, as all of its kind were, but not till I had seen a glacier, as will be told further on, did I understand the difference between the two sets of bergs.

"You see very few bergs about Cape Farewell, " Captain Smith said. "The field ice comes around Farewell from the east side, and follows the current up into Baffin's Bay. The bergs come from Melville Bay and drive south against this current, and plough right through the field ice. I remember lying under Cape Desolation one night waiting for a wind. Bergs that I could just see to northward at night were down abeam in the morning, although the field ice was scarcely moving during all that time. There must be another current driving to the south not very far down under this surface current that runs to the north."

MORE ICE IN THE WAY.

We were glad to get out of the ice—very sorry that we had to get out on the wrong side. Moreover, we had been four days trying to weather it, and had had one day of fair wind to help us, but here we were with apparently as much ice as ever to keep us away from the land. October was close at hand, and we were only 350 miles from the Arctic circle. The nights were lengthening rapidly, and the danger of navigating seas with field ice afloat is ten times greater at night than by day, not to mention the growing possibility that the field ice would increase in amount, and finally prevent our reaching the fiord—possibly catching us in some such hole as we were in that day and holding us there. With such depressing thoughts as these to harrow us, a northeast gale came on that night and made us miserable. The next day we beat up for another look at the ice, to find it as much in the way as ever, and once more we had to run off to sea.

The next day, Tuesday, Sept. 23, we got a slightly better start of wind, and reached in once more for land. With little ice to bother us, we ploughed along until noon, and then through the haze on the horizon, almost dead ahead, appeared a loaf-shaped shadow, faint, indistinct, but unmistakably land.

For a brief interval we were delighted by the sight. It was a peak just to the south of Cape Desolation, and not more than twenty-five miles from the mouth of Arsuk Fiord. We were not more than thirty miles from the mountain. But the broad, substantial pack of field ice soon appeared before us, and once more we had to head off to sea, hoping to beat around the obstruction we had seen every day for almost a week, and which we had found to stretch more than 100 miles along the coast.

All that night we worked to and fro, keeping as close to the ice as safety would permit, hoping against hope that at daylight a lane through to the land water would be formed. We even worked into what might be called a wide bay in the pack, but without avail, and then continued on working to the north. It was so discouraging that I went to bed early, thoroughly tired out.

SOMETHING WORTH SEEING.

At 5:30 on Wednesday morning the Captain knocked on my door.

"There's something worth seeing," he said.

I was soon on deck. There was something worth seeing. With the warm red flush of early dawn for a background, the seven bald peaks on Cape Desolation loomed clear and hard on the starboard beam. The water was still except for the tiny ripples of a gentle breeze. On every side were dozens of icebergs, ghost white in the early dawn, but only here and there a cake of field ice. The ice pack was off on the starboard quarter—we had weathered it. We were even heading fair for the mouth of the fiord, but in spite of all this we were anxious instead of exultant. The color of the morning sky was ominous and the glass was falling.

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Little by little the sun rose, and a purple haze bathed the mountain tops, while the sunlight turned the water to the color of blood. Two sun dogs developed over the mountain tops and hung there for more than an hour, like danger signals. Little by little the wind shifted until dead ahead, and there it remained fluttering like the breath of a fever patient the livelong day. The sun faded out [white] in the afternoon and wholly disappeared before the horizon was reached, although no cloud was apparent to the eye in the western sky. The moon rose with a narrow fan of sickly white rays shooting straight up above, and another set of like rays—"backstays to the moon," the Captain called them—hanging below. Notwithstanding the presence of icebergs all around, and the glaciers and ice mountains of the land, the air became oppressive, and her breaths, now and then, fanned the face.

WAITING FOR THE GALE.

Unable to either eat, drink, or sleep, although he had been constantly on duty for more than thirty-six hours, the Captain walked the deck all night long. Little by little the night wore away. Little by little the ship drifted, rather than sailed, into the mouth of the fiord, until at daylight Kungnat Mountain reared its head abeam. Then the wind fell flat and the signs of a terrible southeaster—the worst of South Greenland storms—gathered thicker and faster, while the tide slowly drifted the ship out to sea—out among the icebergs and into the path over which the ice pack would be driven by the gale.

For an hour one hope buoyed us. A catspaw of wind darkened the water out at sea, and a careful look showed us it was coming in. If it came to us before the gale did we could hope to reach one of the harbors about the fiord and anchor there till the storm was over. Would it come ?

"We've neither cat nor dog on board but surely animals enough for luck," said the Captain.

Then plunging into his stateroom he shifted his old overcoat for a new one, and old trousers for new ones, and coming on deck again walked to and fro gazing at the catspaw out at sea and whistling softly, "s-s-s-s-s-z-z-z-z-z." I had never heard the Captain whistle before.

"What are you whistling for, Captain ?"

"Why for the wind out there, of course."

The mate, in an ulster that reached to his heels, paced the deck forward, gazing out to sea and whistled, "s-s-s-s-s-z-z-z-z-z-z-z-z-z-z."

But the storm signals gathered as before, and the glass fell until far lower than it had been seen on that passage, while the flaw of air out to sea faded away and was wholly lost.

END OF PART I

A TWO-MONTH VOYAGE TO SOUTHWEST GREENLAND (1890)

II. ON GREENLAND'S ICY SHORE.

The Odd Settlement at Ivigtut on the Arsuk Fiord.

The First View of Land in Autumn from the Deck of a Cryolite Ship—Taking an Eskimo Pilot—How the Workmen in the Quarries Live—Their Discipline and Amusements—The Danish Representative and the Officers in their Quarters.

The bark *Argenta*, bound from St. John, N. B., for Ivigtut, Greenland, for a cargo of cryolite, had arrived just at the threshold of her destination only to be driven away from it. But while the Captain paced the deck and whistled for a favoring breeze that would allow him to enter a harbor where he could ride out the gale, came a ray of hope from a very different quarter. He was scanning through his glass the water up the fiord, and looking very hard toward the foot of Mt. Kungnat, when two tiny black specks appeared just outside of a rocky little island there. They might be seals, of which a score or more had been seen during the morning, or possibly ducks that seemed, on account of the condition of the air, to be much further away than they were, but the Captain kept his glass on them, and pretty soon stopped whistling for a wind to say:

"There's two Eskimos coming. That's luck !"

It was luck. If we could get one of them on board for a pilot we could find a harbor up the coast a little way and not lose much ground, no matter how hard the gale might be. There was even a better hope than that.

It was my first view of the Eskimos, and I kept my own glasses on the black spots until they developed into semblances of water bugs, with a long leg on each side, scurrying toward us. Pretty soon there seemed to be a failure of harmony between the two, for one chased the other several boat lengths off to one side, but they soon came on down the fiord together at a speed that would have at once delighted and excited the envy of a member of the American Canoe Association, and within less than half an hour they were close enough to hail. They looked very much alike seated in the kayaks, with a seal leather waist that came up under the arms of each, the bottom of which was fastened to the kayak, and so added a foot or more to the free board of their boats, but one had a white yachting cap on, while the other was bareheaded.

The Captain jumped on the rail and shouted:

"Con-u-reet !" I am not sure about the spelling of the word, but that is the best I can do. It meant "come on" in Eskimo.

"Up !" said both natives together, and that meant "yes."

"Hello, Peter ? Is that you ?"

"Up ! Cap. Smit ?" said the one in the yacht cap.

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"Up ! All well, Peter ?"

"Up !"

"Who's that with you, Peter ?"

"Thomas."

They came close alongside, smiling and talking to each other, and saying "*Argenta*" very frequently. They had heard from the vessels there earlier in the season that an addition was to be made to the Greenland fleet under that name, and were now talking about the new features she presented as compared with the others.

HOISTING IN A KAYAK.

As they paddled to the ship's side the cook sent after a lot of hard tack, four plugs of tobacco, and a bucket. Meantime the Captain got a rope long enough to be doubled and allow the bight to be lowered to the water. The second mate, directed by the Captain, did the same, standing about six feet forward of the Captain.

"Now, Peter, con-u-reet on board, eh ? Thomas Arsh-ly-pook Ivigtut, *Fox*, eh ? Arshly-pook like the devil was after him, eh ?" said the Captain.

"Up."

Peter drew his kayak close to the ship's side, slipped the bight of one rope under its bow until close before his face, the other under the stern till close behind him, and then while handling the end of a line lowered to him so that he could steady himself, the Captain and Mr. Anderson hoisted him up, and with the aid of three men landed the kayak on the rail. Peter drew himself from the boat to the deck, and the kayak was placed on the after hatch.

"Where's the bread ?" the Captain asked.

Here, sir."

The cook had it in a bucket, with two plugs of tobacco. It was lowered to Thomas, who sat expectant in his kayak.

SENDING FOR A TUG.

"Now then, Peter, tell him to go—arsh-ly-pook, eh ? *Fox* con-u-reet. Tell him if he arsh-ly-pooks as fast as he can I'll give him two crowners—two—two crowners," and the Captain took two of the Ivigtut coins of the value there of a Danish crown each and held them up before the eyes of Peter and Thomas. Both natives grinned, and Peter said a dozen words to Thomas, of which I understood one—*Fox*. Thomas was stowing the last plug of tobacco

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inside the seal leather waist about his body, together with a letter to the superintendent of the mine. Drawing the waist close up under his arms again he seized his paddle, shoved off, and in a trice was making a wake behind his kayak equal to a six-knot speed, if not more. He was bound after the steamer *Fox*, a craft well known to the readers of the stories of Arctic exploration as the one in which the party that succeeded in finding traces of Sir John Franklin sailed. She was purchased a number of years ago by the company that owns the cryolite mine, or quarry, at Ivigtut, and is used to carry laborers and supplies from Copenhagen to Ivigtut, and, incidentally, while lying at Ivigtut, to tow the Greenland ships in and out of the fiord. That was the better hope mentioned.

Still smiling, Peter turned to the Captain and said:

"Pipe ?"

"Up." And a pipe was soon in his hands.

A GREAT MAN IN ARSUK.

As he filled and smoked the pipe I had opportunity to examine him, my curiosity being quite pleasing to him instead of annoying, for Peter was one of the great men of Arsuik, the Eskimo settlement that is nestled under the foot of Mt. Kungnat, on the north side of the fiord, and he knew it. He was about five feet two inches in height, with round, thick shoulders and arms, a barrel-shaped body, with comparatively slender legs, while his feet and hands were noticeably small. His face was flat and red—the red of all North American Indians who have a tincture of white blood, say a fifty-per-cent. tincture, in their veins. His hair was straight and black, and a thin, black moustache attracted attention to his upper lip. His eyes were brown, and his teeth showed that he was in no wise troubled by indigestion—they were white and regular. He was clad in sealskin moccasins, a pair of store trousers, and a blue check 'longshoreman's jumper, with a cotton cape over it, the use of which I learned when I visited the village.

Meantime, although I had forgotten all about it, the *Argenta* was drifting out to sea, with such ominous signs overhead as warranted the gravest apprehensions. No sooner had Thomas been sent off and the pipe provided for Peter, than the Captain, with a wave of his hand at the sky, said: "Blow man-go-woc (much), Peter ? Southeaster, eh ?"

Peter looked at the sky for a moment, and said, with a shake of the head: "No-me."

"What ? No-me ? No southeaster, Peter ?"

"No-me."

"Do you hear that ?" the Captain said to me. "They know. I'd believe him quicker than I would the barometer, but I never saw such signs of one without getting it."

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The cook rang the breakfast bell and we went in and ate breakfast more comfortably than any meal we had had since the Sunday after the goose had its neck broken.

Half an hour later I was reminded of one of the yarns I had read when young about the tastes of Eskimos. A certain Arctic explorer, so the yarn said, having invited some Eskimo ladies and gentlemen on board, brought out as presents a lot of eatables, including bread and sugar. The Eskimos, to his surprise, passed them over in disdain, for they saw a bundle of tallow candles, and seized upon and ate them as schoolboys eat maple taffy. When we had finished eating, Peter was invited to "come away to breakfast." He put his pipe in a pocket in his jumper, smiled, and sat down. I wanted to suggest to the Captain that some candles, or at least a cake of tallow, be brought, but didn't because there was a big roll of butter on the table, and I supposed the Captain didn't care for expenses under the circumstances. So, while I wished some of my friends were present to make a pool on the number of bites Peter would take in eating the butter, he picked up a spoon and ladled a half pint of baked beans from a dish to his plate.

"Um—oh they're baked Boston style and greasy—that's all right," I thought. Then he forked a piece of cold boiled corned beef from a plate, selecting a very lean piece, and, taking a piece of dry bread, bit into it first of all. I rubbed my eyes very hard and then looked again. He was eating beans, lean beef, and dry bread all at once, but stopped a moment to put three spoonfuls of sugar and one of condensed milk into a cup of coffee. He did not touch the butter until after he had eaten three plates of beans, four pieces of lean beef, and three slices of dry bread. Then he cut a little piece and, spreading it on a piece of cake, ate it with his fourth cup of coffee.

REAL MOUNTAINS IN GREENLAND.

It was now about 8:30 o'clock and the *Fox*, because of the distance from the mouth of the fiord to Ivigtut, could not be expected to arrive before 1:30 in the afternoon. She is a slow vessel, although very serviceable in the ice. However, if Peter was correct as a weather prophet that did not matter—the men, indeed, would have the more time to get the ship ready for port, and the purser would have enough time to write no end of stuff in his diary about the scenes and incidents of the past thirty hours.

The first views of that land showed a shadowy outline of a sugar loaf below Cape Desolation; but the first good look at the land was in the morning when the sun rose behind the seven peaks that form the headland. Here are the ideal mountains. The naked rocks, brown and gray and black, are piled up until the storm clouds are reached. About the headwaters of the Red River of the South the treeless gorges and cañons are spoken of as broken lands. On Cape Desolation are broken mountains. It is as if a giant ridge alongshore had been pulled apart, leaving peak and cliffs facing the sea. The cape itself—the very point—is the highest peak of all. On the landward side it slopes gradually till nearly 4,000 feet above the water and then pitches sheer down more than a thousand feet to a narrow shelf, down again more than another thousand feet to another narrow shelf, and down again to the sea where the icebergs, grinding themselves to pieces on the rocks, look by contrast like field ice.

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Between Cape Desolation and Mt. Storo, the island at the south of the mouth of Arsuk fiord, a distance of about twenty miles, is a bay with two large glaciers near its head that on a clear day can be plainly seen from the sea. At that distance they are simply great snow drifts of a faint greenish tinge.

BRIGHT TINTS OF AUTUMN.

But when we had entered the fiord the softer beauties which bright colors give to nature's pictures were found in surprising form. Around the bases of the lofty mountains that wall in the water of the fiord grow the tiniest, scraggiest forests in the world, forests of willows from eighteen inches to two feet high and of blueberry bushes. Where there are no trees the soil between the rocks is covered over with a great variety of mosses, while the rocks themselves are often buried out of sight by masses of lichens. Even at a distance the varying shades of green and red and brown and yellow showed in beautiful contrast with the gray and black of lichens and barren rock. But it was only on a close inspection that the real loveliness of the mountainside could be fully seen and appreciated.

We had just finished a very good dinner when Peter, who was at the wheel, said he could see smoke away up the fiord. It was several minutes before the white men with glasses could locate the smoke, but eventually the *Fox* came in plain sight, the white cross of Denmark flying at her mizzen, in token of welcome. She could at least tow us to a harbor. She did more than that, however, for she towed us to our destination.

On the way up the fiord an Eskimo settlement was sighted. At the foot of Mt. Kungnat, where a bit of beach was visible at low water, could be seen a low white building, which the Captain said was the hospital, a gray building with a flag flying from a white pole before it, the house of the Governor, and a white-walled house with a black roof near the water's edge, where oil was stored. These were the buildings of the Danish rulers. A more careful look showed a number of black mounds, almost indistinguishable, between the oil house and the Governor's. They were the homes of the Eskimos.

AT IVIGTUT.

Through a narrow channel that is sometimes so full of little fish that the Eskimos scoop them out with bare hands, across a lake-like breadth of the fiord, and then, with a scream of its steam whistle to let the people know we were coming, the *Fox* towed us around a sharp promontory to Ivigtut, the village that has about the only workable deposit of cryolite in the world. There is an array of low, weather-beaten wooden houses scattered along the slope of a low lying hill, with a wharf at the water's edge, on which were a dozen piles of the white ore, a one-story house painted blue, where the superintendent lives, another house at the extreme easterly end, painted black, where the representative of the King lives, and a couple of houses near the centre, one of them new, from which smokestacks and steam exhaust pipes rise. Back of all this is the mountain, black beneath the lowering sky, but just beginning to turn frosty with the falling of the first snow of the season.

IT IS AN ODD SETTLEMENT.

In summer there are in the quarry 130 employees, all picked men from Copenhagen. In winter there are sixty less. Besides these there are Paul, the superintendent's two-year-old son, and three women—the wife of the superintendent, her maid, and Maria. There are no Eskimos here except Maria and her son Julius. Maria is a masculine-looking Eskimo woman who for many years was the only woman allowed at the settlement. Her business is to care for the fur clothing in which the officers dress in winter. Besides the employees of the mine there is the King's representative, Herr V. Müller. Julius, Maria's son, is his valet.

The majority of the employees are engaged, of course, in quarrying the cryolite and piling it on the wharf, while the rest are engaged in providing for and looking after the quarrymen. The officers include: G. E. Schmidt, superintendent; K. F. Edwards, assistant superintendent; Herr Gottlieb, engineer; Herr Jacobson, assistant engineer; Dr. [Helms], physician; Herr Walter, storekeeper. The superintendent lives with his family in the only painted house in the settlement:—a house that is constructed of Norway pine without and within, the walls being thick and stuffed with moss, while the windows and doors are double, to keep out the cold. Each officer has a cozy little house to himself, and one man is employed to keep these houses clean and neat and the fires burning. The neatness of all the houses, in fact, including the quarters of the men, is surprising, when it is considered that the housework is done by men. The officers have a mess in one end of the superintendent's house, one cook serving for them and the superintendent's family. The men are divided into messes, each with a house to itself in which to eat and sleep, but the cooking and baking for all hands are done in houses set apart for these purposes.

The day of the workmen begins at 5:30 A. M., when they are called and served with hot coffee and bread. At 6 o'clock they begin working, and at 8 all go to breakfast, for which half an hour is allowed. At 12:30 they have a full hour for dinner, and at 5:30 the day's work is done. In former days they got coffee at 3 in the afternoon, and quit work at 6, but that interfered so much with the work that the present system was adopted instead.

The men eat from long tables in a large room provided in each of their houses. They take turns in bringing the food from the kitchen and the bakery, and those who do this leave their work in the mine ten minutes before the rest do. After the dishes have been cleared away the dining room becomes a sitting room, and games of cards, chess, &c., are popular. A bowling alley is provided for those who like the game, and the balls are kept rolling on winter evenings. But in summer, when the days are long, games are not much in vogue. In every dining room hangs an array of firearms, chiefly muzzle-loading and pin-fire shotguns. When the weather permits a hasty supper is swallowed and then away go the hunters in boats across the fiord. Every Sunday, too, a great many of the men enjoy an outing on the mountains, while on exceptionally fine days for shooting during the week as many hunters are permitted to go as wish to do so. In consequence game in plenty can be found on the tables of the officers and men. Winter and summer, they have fresh fish as often as they like. In summer the salmon swarm at the mouth of every brook. Codfish are caught with hook and line in deep water. The brooks are alive with trout.

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There is a distinction between the men and the foreman, or what might be called petty officers. Each foreman has a bedroom to himself in some corner of one of the mess houses; the men sleep from four to eight in a bedroom, of which there are commonly two opening off each dining room. Their beds are simply bunks built against the wall, one above the other. Each bunk is provided with a feather bed and plenty of blankets by its occupant, while some of the foremen sleep on beds of eider down. The walls of dining and bedrooms are always freely and sometimes tastefully decorated with evergreens and prints, chief among which can usually be found a likeness of the King, Christian IX., while on the walls in the bunks may be seen photographs of pleasant-looking matrons and fat-cheeked children, for a majority of these men have wives and babies in Denmark.

ENFORCED HYGIENIC MEASURES.

Not only are the homes of the men kept clean and neat: they are obliged to keep themselves clean. Bath houses are provided where hot and cold water is supplied. There is a laundry, where certain of the men wash for the rest for a stipulated price, or a man can do his own washing if he prefers; but he must keep his clothes clean.

"Among so many men there are sure to be a few who are not cleanly," I suggested to an officer. "What do you do with them?"

"We don't have to do anything with them: their associates look after them. When a man is lazy that way his messmates give him one lesson. If a hint does not serve, they clean him. That is enough."

The staple bill of fare on the mess tables of the men is black bread, salt beef, salt pork, game, *weiss* beer, and coffee, but they have potatoes served frequently, and plenty of fresh pork, with now and then a mess of fresh beef. The two steers and the geese, calves, and sheep on the *Argenta* were for employees of the company. Another of the fleet brought thirty-three pigs, and a large number of pigs are raised in the settlement every year, a special house, kept as clean as some kitchens in America, being provided for the purpose. The drainage is perfect, the drinking water comes from a spring-bed lake just back of the little hill, on the slope of which the settlement is built, and all precaution[s] to secure cleanliness and ventilation are taken, particularly in winter, when all the rooms are aired, frozen sweet, one may say, daily. To prevent accidents, the blasts in the quarry are set off at 3 o'clock in the afternoon, when all workmen are sent to a place of safety. Black blasting powder only is used, dynamite being too dangerous. The powder is tamped into the holes with copper rods, lest iron strike a spark. Capt. Smith of the *Argenta* wanted to get men to wheel cryolite on board the ship after work hours, and these men, for the sake of the extra wages were ready to do it, but they were allowed to wheel only on such evenings as were clear and light, and then only until dusk, lest someone fall from the gangplank and drown.

Counted in dollars, the pay of these men is very small. The foreman and skilled mechanics get from from 50 to 70 kroners a month, and a kroner, usually called crown, is 27½ cents, but after seeing the shanties in which the men in the iron ore beds of Dutchess county live,

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not to mention the homes of other miners in New Jersey, Pennsylvania, Ohio, Illinois, and Nova Scotia, any man would say that life was much better worth living at 27½ cents a day, with board and lodging, in Greenland than at \$1.10 or \$1.25, without board, in an American mining town. Provisions sufficient for three years are kept stored in houses on the hills.

All wear wooden shoes, except Comptroller Müller, his valet, Julius, and Maria, who wear Eskimo moccasins, but the shoes of the officers and ladies are made with wooden soles only and have leather tops fastened on with fine wire. It is not uninteresting to note that these fancy leather topped shoes are sold to the officers at two crowns a pair. The wooden clogs cost one crown. Either kind will wear indefinitely. An advantage about these shoes, aside from their cheapness, is the way they promote cleanliness. Every house here has an entry way or vestibule, in which are slippers in abundance, so that when tenant or guest arrives the clogs are left in the entry way and clean slippers worn within. In other respects the dress of the workmen is pleasing. They wear white duck trousers and white duck shirt-shaped blouses, with soft hats or caps on their heads. White is chosen, because cryolite dust, the dirt of the quarry, is almost white. The officers were invariably well dressed.

AT THE OFFICERS' MESS.

The Captain and I dined with the officers' mess on Saturday. It was understood by our hosts that I was there as a writer to describe all that I saw. The Ivigtut dinner hour is 1 o'clock. The officers were all present when we arrived. We left our top coats and hats in the vestibule and were then ushered into the sitting room. Each one there arose and shook hands and said "Welcome." They could all understand and talk some English, but Herr Edwards and Comptroller Müller spoke it quite fluently. The sitting room was perhaps 12x14 feet large. There was a large table in the centre with cigar stands and ash receivers scattered about, a sofa, a number of substantial chairs upholstered in leather, and a sweet-toned piano. A number of engravings and etchings were on the wall. We sat for a time, smoked good cigars and talked about the cryolite fleet and the mine and the game and the country round about until a young man in a white apron and white cap rang a bell in the next room, when all walked to the dining room. A long black walnut table stood in the centre. There were comfortable chairs around it, with a sideboard beyond. A healthier, heartier set of young men than the hosts would be hard to find. A great bowl stood before Mr. Edwards, and from it he served sago pudding to each person. The Danes put from three to five spoonfuls of powdered sugar on each plate of pudding and then as much powdered ginger as would cover the pudding nearly a quarter of an inch deep.

The next course included a roast ptarmigan and half of an Arctic hare, with fried potatoes and white and black bread. In the sitting room cigars and coffee were served and enjoyed. *Weiss* beer was served with each of the courses at the table, there being a brewery in the settlement that makes beer free for all, and a very good beer it is. The dinner was the ordinary fare of the officers.

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DISCIPLINE.

The maintaining of discipline is a very easy matter. The rule of the superintendent is absolute, although, of course, within the limits of Danish law. According to Comptroller Müller the men rule themselves. Instances are cited when the members of a mess have soundly thrashed a man for creating a disturbance. No hard liquors are allowed in the men's quarters, but that is a rule occasionally evaded. Now and then sailors carry liquor to them, as there is no medium of exchange in the purchase of furs and Eskimo products equal to good American whiskey. But a supply of whiskey commonly precipitates a fight among the mess. Should a crime be committed the criminal and witnesses would be sent to Denmark for trial. For neglect of work and for the ordinary infractions of rules the men are fined and occasionally sent home in disgrace. Two stories will serve to illustrate the troubles with the men: A mate who made several voyages to Greenland learned that he could make some money by carrying in his stateroom such goods as the men there liked. He could speak the language, and he prospered until in some way the men there found he was making more than 100 per cent. on his transactions. They invited him on shore one night as if for further transactions. Capt. Smith went ashore to see the superintendent on business at the same time. Inside of ten minutes he and the superintendent heard yells and curses in the men's quarters that sent them running to that end of the settlement. They found the mate struggling to escape from a mob of wildly excited quarrymen, who were pounding the life out of him with sticks and fists and wooden shoes. They let the fellow go as soon as the superintendent appeared. On another occasion a ship Captain so angered a man on shore that he followed the Captain on board ship and into the cabin, intending to pound him. The man was overpowered, however, and put in irons. That night the quarrymen came down to the wharf in a mob, determined to rescue their comrade or "clean out the ship." The man who was superintendent vainly strove to quiet them, and the appearance of the Captain with his mates, well armed, on deck, ready to repel invaders, only exasperated them. But when a charge up the gangplank and consequent bloodshed seemed most imminent, the comptroller appeared, dressed in his gold-laced uniform. Drawing his sword, he waved it before the faces of the men, and in the name of the King commanded them to disperse. Thereat they slunk away to their bunks. But an armed watch was kept on that gangplank while the ship remained in port, and the Captain did not go on shore again. The two ringleaders were fined twenty-five crowns each. Two small brass cannons stand in front of the superintendent's house. They are probably for ornament and firing salutes. The officers enjoy their own quarters better. I can in no way so well illustrate life among them as by telling how Capt. Smith and I went one afternoon to look at the store where supplies are kept for sale to the men. We started just after dinner. The store is in one end of the house in which the storekeeper lives. It is opened only when a customer comes.

THE KING'S REPRESENTATIVE.

Comptroller Müller and his valet, Julius, are, each in his own way, two of the most interesting persons in Ivigtut. The comptroller's chief duty is to see that the contract is properly executed on behalf of the Danish Government. In laying out the settlement the houses for the officers were built at the east end of the quarry, and those for the men at the west end, where, too, the brewery, the bakery, the kitchen, and the cattle house are located.

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The comptroller's house is at the extreme east end. It stands on a commanding eminence, and is the largest and most substantial dwelling there. It is a story and a quarter high. The walls are built of heavy timbers, furred-off with three-inch stuff on the inside, and ceiled, the spaces thus formed being stuffed with moss. It has four rooms below and three up stairs. It is on such a plan that all Government employees are housed in Greenland.

Mr. Müller was born in Greenland. His father was a Governor there, and his sister is the wife of Dr. J. H. Rink, a well-known writer on Greenland and the Eskimos, and who from 1858 to 1868 was Inspector of South Greenland. Mr. Müller was Governor at Upernavik when Garlington's ill-fated expedition returned down the coast in small boats and when the Greely relief expedition went and came. It is the Government practice to give the children of Greenland officers preference in filling vacancies there. He has now lived in Greenland for fifteen years, and as far at least as appearances go stands the climate there as well as any climate, for he has excellent health.

Mr. Müller's house is furnished partly by the Government and partly by himself, and contains furniture, pictures, and bric-a-brac that would be expected in the home of a bachelor of taste and means, but his library is noticeable for having about all the works on Arctic exploration worth buying. Having rarely anything to do, except measure the cryolite when it is piled on the wharf and make note of the quantity in his books, he passes his days in luxurious ease. His valet takes coffee and a pipe to him before he rises. Later he breakfasts alone, and at 1 o'clock dines with the officers' mess. Supper he takes alone. Julius is cook and valet. For recreation the comptroller has his guns and his traps. For the rest he reads and writes and has a good time with the other officers, and, in the season, with the ship Captains.

For services to Garlington, Mr. Müller received a letter of thanks from Gen. Hazen, in which the General said he would recommend a more substantial reward. The recommendation, if made, was never carried out.

Mr. Müller was well acquainted with the lamented Dr. Pavy of the Greely expedition, and he grieves that one of so many manly qualities should have suffered such a fate. Dr. Pavy's pluck, he says, was never better illustrated than in his dog driving about Ritenbenks and Disco Island. He drove once clear through to Upernavik, and on another occasion from Ritenbenks across the sound and over the mountains to Godhavn, journeys that astounded the Eskimos.

After a while, when he has been long enough in the service to earn a good pension and has accumulated enough money to buy a good annuity, the comptroller intends to retire and live in Copenhagen, and that is the dream of every officer of the Danish Government living in Greenland.

Julius, the valet, is an Eskimo, though nearly white. He talks Danish and English fluently, as well as his mother tongue and, being of an observing and enquiring turn, is a remarkably well-informed young man. His father was at one time the company's carpenter, who had a wife in Copenhagen.

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THE LOCATION DOES NOT PREVENT COMFORT.

The superintendent and his family live as happily here in this out-of-the-way settlement, apparently, as people do anywhere. He is responsible for the care of the whole settlement. From October until April they are cut off from the rest of the world by a barrier that cannot be passed, and even in summer they can send and receive letters from home only three times. There is only one other white family within visiting distance, the family of the Governor of the Eskimo settlement of Arsuk, eight miles away down the fiord, but visits to that family are necessarily rare, because the ice comes and goes all winter long in the fiord, and the storms make navigation very dangerous when the water is open. That white people may thrive well in Greenland is demonstrated by their boy, Paul, who at 2 years of age is as large and bright as most children of 3, while for sturdy health his superior could hardly be found. Being the only white child born there, he is the pride of the settlement.

If plenty of money of no intrinsic value can make a people happy, the settlement of Ivigtut should be contented. The medium of exchange consists of zinc coins of the value of one crown and less. The cut shows the crown piece, full size. It is said by those who have tried them that no handier chips for a quiet game of draw poker were ever invented than the crown, 50-ore, 25-ore and 10-ore pieces, an ore being of the value of one-hundredth of a crown, and a crown, or kroner, being worth 27½ cents American money.

IVITUGT'S DEAD.

Although a noticeably healthy place in a healthy climate Ivigtut has its cemetery. A man who was at work at the bottom of the pump shaft in the quarry failed to fasten a bucket full of rock securely to a rope that was to draw it up. Half way to the surface, and more than 60 feet from the man, the bucket came loose, and the man had no chance for his life. In spite of care a blast was exploded while two men stood over it. One man died, and the other was sent home crippled for life. Comptroller Müller says that in five years only two men have been hurt. But in 1862, when the mine was under a different management, the entire colony died of cold and the scurvy.

Ivigtut cemetery is on the crest of a low hill, nearly one-fourth of a mile from the houses, near the wharf. By blasting and much labor two wide paths, that intersect each other in the form of a cross, were leveled on top of the hill. Where they intersect a pedestal of broken rock two or three feet high was erected, and on this an iron monument, surmounted by a cross, was placed, the whole being about fifteen feet high and visible for many miles along the fiord. On the side of the monument, facing the graves are painted in black letters verses ix and x of the 139th Psalm:

If I take the wings of the morning and dwell in the uttermost parts of the sea,
Even there shall Thy hand lead me, and Thy right hand shall hold me.

There are nine graves, but only seven are those of employees. All of these graves, except one, are in the southwest angle of the cross. A little plateau, a foot or two above the path,

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was leveled off and shallow graves blasted in the solid rock. There the bodies were placed and the coffins were covered with broken stone, with a thin layer of earth above, because the soil can be gathered only by the handful from between the rocks that form the mountain.

The one grave apart is in the northeast angle of the cross. A wall two feet high, and built of the rocks that the action of water and frost has split from the hillside, encloses a space twelve feet square. It is filled with broken stone and earth, and was decorated with many wreaths and bunches of native flowers and grasses. A small marble stone, built into a wedge-shaped pedestal in the centre of the pile, records that:

Herunder Holles
THORVALD NORREGAARD,
Fodt den 29de Oktober, 1849[?],
Ded den 5te December, 1887,
Fied med hans stoo !

Mr. Norregaard was formerly Governor of Arsuk. He was found dead in his chair.

Another grave is that of a ship Captain named Levine. He carried a canoe on his ship and passed much of his time while the ship was loading in cruising about the fiord. One Saturday he started out with provisions for a whole day. On Sunday he had not returned. On Monday Eskimos were sent up the fiord to look for him. One of them brought back one of his oars. A search by boats failed to find him. Six weeks later and excursion party passing a small island saw some empty tin cans on it, with other signs of a white man's visit. Rowing ashore they found the body of Capt. Levine, with one oar and a small pistol by his side. Five chambers of the pistol were empty, and five bullets had been fired from it into his head. The canoe was never found.

END OF PART II

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III. THE ONLY CRYOLITE MINE.

In a Mountain Side at the South End of Greenland.

The Chemical Properties of a Mineral that has Not Been Found in Workable Deposits Elsewhere—Its Uses in Manufactures and Its Value—Quarrying at Ivigtut—Some Queer Letters for Santa Claus.

The deposit of cryolite at Ivigtut is unique. There is no other mine or quarry like it in the world. Very small quantities of cryolite have been found at Miask, in the Ural Mountains, and a trace was found at Pike's Peak, in the United States. A man who reported the Pike's Peak deposit to an interested capitalist in the East was offered \$150 for a ton of it, but the delivery could not be made. As a workable deposit the Ivigtut pocket stands alone. A good deposit of cryolite anywhere within reach is worth as much as a gold mine. Pure cryolite, to the ordinary observer, is a white stone. It is a good deal like white quartz and a good deal like ice that has a mixture of snow in it. Eskimos call cryolite the ice-that-never-melts, while the name cryolite is from Greek words meaning ice-stone. If any one should happen to find a deposit of white rock anywhere and imagine that it was cryolite, a piece of the rock should be soaked in clean water. If it then has the appearance of wet, opaque ice, the next thing to do is to try to cut it with a knife. If it cannot be cut it is probably quartz. If it can be shaved down into a powder very easily it may be cryolite, and samples should be sent to an expert. But not all cryolite is white. Some of it is light brown and some very dark. This is usually due to vegetable matter that has soaked into it, or it may be due to iron. If a piece of the dark stuff be heated very hot—say by putting it on top of a hot stove—it will whiten, the vegetable being driven off. Another way to determine the character of a supposed piece of cryolite is to analyze it. If the rock be fluoride of sodium and aluminum it is cryolite. That is, it consists of three chemical equivalents of sodium, two of aluminum, and six of fluorine. It has a hardness of 2.5, a specific gravity of 3, and it cleaves in three directions.

In 1806 a German named Giesecke, thinking that valuable minerals might be found in Greenland, applied to the Danish Government for permission to go there and prospect the mountains. He searched the Coast from Cape Farewell up, living with the Danish Governors or the Eskimos, as circumstances dictated, until he reached Arsuk Fiord. Here he fell in with an intelligent Eskimo who had been taken to Denmark, educated, placed in Government employ, and finally discharged and sent back to Greenland for disrespect to his superiors. That man told Giesecke about a deposit of ice that never melted on the edge of Arsuk Fiord. It was powdered and used by the natives in tanning skins. It acted on a greasy hide as soap would act. Giesecke went to see the deposit. It cropped out on the south side of the fiord at the water's edge. The prospector gathered abundant samples, for it was an entirely new substance. The next year, with his new-found rock and a lot of other specimens from Greenland mountains, he sailed for home. Unfortunately for him Denmark was then opposed to England in the war that was stirring up the world, and the Danish ship was captured by a British man-of-war, carried to London, and sold as a good prize. The cryolite went to a British institution, where it was analyzed and its constituents were determined. It received a name which, for many years, students of chemistry committed to memory, and then forgot because it was not of any other value in the world than a curious compound of

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certain elements. Then a distinguished chemist named [Thomsen] discovered that a substance very useful to mankind—sal soda, also bicarbonate of soda—could be made cheaply from cryolite, and not only were these substances very cheap, but they were free from all impurities. That discovery led to attempts to work the deposit. As early as 1852 a little work was done in the quarry, but regular work was not begun until 1860. No money was made out of the quarry until 1864. Indeed, although steadily worked since 1860, previous to the year 1864 some hundreds of thousands of dollars were sunk in attempts to develop the cryolite industry.

Until 1864 the entire product of the mine went to Europe. Then an American firm, the Pennsylvania Salt Manufacturing Company of Natrona and Philadelphia, Pa. of which Mr. Theo. Armstrong is President, began to import it. This company was originally organized to make soda ash from the salt obtained from salt water wells at Natrona, twenty-four miles from Pittsburgh. It is said that owing to competition with other concerns which had more cheaply worked deposits of salt, the profits had been reduced to an unsatisfactory limit, when at about the date mentioned the scientific directors of the company began to consider the advisability of importing cryolite. One of their directors was thereupon sent to Denmark, where he had abundant opportunity to examine and test the kryolith, as it is there called. The tests proved so satisfactory that a contract was made by which the Pennsylvania company was to have some thousands of tons per annum, and in any event two-thirds of all the product of the mine. The contract was for twenty years, with the option of extension. The option was taken at the end of the first period.

The difficulty was to get the cryolite from Ivigtut to Natrona. When a representative of the company called on a Philadelphia ship broker to see about chartering vessels for the purpose, the broker thought some of his fun-loving associates had sent the man to him as a joke. When convinced that vessels were really wanted to go to Greenland, he advised the company to apply to [a] St. Johns (N. F.) whaling shipowner, and for a year or two whalers, chiefly from Scotland were employed. Capt. Adam Smith made his first voyage to Ivigtut on one of these vessels. He has completed thirty-two voyages to the Greenland seas. In 1866 several American and Nova Scotian vessels were chartered for the trade, but after a few years' trial the American vessels abandoned the trade, and it was again transferred to the Danish and Scotch ships. The trade had many reverses, as the vessels were old, and neither the Danish nor Scotch shipowners were disposed to infuse new blood into it in the way of building suitable vessels for such navigation.

In 1876 Capt. C. B. Dix became the partner of Capt. L. McKay. Having had considerable experience in the Greenland trade, they were desirous of trying their fortunes again in that icy land. They knew what kind of vessels were needed. They accordingly proposed to the Pennsylvania Salt Manufacturing Company to build as fast as possible suitable vessels that would carry all the cryolite obtainable. Their proposition being accepted, the barks *Ivigtut* and *Natrona*, the first of the present fleet, were constructed. Every care was bestowed in the building and equipping of the vessels, also in the selection of suitable Captains to command them. Capt. Adam Smith, now of the *Argenta*, was one of the first employed. During thirteen years' experience McKay & Dix have built twelve vessels, all of which, except the two previously mentioned, have chemical names, viz. *Kryolith*, *Alumina*, *Fluorine*,

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Silica, Iodine, Sodium, Salina, Silicon, Platina, and Argenta: hence they are called the chemical fleet. Under the management of this firm the annual importations are from 8,000 to 10,000 tons. The first cargoes were delivered at Quebec and taken through by river and lake to Cleveland, Ohio, and thence by rail to the works at Natrona. That roundabout course was soon abandoned, however, for the direct voyage to Philadelphia, and thence by rail to Natrona. Frequently the ships are nipped in the ice off the Greenland coast, and are so badly damaged that they must return home for repairs.

THE MINE.

When work was first begun on the deposit it cropped out as a wide seam a few feet from the water of the fiord at high tide. An exploration showed, however, that the deposit was a pocket rather than a vein. The lay of the south shore is east and west. From the water's edge the deposit plunged down to the southward under the mountain at an angle of about 45 degrees. The rock above, in fact, all around it, is granite. When the deposit had been uncovered, it was found to be more than 400 feet long by nearly 200 feet wide. To this day the owners do not know how deep it is, but they have dug it out to a depth of 100 feet and have drilled 140 feet farther, and found cryolite all the way. At the surface the cryolite was as pure and white as the snow. Huge blocks, without speck or spot of impurity, were blasted out and placed on board the ships. As they worked down the miners found crystals of iron ore. The chunks of cryolite thus defiled were promptly dumped into the fiord along with the covering rock. The iron ore is a perfectly pure carbonate of iron, and could be used in the Bessemer process of making steel in sufficient quantities. In addition to the carbonate of iron were sulphurets of iron and copper, beautiful specimens of lead ore, and several other interesting minerals that are found only in connection with cryolite and, until recently, entirely unknown. Among these are pachnolite, thomsenolite (named after Prof. J. Thomsen, who originated the cryolite industry) arksudite, geoarksudite, and hagemanite, which was named by Prof. Silliman after Mr. Gustav A. Hageman, the assistant chemist of the Pennsylvania Salt Manufacturing Company, who first analyzed it. But these impurities are readily separated from the cryolite in the process of manufacture, as they suffer no change under the chemical treatment by which the cryolite is decomposed.

The deposit as a whole may be readily pictured if the reader ever looked at a mountain spring where the water boiling up through a hole in the bottom kept lifting the sand there and holding it in suspension so that the water was discolored at the bottom but pure and limpid at the top. When this deposit of cryolite was found it boiled up in a liquid form from a hole below, bringing with it iron and lead as the water in the spring brings sand. Then it solidified. Because the iron and lead were of [greater?] specific gravity they remained near the bottom. Such is the cryolite deposit of Ivigtut.

The mine is only a hole in the ground, elliptic in shape and, say, 450 feet long by 150 wide. It lies parallel with the water. The wall of the hole on the water side is about vertical, while on the south side it is vertical also, except that wide pockets between huge pillars have been dug in under the overlying granite to follow the lead of the cryolite. The overlying rock on that side is about forty feet thick. On the water side is an inclined railway, where loaded cars are hauled up as empty ones come down, just as is done in coal mines. A pump

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shaft on this side extends twenty-eight feet down from the bottom of the mine, and all water drains into that. The pumps and engines are good, but not novel. While we were there one gang was blasting up the bottom of the quarry and another was at work cutting down a terrace at the western end. The drilling of the holes for blasting was by hand. The blasts are discharged while the men are away at meals. The pieces of mixed ore and cryolite are placed on blocks of wood, and are broken apart by hand, the cryolite going into one pile and the other ores into another. The refuse has been used for constructing the wharf.

In summer the men work at the bottom of the hole. In winter they work on a novel staging that is readily made here. The water of the fiord is let into the mine, and when it has frozen over the men work on it to clear off surface rock and to cut down benches or terraces for the next season's work.

At the end of April, when the *Fox*, with a complement of men for the summer, is expected, the mine is pumped out and the ice is broken up and hauled away. It takes twenty days and nights to pump out the mine.

ON THE WHARF.

The wharf is about 500 feet long and 100 wide. It is simply a dump heap of refuse from the mine, but it has been floored over with heavy plank and supplied at the water side with substantial spikes and bedded anchors for mooring the ships. Three ships can load at once. They are moored about thirty-five feet from the edge, with which they are connected by heavy gang planks.

The name of the Danish company working the mine is the Kryolite Mining and Trading Company. It pays a royalty of one-fifth to the Danish Government. The most careful account is, therefore, kept of every ton mined. From the mine the cars are run by hand to the wharf, where small pieces of iron ore bolted on the floor locate the corners of the piles which must be built. The piles are of various sizes, but they average about 25x100 feet and 4½ feet high. The men who make the piles use as much care as they would if building cellar walls for country houses. Lines are stretched between the iron-marked corners and then walls of big blocks of cryolite are built to those lines, the blocks being squared by the use of the hammer so that the wall is solid. As the wall is built up the space within is filled. Only pure white, or No. 1, cryolite is used in building the wall and when the pile is of the required height lumps of pure white cryolite are thrown on top, and broken up until the top is covered and slightly rounded. These piles are carefully measured, the unit of measure being a cubic fathom. It is Comptroller Müller's duty to keep the record of these piles and the shipments. A representative of the Kryolite Company records the weighing at Philadelphia.

LOADING CRYOLITE.

The *Argenta* was moored at the wharf on Thursday, Sept. 25. By noon next day she had the first wheelbarrow load of cryolite on board. But the cryolite, being about as heavy as limestone, cannot be dumped down in the bottom of a ship and left there. The *Argenta* had

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a platform built across and fore and aft about four feet above the floor to raise the centre of gravity of the load. If the centre of gravity of a load is too low in a ship she will roll violently, and endanger at least her spars and not infrequently the hull.

On Saturday afternoon the *Fluorine*, Capt. Johnson, arrived from Philadelphia. The *Sodium*, Capt. Anderson, arrived on Sunday afternoon, and thereafter the port of Ivigtut presented a scene of animation. With the aid of the *Fox's* crew and some shore help we got 410 tons of cryolite on board by Tuesday night, the end of the fifth day, and on Wednesday morning hauled the ship out until she was in ten fathoms of water, where the ballast was dumped overboard. Then she was hauled back, and the loading went on as before.

That only ships built in the strongest manner possible could stand this trade is shown by the fact that the *Silicon*, another of the fleet here in July, was obliged to go home in ballast, having been on a rock near the mouth of the fiord, and started a leak. The *Sodium* came into port leaking several inches of water an hour. She took on less than a full load, and was ready to sail when we sailed; but her Captain had a strong presentiment of evil to come, and he remained in Kajartolik harbor at the mouth of the fiord when the *Argenta* and the *Fluorine* sailed. She has since delivered her cargo at Raita[?].

USES OF CRYOLITE.

By certain processes cryolite, the fluoride of sodium and aluminum, is converted into sal soda or carbonate of soda, into bicarbonate of soda, into alum, and into caustic soda. To chemists the processes are said to be extremely interesting because they are simple and because the products are absolutely pure, the alum from cryolite being unique in this respect. Cryolite has further been used in the manufacture of opaque glass. Mixed with sand and oxide of zinc, a glass that very closely resembles porcelain and yet is almost as tough as iron is produced. A company has been organized to produce the metal aluminum from cryolite. Experiments have been so successful that a large factory is in operation in Pittsburgh, and several are contemplated in other cities for turning out that wonderful metal at a price less than \$1 a pound. The product is on the market, and in two or three years will probably sell for less than 50 cents a pound.

The importing and handling of cryolite and its products give employment to nearly 2,000 men, who earn close to a million dollars a year. Several millions of capital are employed, and few enterprises have been supported so lavishly as the Pennsylvania Salt Manufacturing Company has been supported in the development of the cryolite industry. It required a deal of money, as well as skill and patience.

THE CLIMATE.

Ivigtut is in latitude 61° 12' north. It is about the latitude of the palace of the Czar of Russia in St. Petersburg. It is not so far north as localities where very many Swedes and Norwegians live, not to mention the other whites of northern Europe. When we were in Ivigtut it was light enough to work about decks at 6 o'clock in the morning, and the last

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barrow of cryolite was dumped into the *Argenta's* hold at 7 o'clock at night. We arrived with the first snow of the season. It was a light snow, that melted as it struck the deck, but it whitened the upper part of the mountains, say down to within 500 feet of the water. This snow remained and was increased by two or three other snow storms, but the Danes said that it would surely leave even the mountain tops on the arrival of the first southeaster, and that southeasters, with their warm rains, always cleared the snow from the mountains until along in December. There was no snow on the ground at the water's edge when we sailed away, but there was some three or four hundred feet up. All the fresh water ponds and lakes were frozen over by a cold snap before we left to a depth of perhaps three inches at the most. The air by day, except on the rainy days, is best described by the word bracing, but on even the warmest days when the sun had gone behind the westerly mountains the air became piercing cold. But the feeling was much colder than the thermometer indicated. With the Fahrenheit thermometer at from 15 to 20 degrees everybody about the ship who had them wore three flannel shirts. With less clothing on I have been more comfortable in the Adirondacks when the same thermometer was 15 or 20 degrees below zero.

The fiord, which at Ivigtut is $2\frac{1}{2}$ miles wide, is usually frozen over early in November, but last winter it was not frozen. The ice is usually out of the fiord by May 1, but near the upper end of the fiord the water is very nearly fresh, owing to the streams that flow out from under the glaciers there. Willows are always in full leaf the first week in June.

When Dr. A. Hagerup was physician at Ivigtut he kept a meteorological record. He found, according to data left behind, an average temperature of a little lower than 5 degrees Centigrade during the three coldest months of the year, while from the middle of June to the middle of September the average was about 7 Centigrade. During one winter (1886-7) the lowest degree reached was 28 [sic], and the highest during the next summer 21. The last year he was there a total of $35\frac{1}{2}$ inches of rainfall was noted, but that is said to have been a rather dry year. The past summer there was more rain than during any season for several years. Very few bright days, not over a dozen which were bright all day, were noted until the frosts of September came.

It is said that at Julianashaab, near Cape Farewell, is a family that has owned a herd of cattle for more than 100 years, and that both butter and cheese of an exceptionally fine quality are produced. The cattle are small in size, but apparently healthy. They have diminished in size during the recollection of living people, and this diminution is said to be due to the climate. Abundant hay is raised for their keeping. The fiord and the ponds produce mosquitoes with appetites of the most vigorous nature.

One of the features of Ivigtut likely to attract the attention of the stranger is the truck raising. Three or four gardens have been formed by clearing away the rocks, the largest being about 30x50 feet in size. With the aid of window sashes very fine crops of Scotch kale are matured.

THE MYSTERY OF THE FIELD ICE.

Local causes, rather than the latitude, make south Greenland unfit for agriculture. Along the shores of the Arsuk fiord there is very little soil to cultivate except in one or two valleys like the one just above Ivigtut. The soil is black and rich but the obstacle in the way of cultivating that soil successfully is the current that brings field ice from the east coast of the country down around Cape Farewell and up along the west coast. The movements of this ice are mysterious. In general it is known that the field ice goes with the current, or, when the wind is the stronger, with the wind. But that does not account for all the movements. A current like a wide river sweeps up the coast with a pack of ice a hundred miles long on its bosom. As it passes the fiord on a calm day the ice, or large quantities of it, will suddenly take a set into the fiord. Thus at 9 o'clock it has been noticed that not a cake of ice was in sight at Ivigtut. At noon the fiord was full of ice. At 4 o'clock not a cake was in sight. On other days apparently, precisely like that day, a single cake may float off Ivigtut all day long, and perhaps stay there three days. On other days of like character no ice is seen, although there may be plenty of it off the mouth of the fiord. The tide very likely has something to do with the movement of the ice, but the ice sometimes comes in against the ebb tide and goes out against the flood. The reader who has looked at deep pools below a waterfall has undoubtedly seen bodies of the water boil up as if from a spring in the pool; not a violent ebullition but a gradual rising of a large volume of water to the surface. This rising of the water would scatter floating débris in all directions. There is something about the movements of the ice off the coast of Greenland to suggest just such upheavals of water from the depths below.

Of the meteorological phenomena of this part of Greenland nothing, probably, is more interesting than the easterly gales that rage along the coast. Because of the extraordinary force with which the wind courses down the mountain sides and out of the gorges and valleys, the utmost care has to be taken in mooring the ships. Indeed, a ship was once known to break a good chain cable by which she was moored at the bow and go drifting off with the gale. But not only is the gale interesting because of its extraordinary power: it is peculiar in its phases as it rises. One night the overcast sky began to clear in the east and then to whiten as if the moon were rising. A little later the cabin door opened without apparent cause, and a chilliness, followed by a warm breath, pervaded the room. The captain shook his head, but said nothing, although he thought, as he said afterward, that the door had opened for an unwelcome guest. Half an hour passed before the guest appeared again, and then its presence was manifested simply by a sigh in the rigging. A full hour passed, and then it came again, a gentle breath that sighed through the rigging, a breeze that made the wires sing, a squall that whizzed around us, and then the gale, roaring and screaming upon us and across the fiord, rolling the cryolite across the deck, tearing the planks from the staging, and beating against the ship until she groaned and trembled. But the Captain said it was only half of what is sometimes felt.

But when we lay in Kajartalik harbor waiting for the ice to clear away from the mouth of the fiord, that we might sail for home, we saw the gale in all its glory. It was on Sunday, Oct. 12. The lofty peaks of Kungnat were behind us, and away across the fiord towered those of

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Storo and Saverut. Snow had fallen during the night, but early in the morning the sun came out bright and clear, while the gale intensified until its power was terrific. Leaping from crest to crest and bounding from side to side of Kungnat, the wind whirled in tornadoes down upon the water, tearing it into spinning columns of spray. Unchecked, the gale left the water and swept up the valleys and the gorges and the precipitous sides of the mountains, gathering the loose, dry snow in its embrace as it went, carrying it up and up to the very crests, and there hurling it away in spouting streams and fleecy clouds, that spurted and soared more than a thousand feet above the loftiest peaks, more than four thousand feet above the level of the sea, to fade and vanish slowly out of sight.

Woe betide the ship caught in the open fiord by one of these gales. There is no escaping its fury without serious damage, while fatal results are avoided only by extreme vigilance and a prompt squaring of the yards, that she may be driven out to sea. Capt. Smith of the *Argenta* was once driven out of the fiord, and he was able to bring his vessel to her course four degrees of latitude away.

The perils and discomforts of the voyage, balanced against the pleasures, may be endured willingly, and among the latter not the least is the pleasure of looking at the effects of an easterly gale from a safe harbor near the mouth of the fiord. Another great pleasure is in the spectacle afforded nightly by the aurora borealis. If there be any manifestation of the powers of nature that will convey a conception of the dawn of the day which shall come like a thief in the night, in which the heavens shall pass away and the earth and the works that are therein shall be burned up, that manifestation will be found in the electrical flames that cover the skies of Greenland at night.

LETTERS TO SANTA CLAUS.

One of the most interesting experiences of the whole journey was the reading of two letters which had been written in the United States and had been forwarded northward on their way to "Mr. Santa Claus, Greenland." Every youngster in America believes that the home of the jolly old dispenser of Christmas comforts is among the icy mountains of Greenland and that once a year he leaves the snow and ice of his home to drive a swift team of reindeer over hill and valley and lake and stream, stop at every house, climb down the chimney, and fill every stocking hanging near it with no end of nice things for little folks: but not very many of these youngsters ever tried to write to their generous old friend, and, of those who have tried, only two have succeeded in getting their letters as far on the way to the home of Santa Claus as the coast of Greenland. These two letters were in the possession of Mr. Schmidt, the Superintendent of the mine, and if he kept them instead of sending them on their way to the home of Santa Claus, it was because no man has ever yet been able to get far enough in among the ice mountains to discover just where Santa Claus lives. The letters were brought to Ivigtut by the *Fox* when she arrived in April last, with the first of the season's supplies and the summer complement of men.

One of the letters had been written, as the marks on the envelope indicated, in Zanesville, Ohio and received at the Zanesville Post Office at 6 o'clock on the afternoon of Feb. 12, 1890. It was directed to

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MR. SANTA CLAUS,
Ici Mountains,
Greenland.

The writing on the envelope was neat and small, apparently that of a woman, or a girl. It had a two-cent stamp. From Zanesville the letter was sent to New York, but either in Zanesville or New York some one wrote on the envelope with red ink; "Try Ice Mts., Greenland." From New York the letter was forwarded to Copenhagen, where it was received on March 6, and then, after having been marked "Greenland, 27" in red pencil, sent to the office of the company that owns the mine at Ivigtut. Mr. Schmidt found in the envelope a small piece of white paper of the kind used for daily newspapers. It was covered on both sides with ink marks, and most of them were like the letter M, but some of them were "hen tracks."

In the mail with it was a letter from Washington D. C., and this was a very good letter. It was directed thus:

MR. SANTA CLAUS,
52 Iceland street,
Greenland.

According to the marks on the envelope, it had been received in the Washington Post Office at 5 o'clock on the afternoon of Nov. 27, 1888. It had a five-cent stamp on it, as required for foreign letters. It was forwarded to New York that night and reached Copenhagen on Dec. 12 following. It was also sent to the Kryolith Company. The envelope had, like the other one, been directed by a woman's hand, but when Superintendent [Schmidt] opened it he found within the following letter, of which the penmanship was excellent, but manifestly a boy's work:

WASHINGTON, D. C., Nov. 28th, 1889. [sic]

DEAR SANTA CLAUS: I am a little boy ten years old I go to St. Aloysius boys' school I am in the 4th grade I study reading writing arithmetic spelling geography catechism grammar and I take music lessons. Dear Santa Claus I would like to have a writing desk and a wagon some nice books a pair of rubbers 2 bokes[?] of alies[?] If you will be kind enough to bring me these things I would try and be a very good boy and try to make good use of them Dear Santa Claus when I write again I will describe Washington City as I think all the little boys and girls would like to hear about our great city. I suppose the little boys and girls do not know much about Washington. I would like to have snow for Christmas I suppose you are tired of snow up in greenland where it is so cold we have rain rain all the time Dear Santa Claus I hope I have not asked to much of you as this all I have to say at present I will close my letter by wishing you a Merry Christmas and a Happy New Year I remain your little friend

WILLIE T. A. JACKSON
739 Second street N. W.

The people now at Ivigtut think that no other letters have ever before been received in Greenland directed to Santa Claus.

END OF PART III

IV. SOUTH GREENLAND ESKIMOS.

Life in the Little Settlement of Arsuk, on the Fiord.

Interesting Particulars About Their Huts, Habits, Discipline, and Amusements—In Many Respects Their Homes are Better Than Some Tenements—Features of the Village—Very Simple Government.

Two days after our arrival at Ivigtut the superintendent said that he had received a letter from Gov. V. Karseh of Arsuk, the Eskimo settlement, inviting the officers of the mine, Capt. Smith, and myself to go down there on a visit. The physician of the settlement, Dr. T. U. Krabbe, intended to leave for Copenhagen when the *Fox* sailed, and there was to be a dinner in his honor. Here, then was an opportunity to see not only the Eskimos, but a Danish entertainment also. The following morning, therefore, the invited guests boarded the little steam launch *Akunit*, provided by the company, and steamed away for Arsuk. Maria, in her most gorgeous array, was one of the party. The run of eight miles was made in something over an hour, and then as we turned into the little bay the settlement, with its three Danish houses, its group of Eskimo huts, and its swarming humanity, was before us.

The natives, as seen from the launch, were like a throng of big and little boys. Every person in sight was dressed in jacket and trousers, and at the first look there was no distinguishing the sexes. The *Akunit* anchored and we landed in a yawl that had been towed down from Ivigtut for the purpose. Here, while the Eskimos gathered about looking at the whites as school children look at strangers, but greeting Maria cordially by shaking hands, I had an opportunity of examining them until I began to focus my camera for a snap shot. Then, with such squeals and giggles as one hears from schoolgirls, the women ran away, bending over and scooting into the huts pell-mell. For some time every effort to get a photograph of a woman was unavailing, and we had to wait for them to become accustomed to the novelty. This plan worked so well that before we left the settlement the prettiest of the girls were posing about the entrances and against the huts anxious to be photographed.

Gov. Karseh and his wife Theresia, with Dr. Krabbe, received us at the door of their home, a wooden structure a story and a half high, built of solid timbers, furred off within, and stuffed with moss, after the usual fashion of Government houses in Greenland. At the right of the entry were two rooms devoted to the Doctor's use. At the left and upstairs were the apartments of the Governor's family, including a number of Eskimo servants. Although the Governor and his wife understood no English they understood well the art of making a stranger comfortable. The parlor into which we were invited was carpeted, furnished with the usual chairs, sofa, and tables, and there was an abundance of bric-a-brac on the mantel and shelves. The single window had a beautiful garden of house plants in it. Here we sat and took a little wine, with cigars for the men; but breakfast was soon announced, and we went to the dining room adjoining, where we were served with two courses. The first included schnapps, beer, fried reindeer venison, with cream (goat's milk) sauce, fried potatoes, and black rye bread. The next included cold boiled ham, mutton sausage, bologna, pickled salmon, pickled *salmo villosus* [capelin, Ed.], pickled tongue, cucumber pickles, ripe

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cucumber sweet pickles, black bread and white bread with butter, Swiss and American cheeses. The Danes preferred the black bread to the white, but both kinds and indeed, everything on the table, were excellent, even to the unaccustomed taste. The cooking was by Eskimo women, who also waited on the table. After breakfast, we returned to the sitting room, where coffee, with goat's milk and loaf sugar, and cigars of fine quality were served. We were about an hour and a quarter at breakfast.

THE VILLAGE.

The bay on which this village is built is an oval indentation of the shore line, with a little pebbly beach at its head, where a clear mountain brook enters. It has rocky sides, the rocks increasing in size from the head of the bay out. The water deepens rapidly off the beach. The landing place of the kayaks is on the pebbles, but we had to land on the rocks on the easterly side of the bay, where the water is several feet deep even at low tide, and the rocks are of a convenient size for steps. At that landing is a house with stone walls, a strong wooden door, one window, and a well-tarred wooden roof. It is about 14x25 feet and the walls are 7 feet high. It is the storehouse for the surplus seal oil of the settlement. The ground is fairly level for 40 rods or so from the water's edge, and then it rises with a rapidly increasing pitch until the almost vertical side of Kungnat Mountain is reached. The soil is a sandy loam, what there is of it, but rocks crop out everywhere. The huts of the Eskimos are built on the level ground, along a path that leads from the landing to the Governor's house. The location is well chosen because the ground is level, and because the mountain brook runs through it, furnishing abundant pure water. Kungnat Mountain on the north and northwest and Pingo on the northeast shelter it from the coldest storms, their precipitous sides forming the semblance of an amphitheatre. But the houses are not in danger from the rocks that are split from the mountain side by the frost and sent tumbling down with startling roar and crash. Indeed, the Governor's house is twenty rods nearer the falling rocks than the Eskimo huts.

The huts of the Eskimos of Arsuik are built on one plan. They suggest more than anything else the sod houses of the western plains, except that the Eskimo house is reached by what may be called a burrow. The walls of the huts are built of alternate layers of stone and sod, and are from two to three feet in thickness, by about five in height at the highest point; some are not more than four feet in height. Each consists of an entry way, a kitchen, and a living room. The entry way is from eighteen inches to two feet in width and about three feet in height, the stone walls meeting overhead to form a roof. An arch might easily be made by one knowing how, because the stones used are those split from the mountain by frost, and many of them are wedge shaped. The entry is from twelve to sixteen feet in length. On the left, half way to the main room, is an opening that leads to the kitchen, which is a structure shaped like an old-fashioned bee hive or a hay cock. It is a small room, with the walls arching over, dome fashion, and with a hole in the top for the smoke to escape through. A number of stones close together on the floor, which is bare ground, served to keep the open fire partly confined and to support the iron kettles. The fire is of driftwood brought to the fiord by the ocean current, and of the trunks of the crooked little trees that grow on the mountain side. In winter the lamp in the main room does the cooking for most of the families. The kitchen is so low that even the women can stand erect only in the centre. The

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entrance to the long low passage leading to the kitchen and the main room was a reminder in one respect of the doorways of New York tenements, the walls being black and shiny where men, women and children had rubbed greasy hands on them. Once in I completely closed the passage, in fact I could only squeeze through after bending over until I could touch the ground with my hands, but I still had reason to suppose because of the odor that the passage was greasy within as well as without. There was no door at the entrance of the passage, but a board and batten door closed the inner end. The guide entered without knocking, but we were always welcomed with a smile and a word—con-u-reet—(come). The main rooms were about square, or about 12x14 feet. The entryway and main room always lay east and west, so that the right-hand wall was to the south. In each house the south wall had a window which contained anywhere from nine to sixteen panes of about 9x13 glass. Each room had a board floor and a ceiling overhead. Most of them have the walls furred off and ceiled and the spaces stuffed with moss. The windows were a trifle hazy with dust, but the floors had been cleaned, perhaps in anticipation of the coming of the white visitors, for, the Danes said, the Eskimos are dirty housekeepers. In two houses were beautiful window gardens, geraniums and foliage plants holding the place of honor. When particular attention was paid to the plants, by admiring the flowers and the evident care given to them, the husband and wife showed equal pleasure.

In each house were a long bench of boards under the window and a short one at the left of the door. A table was in the further right-hand corner. In two houses stoves, each a vertical cylinder of sheet iron with fire brick lining, stood near the doors. A small table near the further end of the room invariably held a lamp, simply a soft green stone about 8x14 inches and 6 or 8 inches thick, with a hollow scooped in the top. It was filled with seal oil, and a piece of moss served as a wick. Several families had lamps like those used in America, but filled with seal oil. The ceiling was in no case more than 4½ feet above the floor, and the taller Eskimos could not stand erect in their homes. The roof of the big room was of timber rafters laid square across, with boards above and a rounded pile of sods on top. From the ceiling near the wall hung the gun of the owner, and from pegs along the walls various articles of clothing. Numerous advertising lithographs were on the walls, and in several houses prints of King Christian IX. Several families had clocks, but not one was running. The most important feature of the room, however, was the bed. It was a platform of boards planed smooth, about six feet in width, along the entire left side of the room. It was about a foot above the floor on the forward side, the side next to the wall being perhaps three inches higher. The platform at night is covered with feather beds of the ordinary size, but during the day the beds are doubled back, leaving the forward half of the platform for use as a table or seat.

Comparisons may be odious, but they are commonly instructive. The poorest of the Eskimo huts in Arsuk were cleaner, lighter, and in every respect more comfortable than the best dugouts to be seen during a journey through southwest Kansas, the Indian Territory and Texas. The best of the Eskimo homes needed only higher walls to compare well with the best sod houses on the American plains. In winter time the Eskimos drag the carcasses of the seals they kill into the huts and dress them there. The richer an Eskimo is the more seals he kills, and the dirtier his home becomes. But when I was there the floors were not greasy, even if the entry walls were shining. Allowing for the worst condition of the Arsuk

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Eskimo hut, it is cleaner, sweeter, lighter, and infinitely more healthy than the homes of thousands of persons in the American metropolis. Rancid seal oil is unpleasant, but so, too, is a stew of pork, garlic, and cabbage, even before decomposition. If the Eskimos knew how the degraded poor of New York live they would feel very sorry for the unfortunate white folks, and would be thankful that their own lines had been cast in pleasant places, and they would have good reason for the thanks, even if three or four families do live in one room.

NO FULL BLOODS.

The well-informed reader believes that the Eskimos are a stunted race of copper-colored natives, dark of skin, with coarse black hair, dark-brown eyes, and high cheek bones. That is the way that the Eskimos did appear in former days. The majority of the natives of Arsuk, however, except in their dress, are more like north of Europe emigrants than the Eskimos described in books. There are ninety-seven souls in Arsuk, but probably not one of them has enough Eskimo blood to be called a half breed. They are alike everywhere along the west coast of Greenland, it is said, but along the east coast are many full bloods. The most striking peculiarity of the Arsuk Eskimo men, aside from the light complexion, is the shape of their shoulders. In that respect they seem to have the strength of men twice their weight, due, of course, to the fact that they pass their days paddling kayaks and very rarely walk more than a few rods at a time, say from the water to their homes, or to a trap near a pond or a brook on the mountain side, but near the fiord. This strength of shoulders is not apparent in the young. It gives the men a hump-shouldered appearance, however, that is increased by the oft-repeated stooping to enter their huts, and by their fashion of sitting humped over on their benches within. But when one does straighten up he stands erect.

On such fine Sundays as the one on which this visit was made to Arsuk the men stand leaning against the walls of their houses, with their hands in their pockets, enjoying the warmth. The attitude is much like that of white men standing on street corners in New York, but it is said that the Eskimos never make unseemly remarks about passing women.

The dress of the Eskimo man of Arsuk consists of jacket, trousers, moccasins, undershirt, drawers, and socks, with occasionally a hat or cap. More go bareheaded than with hat or cap. These clothes, except the foot wear, are usually made of woolen or cotton stuff purchased of the Danish Governor, who keeps a store in one corner of his dwelling, the goods being supplied by the Danish Government. The jacket is usually a cylinder of gingham with sleeves. It fits loosely about the neck, but there is a hood that can be drawn over the head, and the whole then fits, by the aid of a puckering string, tight about the face and chin. In cold weather, however, or when about to paddle his kayak into a boisterous sea, he wears a jacket and hood combined of sealskin, leather side out. When going after seals a white cape is thrown over his shoulders and a white cover is provided for his head, and thus he is transformed into a good enough semblance to a cake of ice to deceive the seal. His trousers are purchased ready-made at the store, or are made from sealskin with the hair out. In very cold weather they may be lined with sealskin, having the hair in. His moccasins are well-shaped sealskin boots, the legs of which reach two thirds of the way to the knees. The socks are like the boots except that the hair is left on the skin and is turned in to the feet. Some wear woolen socks. The underwear is of Danish make. Seal leather

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mittens, with neither hair, nor lining, nor wristlet to add to the warmth of the hands, are worn in cold weather. They are very quickly wet by the icy water that runs along the paddle and over the wrists, but the Eskimo does not mind that. It is noticeable that the men are on the average considerably darker-skinned than the women. They do not comb their hair, or, if they do, it is in all directions from a spot on the apex of the head. It is kept at a fashionable length for bangs.

ESKIMO WOMEN.

The women are not so tall as the men and although they are broad-shouldered, they do not show the development there that the men show. Although some are almost white, all have black hair and brown eyes, but many are so white that in European dress they could not be distinguished from Danish women except by their gait. There is no semblance of a swing in the gait of either men or women. They trot, or mince, along, taking the shortest steps of any people. The women walk with a slight stoop, due perhaps to the frequency with which they go in and out the burrow-like entrances to their houses and to the low ceilings within. They have oval faces, good foreheads, beautiful liquid, brown eyes, which they know well how to use, Grecian noses, blooming cheeks, pouting, red lips, white, regular teeth, and well-shaped limbs, the hands and feet being noticeably small and shapely and the fingers soft, considering that all do hard work.

"Are the women handsome?" was asked after my return.

"Some of them are."

"As handsome as ____?" naming a woman of acknowledged beauty.

"No. When one speaks of a handsome squaw he refers to a very different standard of beauty from that by which he calls an American woman beautiful. If dressed in European garb and placed among a thousand emigrants an unprejudiced observer would say that the Eskimo beauties were not surpassed by any emigrant belle from the north of Europe."

The most noticeable feature of the dress of the Eskimo woman is the ribbon with which she ties up her hair. The ribbon is of a bright color, and, moreover, the color means something. All the females in the settlement, old and young, except one girl of perhaps 20 years, had their hair combed up from all sides to a topknot on the apex of the head. The topknot was commonly from four to six inches in length and two inches in diameter, according to the abundance of the woman's hair, and from the fact that none was longer than that, one would infer that their hair was neither thick nor long. The topknot was wound round, and nearly covered out of sight by a ribbon of one of four colors. The married women wore blue ribbon, the widows black, the girls red, and the mothers who had not been married green. In thus putting a mark on unmarried mothers the Eskimos show almost civilized sternness. The unmarried fathers do not have to wear any distinguishing badge, but, on the contrary, are counted the pick of the flock as they are in many civilized communities. However, the green ribbon, although worn perforce under the Danish rule, is not counted a badge of shame among the Eskimos, according to my judgment, for the women with the green ribbon were in no way ostracized or shunned by any one. The one exception to the rule of

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wearing the hair in a topknot was an octoroon with beautiful long hair plaited across the back of her head. Loosened, it hung far below the top of her short-waisted trousers—a head of hair that any New York girl would be proud of.

The first article of dress below the head is usually a collar of beads with lace-work pattern, rainbow colors, and many intermediate shades between, running around the neck. The width of the collar depends upon the wealth of the woman, and Maria, from Ivigtut, has one more than a foot wide over her big fat shoulders. Below this they wear a waist of woolen stuff, red, blue, green, and plaid being the favorite colors. It is made without buttons and is drawn on over the head. At the bottom it is gathered to a fairly snug-fitting belt of different color from that used in the waist. At the top is usually an eider-down or a fox-skin collar. Below the belt is a pair of short-waisted knickerbocker trousers or sealskin. Indeed, they may be said to have no waist. Not only are they short-waisted: they are also very loose and are worn without suspenders. The unaccustomed spectator is constantly in dread lest they drop down altogether, a dread that is not lessened by the habit the women have of hitching at their trousers sailor fashion every few minutes. But it is excruciatingly funny to see the fat little toddlers a year or two old gravely hitching all the loose-fitting garments. Hitch as she may, there is always a space of an inch or two between the top of the trousers and the bottom of the waist belt, showing a white cotton chemise under the jacket. Women with unweaned babies wear a chemisette instead of a chemise, which, with the jacket, is raised when the baby is to be nursed.

The trousers of the women are of sealskin, dressed with the hair on, the leather being very white and attractive. Up the front of each leg of her trousers the woman shaves off or pulls out the hair, leaving a bare space three or four inches wide, running from the knee to the waist. In the centre of this space she then works or embroiders a stripe about an inch wide by sewing on minute squares of black, red, blue, and green leather. Some of the bits of leather are no more than one thirty-second of an inch square, and each is fastened with a stitch of fine thread of its own color, so that it is only by a careful look that one can see how the pattern is made and secured. The stripe in appearance is a plaid and pleasing. The top of the trousers is bound around with cloth of some color or with leather. The bottom of each leg is bound with seal-skin with the hair on. The legs of the trousers terminate at the knee. Below the knee are the long-legged moccasins, which the Eskimos call stockings. The tops of the moccasins and the bottoms of the trousers never meet, somehow, and, although the neatly embroidered ruffle of the cotton underwear almost fills the space, the observer generally gets a glimpse of a pinky brown leg as the woman walks along. The moccasins are of double thickness of seal skin. The leather is tanned very white for the outer part. Sometimes the hair is left on this part, but not usually. The moccasins are ornamented with a stripe, like that of the trousers, from the toe up almost to the knee cap, and there divides Y fashion, and runs to the binding of white leather at the top. The inner part, or what might be called the stockings proper, always has the hair on. The Eskimos probably do not suffer much from cold feet.

The children dress like the parents, and very interesting anthropological specimens the young Eskimos are. The moment we landed Herr Schmidt tossed a handful of coppers into the air and his example was followed by others. Such screaming, scrambling youngsters

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are seldom seen, but all in the best of humor. Not a fight, not even a scowl was seen. If one could judge by their expressions, those that failed really enjoyed the success of the rest. They were healthy, sturdy, little fellows except one, a hunchback, who had thin cheeks and sorrowful brown eyes. He joined bravely in the scramble for the coppers, but he had no show, except by accident, in the contest. But he did not lack for coppers.

Of the adult population two were ailing. One of these was the largest and most powerful man in the settlement and withal the most ambitious and successful hunter. His energy had proved his ruin, for he had hunted so persistently in fair weather and foul that he had broken down under the strain. He had been attacked by bleeding at the lungs, and his doom was sealed. He will die of consumption inside of eighteen months. Another sick person was a widow. Sitting on a log she was a picture of abject misery. She, too, had consumption, the disease of which most of the Eskimos die.

Not only were the children good natured, the adults were neither vicious nor sour in appearance. The women retain their youthful good looks longer than the men, and, according to my observation, the men treat their wives as well as most white men treat theirs. It was noticeable in Arsuk, as in America, very homely men had got very handsome wives. Thomsen was about the homeliest Eskimo in Arsuk, and it was acknowledged that his wife, Christina was the handsomest matron there.

Besides the Government houses and the Eskimo huts, there was one house occupied by a native that was vastly more pretentious than any other native house. It was the home of the preacher. It serves also as a church. Every year the Danish Government takes a number of bright Eskimo boys to Denmark, where they are educated at Government expense. Some become mechanics and some sailors, and are taken into Government employ. A third class are educated as Lutheran ministers, and are sent back to Greenland to preach to the natives. Each settlement, it is said, has its native Lutheran preacher. The preacher's house at Arsuk had the usual burrow-like entrance and the conical kitchen, but the main room was about 12x16 feet, and had walls seven feet high, built of timbers and shingled over outside, as well as furred off and ceiled inside: four large windows were on the south side. The Eskimos gather in this room at every service, unless some one is sick. The stone walls of a church to be of ample size to accommodate more than 100 adults are under construction. The building is to be completed in the course of two or three years. The Eskimos are not very fond of such work.

THE DIVISION OF LABOR.

Of the work of the family[:] women were splitting wood, building fires, cooking and dressing a deerskin. The skin was staked, flesh side up, on a grass plot with seal ribs for stakes, and was then scraped clean by an old woman named Julia, who used a hash knife for a scraper. The men hunt and fish, gather wood, build houses, cut and split wood and work over their boats and weapons. The women make and care for the family clothing. No finer needlework can be found than these women do, and if some one would teach them to make lace they would produce astonishing results. The men show great skill in fitting wood, bone, and iron together in making their weapons, and a number of specimens of sculptured

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stone work, such as a bear with a cup on its back for holding cigars, made for the whites, showed that they are not lacking in artistic sense.

The Eskimo has two vehicles, the kayak and the woman boat. One kayak measured 18 feet in length, 18 inches in width and 9 inches in depth. It had a keel of inch-square pine, a keelson in each bilge that had a cross section like a truncated V, and topsides, or planksheers, 4 inches wide by $\frac{1}{2}$ an inch thick. The frames, or ribs, were of barrel hoops, and were from 3 to 4 inches apart. The owner sat on a piece of ingrain carpet a foot square put on a piece of board that rested on the keel and the bilge keelsons about a foot abaft the midship section. The frames crossed the top of the boat in the shape of straight beams, and the whole was covered in with sealskins, except a round hole just large enough to admit the body of the owner. Around this hole was a hoop of oval cross section, an inch and an eighth wide and three-fourths of an inch thick. This hoop rested on two beams of oval cross section that were an inch and a quarter wide. The entire frame was tied together with sealskin thongs. It required six sealskins for covering. The seams were joined with split sinews, and were greased. While the model of the kayak is very sharp, it is not graceful, except in the sheer, which is invariably a pleasing line. A section anywhere near the middle or more than four feet from either end would show straight lines sloping in to the bilge, but instead of a flat bottom it has one of a wide V-shape. Within four feet of the end the keel rises to meet the planksheer in a sharp point, the cross section at that point being of the shape of a Roman V. To protect the extreme points of bow and stern and what may be called the covering of the keel from where it begins to rise up to meet the planksheer to its very point, the builder trenails on pieces of bone. With this bone edge he will cut his way through ice a half inch thick very readily.

Narrow as the kayak is, it is marvelously stable with an Eskimo in it. With his hooded sealskin waist drawn tightly over his head and down over the hoop, the Eskimo will face a gale in the fiord in which no ship's long boat could possibly live. In them they travel hundreds of miles along the coast. Waves break over the boat and over a man's head, but he is kept dry if his boat be sound. In their journeys they sleep in their kayaks. They draw them up on the rocks whenever night overtakes them, and, after getting into the boat, pull the hood over the head. Two men in Arsuk could turn a kayak over, and with a motion of the paddle right themselves again. One did that three times. Launching his kayak, he paddled to deep water, and grasped his paddle with both hands one-third the length from one end, the left hand being nearer the long end. Then, putting the paddle over the port rail, with the long end forward and above the rail and the short end just clear of the water, over he went to port and up again to starboard. Much more interesting, however, than that exploit are those of one of the men of this settlement. Though absolutely blind, he paddles everywhere along the fiord as readily as a blind white man can traverse his own house. He is a first-class fisherman.

The woman boat, called *oomiak*, is a flat-bottomed whale boat, or perhaps better described as a long dory, sharp at both ends. Its frame, composed of slender strips of wood, is a model of lightness and strength, and its covering is, of course, sealskin. A boat that will carry a dozen men and women, besides babies and baggage, can be easily lifted out of the water and carried up the rocks by two men. The occupants sit on thwarts, and the boat is

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propelled by paddles. The one effort at picture-making that I saw among the Eskimos had reference to the *oomiak*. On a light-colored rock, just above high water, was a rough sketch of an Eskimo man in a great state of hilarity. The man's arms were up Y-fashion and the fingers were widespread. The dash that represented the mouth had upward curves at the corners, and the eyes were big and round. The art materials were black paint and an inch-wide brush. Near by were the words: "*Hura Kurner bod.*" That was the Eskimo's method of spelling three Danish words which mean: "Whoopla ! woman boat !"

The subject of the sketch was interesting. In June the Eskimos leave their homes at Arsuk and go up the fiord for the double purpose of having a picnic and gathering the little fish which they call *augmatsat* (*Salmo vidosus*), a salmonoid about six inches long that comes into the fiord in such vast quantities that sometimes they choke full the little bays and harbors. Capt. Smith said that he had seen what is known as Fortuna harbor so full of these fish that for a short time a man could walk across the harbor on their backs. In their efforts to escape a horde of seals they filled the harbor so full that the mass rose above the water several inches and rested apparently on the bottom. The Eskimos scoop them out with nets, cans, their hands, anything that will scoop, and spread them on the rocks to dry. The catch is a principal source of food during the winter. The men first go on the excursions and prepare temporary huts of loose stone in which to sleep at night. Then the women start, and their coming is the occasion of great festivity—singing, dancing, feasting, &c. They commonly paddle up the fiord by the light of the new moon, singing as they go, and lookouts, posted where they must pass, run to announce their approach. It was a lookout who, noticing his shadow on the rock as he stood awaiting the coming of the *oomiak*, conceived the idea of making permanent the shadow by the use of paint and brush, and, with the instinct of the artistic idealist, painted, instead of the dull shadow of a man who anxiously waited for something, the ecstatic figure of one who sees already the object of his desire.

FISH AND SEAL BLUBBER DIET.

Reference has been made to the tastes of one Eskimo, Pilot Peter, in regard to food. Whatever may have been the tastes of the northern Eskimos when first visited by the Arctic explorers, the article for which the Eskimos of Arsuk were most anxious was hard tack. They brought a very large string of codfish to the ships in exchange for a small pile of sea biscuit. Their staple articles of food, however, were seal meat and blubber, with the little salmonoids. They eat the seal meat either boiled or fried and on occasion raw. The dried fish are dipped in seal blubber and eaten either with or without bread. After eating seal oil any one who likes oil of any kind will say that by any name it is very good eating. There is no fish flavor about it.

Seals when found on the ice are shot, when in the water they are harpooned. A dead seal ordinarily sinks, although nursing seals and their young, being very fat, will float. The head of a harpoon is made of bones or the ivory tusk of a walrus, and is tipped with a piece of iron that, with rare skill, is set into a slot in the head and there secured with a dowel. A line 30 or 35 feet long, made of a quarter-inch strip of sealskin, is attached to the harpoon head. When the seal is struck the harpoon handle comes out of the head and away goes the seal,

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dragging the line after it. To the end of the line is attached an inflated bag, made of the skin of a baby seal. It is about two feet in length and fifteen inches in diameter. This enables the Eskimo to follow the seal, which soon comes to the surface, and is there lanced with a bone or ivory lance tipped as the harpoon is. The harpoon head is about six inches long and two and a half wide. The ivory used in making these comes from the north. Only one walrus was ever seen in this fiord.

Besides the seal and the salmonoids the Eskimos catch many Arctic codfish, but they do not eat them when anything else is to be had. The same thing may be said of the Arctic hares, the ptarmigan, the gulls, and even the eider and other ducks which they kill in abundance for sale to the whites. But the eggs of all wild fowl are eaten during the season, regardless, it is said, of the condition of the egg. Indeed, they think as much of unhatched birds as white epicures do of snails. When gathering eggs for the Danes, however, they sweep the rock benches where the eggs are laid, clean, and wait two days. When they again visit the benches they find fresh eggs a-plenty. The Danes preserve thousands of eggs for subsequent use by storing them in the glaciers. Hares, ptarmigan, and foxes are captured in snares and deadfalls made of rocks, and are shot when opportunity offers. The Eskimos are very fond of roast fox, but the Danes never eat that animal. There is neither reindeer nor musk ox nor polar bear in this part of Greenland, although the deer are found in herds sixty miles northward. Two bears have been killed on the fiord, but they came to the coast on drift ice, and were very hungry.

The Eskimos obtain bread and cakes, both hard and dry, from the Government store in small quantities. They also buy coffee, tea, and brown sugar and salt. Among other things on sale were a barrel of soft soap, a box of toilet soap, a box of coarse combs, another of fine combs, slender bars of iron, fifteen inches long, for making spears or javelins, butcher knives, table knives, forks and spoons, plates, cups, and saucers, a few tin cups and basins, fish lines, fish hooks of a large size, gaudy handkerchiefs, and several rolls of gingham, calico, and woolen stuff. The fish hooks were interesting because of the method in which they are used. With a shank four inches in length and a width of $2\frac{1}{4}$ inches, the hook is strong enough to hold an ordinary shark, but two of them are secured side by side by casting lead around their heads. The lead is tied to a half round wedge of green stone nearly six inches in length, and to the top of that a bit of bone to hold a loop for the line. On the face of the green stone four seal teeth are hung, with a bit of red flannel, and then the Eskimo lure for codfish is complete. He lowers this into 300 feet or more of water and then jiggles it up and down. When the fish try to bite the white teeth or the red flannel the hooks catch under the gills. The codfish taken in the fiord run from a foot to eighteen inches in length.

The Eskimos get their lumber for houses and wood for kayaks and weapons of the Danes, who bring it from Norway, generally. Those who have stoves buy coal of the Danes. The coal used at Arsuk is brought from Ivigtut, and is taken to Ivigtut from Philadelphia by the chemical fleet. The Danish supply ships stop only at the large settlements, and goods for places like Arsuk are carried to them in little schooners, and oil is carried back in the same way. One of these schooners was at Arsuk. It was built by the Eskimos at Julianashaab. She

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is called the *Whale*. She was about thirty feet in length, with brailing sails, two jibs, and a square sail. She was on a round model. Her crew numbered five Eskimos.

The Danes speak of the Arsuk Eskimos as a poor lot. There are only four hunters in the settlement, and they supply the whole lot with seal meat. The rest do not hunt, and they are not so skilful in making clothing and other articles, such as leather muffs, down-lined coats, &c., which the Eskimos further north make. Their poverty and laziness are said to be due to the proximity of Ivigtut. The whites are a damage. The Eskimo men prefer loafing around Ivigtut, picking up food and tobacco by begging or running errands, to hunting. The women are not allowed near the settlement, not even to cross the fiord: nevertheless the Danes go to Arsuk, and the admixture of white blood makes the Eskimo lazy and less capable of enduring the hardships of outdoor life. It is not lawful to give liquor to Eskimos, and the law is pretty well observed.

THE DANISH RULERS.

Greenland, for the purposes of Government, is divided into two sections—the South Inspectorate and the North Inspectorate—the Governor of each part being directly responsible to the colonial office at Copenhagen. Each Inspectorate is divided into districts, which have Governors responsible to the Inspectors, and each district contains a number of settlements, at each of which is a resident agent and storekeeper, usually called the Governor. By the census of 1888 there were 10,221 Eskimos in Greenland, but that census did not include the wild Eskimos known to live on the east coast, and are under no white rule whatever. Arsuk is in the Frederikshaab district of south Greenland. So, too, is Ivigtut, but Ivigtut is in no way under the rule of the Governors of the Eskimos. A knowledge of what Greenland produces may be gathered from the fact that Julianashaab's district, with a population of 2,468, exported 4,000 barrels of seal oil.

Governing the Eskimos is a very simple matter. They are as simple-minded as children, and very peaceable and kind in disposition, although wholly incapable, apparently of appreciating some of the white man's moral teachings. The ruling passion is strong in the Eskimo. If an Eskimo had an opportunity to steal anything belonging to the whites he would do it. When asked why they do this they reply: "You whites are rich, and have everything. You can get anything you want to replace what we take. Why shouldn't we take?" That they should fail to appreciate the white teacher's doctrines regarding the relations of the sexes is not so much to be wondered at, for the whitening skins of succeeding generations show a difference between white teaching and white practice. The Danish rulers do all or even more than one would expect them to do in caring for the morals of their wards. The crews of the ships that go to the coast every year, carrying supplies and bringing away oil and skins, cannot be kept on board all the time. It is worth noting, however, that only men in perfect health can go to Greenland in Danish ships, and that even the sailors in the cryolite fleet, who are never allowed to visit Arsuk, must be able to pass a rigid physical examination at Ivigtut. Whalers are not allowed to land, and should one appear at a settlement the Danish ruler would corral his flock as carefully as a shepherd would do if wolves were about. The white father of an Eskimo child must give the mother half his wages for a year.

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It is part of the Danish policy to supply the Eskimos with a circulating medium. What would be called shiplasters in America are issued by the Government and sent to Greenland where the money is current only. The little bills represent one crown, 50 ores (a half crown), 25 ores, 10 ores, and 5 ores. The Eskimos are paid for their seal oil, skins, furs, and other products with this money, with which in turn they buy anything they want at the Government store kept by the agent or Governor of each settlement. So it happens that at Arsuk three kinds of money are current—the Eskimo paper money, the Ivigtut zinc money, and the Danish gold and silver.

PUNISHMENTS.

The Eskimos are not allowed to sell any seal or other skin or fur to any one except the Government agent. Infractions of this rule, thefts, and adultery, I was told, are the three crimes of which the Eskimos are most frequently guilty. When one is accused the Danish ruler acts as a Judge, but he has mighty hard work to learn the facts, for Eskimo honor forbids one to tell tales on another. When crime is proved the guilty may have one of several punishments. He may be fined as much as forty crowns, and he would be a long time paying it. A man may be tied to the flagstaff in front of the Governor's house, and, with the flag flying above him, he may be flogged, twenty-seven lashes at the most. If it be proved that a woman was chiefly at fault in a case of adultery, she has her hair cut off.

"They are sensitive," Comptroller Müller said, "and it is the shame of punishment rather than the pain that they fear. Flogging a man under the flag before the whole settlement is more effectual than capital punishment."

In former days there was constant warfare among the Eskimo families. If one Eskimo killed another, even accidentally, the relatives of the dead had to kill the slayer, or, failing in that, one of his family. That in turn called for a reprisal, and so it went. The Danes ordered that stopped, but the Eskimos continued the practice secretly, at first using the rifle to slay their enemies by shooting from the rocks when the victim was far from the settlement. After that had been discovered and had become impracticable, they took to slitting the kayaks of the enemies they wanted to kill, making the cut in such a way that it would not open to let in the water until its occupant was making some unusual exertion, as in striking a seal. Then the slit would tear out, the kayak fill, and the man drown, for they are not good swimmers. Even to this day an Eskimo never goes into his kayak without first carefully examining it for any traces of a knife cut.

THE PHYSICIAN.

Dr. Krabbe, who left Arsuk for home when the *Fox* sailed, was physician to four settlements. The Government supports physicians for the benefit of the Eskimos. The sick of the other settlements were commonly brought to Arsuk in a woman boat and put in the hospital, a stone building of four rooms and a bath, all well warmed and ventilated. Sometimes the doctor went to the other settlements in a woman boat. An important part of his duty was to see that every child was vaccinated. The Eskimos make simple herb teas that serve in curing ordinary diseases due to exposure, overeating, &c., and are skilful in dressing

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wounds. They are not long lived, however. Although Comptroller Müller had seen a woman of 83 years, he thought that not many men or women lived to be 50. The women live longer than the men.

After the death of an Eskimo in Arsuk the body is carried to a little stone charnel house built for the purpose, where it lies from one to three days, according to the weather. It is then carried to the cemetery, a little collection of oval heaps of stone on the mountain side, with a little black cross in the centre of the yard. The dead are buried according to the Lutheran ritual. The grave is a heap of stones built over the body.

I saw only four dogs in Arsuk, and they were curs. Sled dogs are not used. There is neither horse, nor mule, nor pony in Greenland.

There are Eskimos on the east coast who come down to Julianashaab, near Cape Farewell, at regular intervals, to exchange furs for such things as the whites have for sale. How far they come is not known, but they say it takes some of them three years to make the journey. They come in woman boats. Now and then some of these Eskimos are tempted by the luxuries to make their homes at Julianashaab, but they do not live long in their new homes. The enervating effects of a climate warm enough to grow cabbages in a hothouse are too much for them.

A GRAND DANISH DINNER.

The experiences of the day among the Eskimos was finished by a grand dinner in the Governor's house. We began on seal soup that had Russian peas and Italian macaroni in it. We passed to roast ptarmigan served with a sauce in which were pickled onions and sweet, pickled, ripe cucumbers. Then we had lobster patties, and after that a layer cake—four layers of sponge cake, with three kinds of sauce between the layers. One kind was made of native blueberries, which grow in vast quantities on every hill side, and the other two were of cherries and apples imported from America. Beer was served with each course, and claret and sherry with all but the first. Then we went to the sitting room, shaking hands and saying, "Well become," where we had coffee and cigars, sherry, claret, and brandy. Over the cigars they told stories and were merry, the stories that proved most felicitous being two of Mark Twain's which Dr. [Helms] related. One was of the frog that couldn't jump because of the shot it had eaten, and the other was of the man who knew a certain island had but one tree on it because he had counted the tree very often.

The Governor's wife, Madam Kurseh, was a most charming hostess, handsome, vivacious, and gracious, and had withal a number of ringlets of hair over her forehead that would get down in her eyes in a way that made her pout delightfully.

At length, when we were ready to go, we went to the landing place, where we all shook hands, while the whole Eskimo population gathered around us. As the steam launch began to move away, three Eskimo men fired a salute with shotguns, and all waved hats and hands frantically.

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THE SECOND DAY.

My second visit to Arsuk was on Monday, Oct. 18. The three ships of the fleet were in Kajartalik harbor, at the mouth of the fiord, waiting for the wind to blow the field ice away. To see whether it had really been scattered by the gale of the day before, the three Captains, with the three second mates to row, and myself, went in a small boat to Arsuk, where we proposed to climb Mt. Pingo for a look at the sea. We called on the Governor, of course, and that well-nigh prevented us climbing the mountain, for he would not let us go until we had eaten breakfast with him and lingered long over the cigars and chocolate which followed. Then we climbed the mountain where we couldn't see anything because snow had begun to fall while we smoked in the Governor's sitting room. So we came down again, and by that time dinner was almost ready and we were hungry. Dinner over, we were told that the Governor had devised a most attractive entertainment for us. The Eskimos were to come and dance in the front yard. The Eskimos, by the way, are born musicians. They learn to play ordinary instruments readily, and certainly have very pleasant voices.

In the course of an hour Isaacsen, the homeliest man with the handsomest wife in the village, came into the yard, carrying an enormous concertina. He was followed by all the Eskimo young women and three or four young men, while a number of elderly women gathered at the fence and looked over. Sitting down on the gravel, with his back against the house, Isaacsen tapped his moccasined toe softly on the pebbles, while he squeezed the concertina until a gallop shivered through its keys. The girls and the boys looked at him and at one another and giggled, but no one offered to dance until the Governor, to overcome their shyness, grasped a dark-skinned maiden and hustled off with her. Hustled is the word for the first few steps, but pretty soon they fell into the rhythm of the music, and then the feet and legs of the girl—and very trim they were under close fitting leather covering—moved with exceeding grace. Directly two couples of girls went dancing, and then Capt. Anderson of the *Sodium* made bold to help on the fun by grabbing a not unwilling sprite from the group, who laughed, pushed, protested, giggled, but soon danced much better than he did. The Eskimo young men were shy, but Capt. Johnson of the *Fluorine* joined in, and the dance was well started. A reel, another gallop, and a polka followed. During this time the purser and the Captain of the *Argenta* had watched the young people with delight, but with very little thought of taking part, especially as each had on the heaviest of sea boots and greatcoats, until Isaacsen turned on the Blue Danube waltz. There was something very attractive to the purser in the cadence of the waltz, something that made the toes of the sea boots beat time, and the motion attracted attention. Several of the more elderly of the Eskimo young women had invited him to join the dancers, but he had refused, saying he could not. Now, a particularly plump matron pointed at his feet, rolled her big brown eyes at him, and crooked her finger just a trifle. The purser had been thinking of how we are all as prone to sin as the sparks to fly upward: how we all, like sheep, have gone astray and commonly enjoyed the outing; and therefore when he saw this invitation he threw off his coat and took the brown-eyed woman in his arms, and the gravel began to fly.

All the Eskimos of Arsuk big enough to walk dance well. Among those at this party, before the close of the afternoon, were the five members of the crew of the little coasting schooner

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from Frederikshaab. They seemed to be as popular as the white men were with the young women. They were certainly better dancers than the whites. Later, as the glare of nature's electric lights replaced the warmer radiance of day and the white men pulled their yawl slowly shipward, three of the handsomest of the Eskimo girls sat on the forecastle of the little schooner and gayed the whites, while the Eskimo sailors laughed contentedly.

END OF PART IV

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V. ON A GREENLAND GLACIER.

A Divided Stream of Ice in a Mountain Gorge.

Starved to Death on the Face of a Bird's Nest Cliff—Homeward Bound—Shifted Her Cargo in a Southeast Gale—Swept by a Tidal Wave—Two Topmasts Carried Away—Needlessly Frightened—Almost Ashore on the New Jersey Coast.

There is one natural feature of the scenery about Arsuk Fiord which would prove interesting, I think, to even the most superficial observer, and that is the glacier. The lofty peak of Kungnat, being a treeless mountain, might not prove attractive; the precipices, almost a thousand feet high, where the sea birds nest in security, might receive but scant notice because mere piles of rock; the waters of the fiord in their placid beauty might appear only as an ordinary sheet of water; the tiny verdure on the mountain sides, with all its wealth of color, might be passed unseen because it is tiny, but the Arsuk Glacier—the *isblink* of the Danes—must command the attention of all.

On the morning of Oct. 5 a party, consisting of Capt. Johnson of the *Fluorine*, Capt. Anderson of the *Sodium*, Capt. Olsen of the *Fox*, Herr Gottlieb, the engineer of the mine, the mate of the *Argenta*, and a fireman, and myself, took the launch and steamed up the fiord for a visit to this most interesting work of nature. It is found at the extreme head of the fiord at a distance of about eight miles from Ivigtut—a distance that is too quickly covered, for the eye never tires of looking at the rock forms of the mountains, with now and then a green valley (an *ivigtut*) between, with here and there a small berg afloat, fresh from its birthplace in the glacier, not to mention the flocks of gulls, terns, and ducks, and the seals that now and then raise their heads in wonder above the water to gaze for a moment at the puffing monster that is approaching them, and to dive with hurried splash and paddle away then as fast as active flippers can carry them.

It was nearly 10 o'clock when we sailed, and a little over an hour later we rounded the last point between us and the head of the fiord, and then the glacier was before us. From the mouth to the head of the fiord the mountains rise directly from the water's edge—in all the length of the shores there is scarce a rod square space of level ground—but at the head of the fiord its rocky walls are loftier and more precipitous than at any other place, save at Kungnat Mountain. Brown and red and gray and black, they are piled up in sheer precipices anywhere from 100 to 1,000 feet above the water, and then slope back and up to unmeasured heights.

Just where these walls make a turn to the right a long, rough serrated tongue of ice is thrust out from between the mountains. At first one cannot see where the ice comes from, but on nearer approach the vista opens and the glacier is seen in all its grandeur. Imagine a narrow valley where it opens out on a little lake between two lofty ranges of mountains; imagine in this valley a snow bank that covers the ground at the water's edge, but grows deeper—rises higher and higher back between the mountains until at last only the brown bare peaks can be seen, and that is the picture of the glacier of Arsuk Fiord from a distance.

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A closer inspection develops striking variations from the snow bank simile. Our approach for the sake of such an inspection had to be made with caution. There were large numbers of tiny icebergs, blocks broken from the glacier, floating about, a collision with any of which would have been fatal to the little steamer. Besides, no one on board knew the channel, which, though probably deep enough to float a Liverpool packet, contains many jagged rocks above which the water is shoal. Finally by the aid of a good man, slow speed, and a lead line in constant use, we reached an anchorage half a cable's length from the narrow little sandy beach that lies along the south half of the foot of the glacier, and having moored the launch so that no sudden storm could drift it on the rocks we went ashore.

Every reader of THE SUN knows that a glacier is a river of ice—a lengthened body of ice that is travelling down a well-defined bed in the mountains. Here at the head of Arsuk Fiord is such a body of ice sliding down a narrow, crooked, well-defined bed, but with a divided current. A single glance at the glacier shows that the north half is flowing down at a very fair speed for a glacier, while in the south half the movement is perceptible only on a more careful examination. Not that any one can see the ice moving along as the current of a river is seen to move: the north or swifter part flows down but twenty-three yards a year, Engineer Gottlieb said, while the speed of the south half has never been measured because it is so slow.

After landing on the beach the spectator who looks at the south half of the glacier finds the simile of the snow bank still good. He can walk over the sand and pebbles till he reaches the edge of the ice, and stepping upon the ice, can gradually ascend the gentle slope until a thousand feet above the water, and then go on and on over the fairly smooth surface, no one knows how far—perhaps to the east coast, if he travel that way; perhaps to the north pole, if he should turn to the left when half way across.

No one, however, would be likely to step from the pebbles to the glacier without stopping a moment to look at the pebbles, for they are heaped up before the edge of the ice just as dirt heaps up before a road scraper on a country road. The roll of coarse sand at the foot of this part of the glacier is about four feet high, and perhaps ten feet wide on the base or at the water level. The forward movement of the glacier has here ploughed up this roll of sand—sand that is composed of rounded bits of stone of every size, from particles too minute for the naked eye up to those of the size of a man's two fists.

Over on the north side the glacier terminates in a vertical wall perhaps seventy-five feet high above the water, for there was no beach there. I found myself incapable of estimating heights and distances accurately, because everything is made on such a stupendous scale in the neighborhood. The height may have been more; it possibly was less. In the photograph of which an engraving is given the men were thirty feet from the camera, and the side of the glacier (not the front wall) was a hundred feet at least beyond them. The wall or ice front is clean cut, just as if a long block reaching across the entire front there had been split off. That, indeed, is probably what had happened, for the entire north half of the glacier was cut across by crevices from 40 to 60 feet apart. It is as if a tongue of ice of unknown length and 300 yards wide by 425 feet thick had been sliding down a gentle slope until at last the end ran out over a little precipice. As the end ran out its weight broke it off in cakes clear across

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the width of the tongue. The slope thereafter continuing somewhat steeper and slightly rounded, these cakes continued to slide on down with the crevices between them separated somewhat more at the top than the bottom until the water was reached. Then when they had got into deep enough water—that is, when 350 feet of water would enable the cake to project but 75 feet of its bulk only above the surface—away floated the cake. That is what seemed to me to be the general course of the north half of the glacier. The action of the sun on the tops of the cakes had melted them into a wedge shape, so that the whole north half of the glacier was serrated like saw teeth.

After a look at the faces of the glacier and at the stream of roiled water (roiled for a hundred feet from the ice) that comes from under the glacier, we strapped on ice shoes ready for the climb. These ice shoes were simply pieces of wood of the shape of a boot sole, filled with spikes on the under side and provided with skate straps. The sloping surface of the glacier, though by no means glass smooth, ought not to be ascended without these shoes, because crevices are met unexpectedly and the danger of sliding into one of them is very much greater than it seems to be to the novice.

The spectacle afforded on the surface of the glacier can scarce be adequately portrayed by any newspaper engraving. The one here given is from a photograph taken about 500 feet above the surface of the water. The mountains beyond the ice rise at least a thousand feet higher. The crevices were so deep that the eye could not penetrate the gloom at the bottom. They ran in every direction, and the cakes between them were of every form. The view was taken along the dividing line, between the swift moving portion at the north and the all but stationary mass at the south side of the glacier bed. The swifter current at the north was literally tearing its way along, breaking off great masses from the other part and whirling them around, making ice eddies where the streams parted.

It happened that on the day I was there the glacier was fairly quiet, but at times they say the splitting apart of the huge masses of ice makes the air resound for miles and miles around. At Ivigtut the roar is like that of the sharp reports from the cannon of a modern war ship, while the force exerted makes the earth tremble as if by an earthquake.

Just why one part of the glacier moves on while the other tarries is readily seen on inspection. The source of the glacier appears to be what might be called an ice lake or sea—a valley back in the country in which the ice forms and wells up until it overflows through this valley leading down to the fiord. The channel to the fiord runs nearly southwest for an unknown distance, and then, when within half a mile of the water, curves sharply around to the west. Within the hollow of this elbow or bend of the channel the ice rests against the solid mountain and the progress of the current is all but checked. On the north side of the channel there is no obstruction, and the ice there breaks loose of its own weight and flows on with the speed due to the pitch of the channel, save that it is retarded by the friction with the slow-moving half.

A mere look at the two parts of this glacier shows very clearly the cause of the difference in color noticed among the icebergs seen before the *Argenta* had reached the fiord. As told in that part of the story, the majority of the bergs were simply great rectangular chunks of

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snow-colored, or rather snow-mixed, ice. They looked like solidified snow banks. But here and there one was seen of a clear blue color, the color of diluted indigo being the nearest approach to it that I know of. The bergs were either one color or the other; there was no berg of the two colors combined.

Looking at the glacier at once reminded me of the bergs. The slow moving south half was of the exact color of the ordinary berg. A cake broken from it and sent floating away would show the blank white walls and the black spots in places where dirt had been blown on it from the mountains around. It might even show a huge rock picked from the mountain side as one that had been split from the mountain by the frost and tumbled down upon it. On the north the color of the ice was different. It was a stream direct from the heart of the glacier to the sea, and the icebergs broken from it were as blue as the vault of heaven. Whatever the fact may be, the ice of the north half seems to be formed of clear, pure water only, while that on the south side is of the color of frozen water and snow mixed.

After we had climbed over the glacier until we were tired we went back to the steam launch and ate a hearty luncheon provided by the ship captains. While enjoying this with appetites sharpened by the climb in the bracing air we had the luck to see a piece broken from the face of the glacier fall into the water. It was not much of a piece to the eye; it did not appear to have a face twenty feet across, and it simply rolled over. Nevertheless the waves it stirred up tossed the launch about and roared on the beach for several minutes.

GULLS NEAR THE GLACIER.

The number of gulls about the head of the glacier was noticeable. Many cakes of ice were covered with them, and it was apparently a good feeding ground for them. Their numbers caused Capt. Olsen to speak of them and then to point out the benches on the face of a vertical cliff, nearly a thousand feet high, where they build their nests in the spring. Here are cliffs that seem high—they rise a sheer wall above the water, which they overhang in places. No one can be disappointed in the height when looking at these cliffs from a small boat at their feet. The spectator is more likely to shudder at the thought of falling over such a cliff than to feel any tense of disappointment in their height.

It was when we had just thought of the awful fate of one falling from such a height in our minds that Capt. Anderson related the story of the bird rocks in the Rittenbenks district of Greenland. In a little bay back of Disco Island is a precipice much like this one in Arsuk Fiord. It is of immense height, though not perpendicular, but the benches on which the birds nest reach almost to the water.

A TRAGEDY OF THE GLACIER.

One day in the spring, something like 75 years ago, five adventurous Eskimos paddled their kayaks to the foot of the precipice bound for a supply of the eggs of the gulls. Reaching the rocks the courage of two of them failed, but three began to climb where no one had ever climbed before. It was slow and fearfully dangerous work, but hand over hand, foot above foot, up they went, with never a thought beyond the moment, until at last they were so high that they too grew faint-hearted, and that, too, without having reached the eggs.

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They would rest awhile, and then they would go back. So they sat down for a few minutes, waiting till they could breathe freely, and then looked about for something to take hold of while they lowered themselves to the next shelf below, but they looked in vain.

It had been terribly dangerous climbing up; it was impossible to go back. They walked to and fro on the narrow shelf, looking for crevice or knob by which they could steady themselves down to the next ledge, but none was found.

So they sat down on the bare rock, and with their chins resting on their knees, waited while their companions below paddled away for help that never came. With savage stoicism they sat there, hour after hour, while the sun swung around above their heads in the prolonged Arctic day, until at last, after no one knows how long a time, death from starvation came to end their misery.

In Greenland the air is so pure that no dead body decomposes. It simply withers into a mummy. The bodies of these Eskimos were beyond the reach of beasts of prey, and the birds would not touch them. Seventy years after the day they started on their fatal quest, Capt. Anderson went to look at the rocks. He had to go without native guidance, for even now no Eskimo can be persuaded to venture near the place. He saw the bodies of the dead shrunk and wasted, but still sitting there as they had sat while they vainly waited for help. The bodies are there to this day. How much longer they will remain to tell the story of a pitiful fate no one can say.

The rocky sides of the fiord show but little trace of the presence of a glacier in former years save at the bend to the south in the fiord, nearly three miles below the present end of the glacier. Here, within the elbow, or on the westerly side of the bend, the face of the rocks, which are here only about 300 feet high, has been shaved or ground off until as smooth as glass. It is a flesh-colored granite face streaked with tints varying from white to red the, whole forming a geological picture of the greatest beauty. Although there are seams through this pile in every direction, there is no trace of a spring or stream issuing from it, and to this fact, apparently, is due its stability. Springs burst from every other precipice and mountain side along the fiord, the waters from which has gathered in the crevices and thus destroyed the traces left by the receding glacier.

HOMeward BOUND.

We're homeward bound for London town,
Good-by, fare ye well,
Good-by, fare ye well,
We're homeward bound for London town,
Hurrah me boys, we're homeward bound.

When we pull into London docks,
Good-by, fare ye well,
Good-by, fare ye well,
The ladies will come down in flocks,
Hurrah me boys, we're homeward bound.

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It was at 5:30 o'clock on the morning of Friday, Oct. 10, that having cast off all the moorings save that at the stern, the men ran to the windlass and began throwing their weight upon its long brakes to get "up anchor for home." With the first stroke Fred Hansen, a jolly round-faced Norwegian, broke into the strains of the old British shanty, and everybody joined in the chorus with a will that somehow threw weight on the windlass and made the chain jump.

It was just the morning for the work. There was a gray light over the mountain to the east and the air was crisp, still, and cold, so cold that a skim of ice a half inch thick had formed over the still water places of the fiord. The *Argenta* had completed her loading on Wednesday, but had waited for the other ships because the Eskimos had reported "*seco mangowoc*"—"some ice"—off the mouth of the fiord, and because, too, it would be mighty comforting to have another ship within signaling distance in case the five-inch soft wood planking of the *Argenta* should come in contact with any piece of ice larger than a dining room table.

It had been arranged that the *Fox* should tow the *Sodium* and the *Argenta* out together, and then take the *Fluorine* to sea the next day. So when at last the anchor was at the bows and the last mooring was cast off, we were towed away just as the sun had risen high enough to make the snow-topped mountains gleam like burnished silver.

In spite of a gentle but favoring breeze the Captains were both nervous, for reports of ice without had come the night before, and there was a dead, smooth surface to the water of the fiord that betokened the presence of something outside to break the force of the ocean swell. Then we reached Arsuk Island and found a fog over the surface of the fiord which was almost as ominous, for the fog was a sign of ice too. Glasses in hand, when within sight of the open sea, they went aloft, and after a long time came down again.

"I'm going into Kajartalik harbor," shouted Capt. Anderson from his forecastle deck.

A MODEL HARBOR.

"So am I," replied Capt. Smith, and that settled it. There was no going to sea while the field ice was on the mouth of the fiord. A look at the little chart of the harbor will prove interesting because it is just the kind of harbor one reads of in sea novels. It is a little U-shaped basin with an island across the mouth that has on occasion held six small sailing vessels, but would hold no more than four of the present Greenland fleet. It shoals gradually at the back, but there is an ample depth of water. It is protected by hills, whose steep sides rise above the topmast head of the largest ship that ever tarried there. Iron mooring posts have been fixed here by the Danish Government, and various rocks that will hold a hawser have been chipped and marked so that they will not cut a mooring line, and can be readily found. If a ship had to winter in Greenland, no safer harbor than this need be asked for. But there was very little comfort in the thought, after all, for no one would want to winter in Kajartalik, even if it is safe, for one would there be cut off from all possibility of seeing any human being, unless, indeed, the fiord remained open all winter, for it does not usually freeze so as to make a safe roadway.

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AWAY WE GO.

However, on Saturday the *Fluorine* came down and was towed out for a look at the ice, which was found too close together, and she, too, came into the sheltered basin. Then on Sunday came the gale that drove the ice away, but we waited over until Tuesday to give the wind, which was fair, ample time to clear the path, and then once more we got the anchor, this time for good and all. The *Fox* came down, all loaded for home, having bidden farewell to Ivigtut for the season. First the *Fluorine* went out and then the *Argenta*. A lowering cloud of fog in the offing, and the lateness of the hour in the day before the *Argenta* was off, determined Capt. Anderson to remain, and so, with all sails set to lower topgallant sails, we bowled away with the *Fluorine* over a sparkling, tumbling sea. It was a glorious day, and all the more glorious because we were every minute lessening the distance between us and home.

We had seen icebergs going in, but this day they were so numerous that even Capt. Smith, who had passed his life among them, said he had never seen so many. Not less than 150, perhaps more, were in sight at once. But only here and there could a cake of field ice be seen until about 1 o'clock, when we found the pack ahead of us, but somehow a kindly Providence had directed us so that we were heading through a break or opening across it. There was plenty of ice on the starboard bow, and more yet on the port, but ahead it was so open that no one feared to go ahead. A blunder at the wheel all but threw us on a cake, but we escaped by something like a foot or less, and that was typical of what was to come.

THE LAST OF THE ICE.

By 3 o'clock we were forty miles away from the little harbor of the night before, and Kungnat Mountain showed but faint and ghostly in the haze. An hour later we were free from the field ice, and at 8 o'clock next morning passed the last iceberg seen that voyage.

While lying in Kajartalik harbor, looking out at the white barrier that detained us, we had said to one another that once we were clear of the ice we would not care what the weather was; the *Argenta* was new and staunch, and blow high or blow low we would not grumble. Within forty-eight hours after leaving the shelter of the harbor we had changed our minds.

Before noon on Wednesday I had written in my diary that we were "rolling along 125 miles from Kajartalik in a stiffish southeast gale that piles up the green waves about us until lumps as big as hogsheads, and bigger, come swashing over the rail." At 2 o'clock in the afternoon the "stiffish gale" had developed into a "blooming storm."

The huge rollers would pile up astern till they seemed ready to sweep over everything; then down would go her head and up her heels, while the wave, roaring and frothing, tossed her half way up its side and then poured such torrents over her rail as filled her bulwarks level full. Then down she'd sink in the hollow to do over again as she'd done before.

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A STORM SURE ENOUGH.

It was the starboard watch on deck, and Mr. Anderson, the second mate, was dancing about the deck in great glee, for no matter if it was a gale, every wave lifted her on her way home and the wife whose doing he still guessed at by looking at his watch, set to St. John time. After a while he was standing just forward of the main rigging to windward, where he stopped to tell a joke to the purser standing on the mainmast pin rail, just out of the reach of the water. But the purser missed the joke. As the second mate started to tell the tale the largest wave yet seen piled upon the weather quarter and in a trice over it came fore and aft, burying Mr. Anderson wholly out of sight, just as combers on the beach bury a swimmer.

Fortunately the weight of the water swept the man against a spare spar well lashed to the deck. He clasped it and held on while the wave swept over the lee rail, and then got out of the way of the one that quickly followed. The second was larger than the first, and the ship, having broached to, caught it fair abeam. Over she went, over, over, till the water from the lee side was up to the hatches, and a jar not of the water shook the vessel, and then as the wave passed she partly righted, only to slump back again with the lee side of the deck well nigh awash even in fairly level water. The Captain came running out on deck and gave one look around, and then shouted:

"Stand by to wear ship."

THE CARGO SHIFTED.

The cargo had shifted and that was only the beginning of our terrors. There we were in a growing gale, with the ship about as near on her beam ends as she could get and reach port afterward, and the only hope of righting her was the desperate expedient of getting her on the other tack, so that the waves would throw the cargo the other way, although the chances were even that the next big waves, instead of righting the ship, would strike her now exposed hatches, break them in, and send her to the bottom. However, round she went, and then all hands went below to shovel and pitch the cryolite from the weather side to the lee, and for half an hour all hands worked with desperation. Then the big waves came, the cargo slumped back, and after half an hour's more work the appearances showed that she was now nearly level, and, if no butt or seam had been opened by the tremendous strain of the shifting cargo (which was now settled) no further danger was to be apprehended in that quarter. Going on deck, the men tried the pumps, found but little water, and reefed the sails down until she looked fit to weather a cyclone.

Before morning we hoped she was fit to weather a cyclone, but we had our doubts about it. As the night came on the wind gathered in steady force, while squalls swept along with a speed which cannot be described, and which no one can appreciate without experience. The waves grew with almost equal speed, and drove across the deck in such masses that it was unsafe for the men to move about without watching with the utmost care the coming of the water. A life line was stretched across the poop deck, near the wheel, for the safety of

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the mate and the wheelsman, and the rest of the watch, save the lookout, gathered under the break of the topgallant forecastle. That the wind was bitter cold scarce need be said.

A TIDAL WAVE.

At midnight the climax of the storm came in a squall that carried with it one of those tremendous swells called tidal waves. It was just at the stroke of the bell when this wave rose up on the port bow, and with no warning whatever, dashed against the forecastle house, broke it in as if it were pasteboard, tore the bunks from the walls within, waking the watch from their sleep, to leave them struggling in the water with the thought that the ship had sunk: smashed the galley, stripped the two yawls and the dory from their lashings on the main hatch, and then away it went over the lea rail, carrying the boats with it.

Lying in my bunk in the cabin, unable to sleep, I felt the ship reel under the blow, and then counted four distinct vibrations or thrills that ran fore and aft through her frame, just as vibrations run along a stretched rope and back when it is shaken.

The Captain got out of his bunk at once and, dressing himself, went out on deck. He came back in a moment with two naked sailors and two but partly dressed. Unable to extricate their clothing from the debris of the ruined forecastle, they had fled aft for shelter, and now, with chattering teeth, gathered about the stove, where spare clothing was handed to them. They took it, but stood there, gazing first at the garments and then at the fire, and then about the room, utterly dazed for the moment by the terror and distress of the situation they had been in.

TWO MASTS GO.

While yet they were lingering without putting on the clothing, a crash aloft, followed by a thud on deck, was heard and the officer of the deck rushed into the cabin.

"The main topgallant mast's down," he said, and so too was the head of the main topmast and the mizzen topmast as well. Here was trouble enough, but it was not all.

As quickly as possible the naked men were dressed and sent on deck, and all hands turned to at the pumps. Nothing could be done toward clearing away the wreck aloft, but they might try to see whether the heavy laboring in the sea was straining her any. There was no song at the pump this time, but steadily the wheels went round. A half hour passed and the men stopped to breathe a bit. Another half hour passed. They rested longer this time, and then turned to again, for there was water a plenty in the hold. Another hour at the pumps and still water a plenty. Daylight came and they were still pumping.

After a little, even the Captain took his turn at the pump, and thus it went until 7 o'clock, when the Captain said to the mate:

"Mr. Bartlett, sound the well, and see how much water there is in her."

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Mr. Bartlett got the iron rod and lowered it carefully down and then drew it up. It showed two feet and one inch of water. Certainly we ought to pump that out by one vigorous spurt, and, much encouraged, we turned to and for half an hour made the wheels whirl as they had never before whirled. The Mr. Bartlett sounded the well again. It showed two feet and two inches of water in the hold. It had gained one inch against our best efforts.

As we stood by the pump silently watching the mate lower and draw up the rod, a wave swept over the deck, filling the bulwarks full. As the water rushed across the deck it reached just waist high, and we had to clutch ropes or the pump to keep from washing overboard. We had had to catch hold of something thus every few moments as we had pumped, for nearly every wave swept across her deck, some of them more than half burying us. Not only were we wet and chilled: we had pumped till we were half blind—till everything in sight was swimming in a haze. As the sounding rod was held up and showed the water was gaining, not a word was spoken for a minute. Then the Captain said:

"We will go to breakfast."

I had often heard that work at the pumps so exhausts a sailor that he soon comes to care not whether the ship float or sink. Let the reader not doubt it: it is true. But the crew went into the cabin and ate raw herrings and hard tack with a relish.

THE LEAK FOUND.

Then came a great relief. While most of the crew were eating there were, of course, two or three about the deck, among whom was Baxter, a young Frenchman. In working his way aft Baxter made a most cheering discovery: it was a big auger hole through the deck, down which the water was pouring into the hold as if from the hose of a steam fire engine. I think I may say that that hole was soon plugged. Then further search was made and three other auger holes found. They too were plugged. Then we all turned to at the pumps, and in what seemed no more than half an hour had her pumped out. Going to Greenland the ship was light and took no water on deck. So the holes that the builders had left unplugged had escaped notice. And that was all the leak there had been on the *Argenta*.

During the rest of that day the crew worked at the wreck aloft, so that it should do no further damage, and then, on the day following, the wreck was got down on deck, and such repairs made as were possible. The purser, though a landsman, could steer, and so in order that the sailors might all work at the wreck he went to the wheel at 6 o'clock in the morning—before sunrise—and remained there until an hour after sunset. This fact is mentioned only because his was the lightest and easiest day's work of any on the ship.

WITHIN A FOOT OF THE JERSEY BEACH.

The wind had by this time fallen and swung around to the north, and northerly it held for more than a week, so that we went booming along down the coast, sighting Cape Francis on Newfoundland, seeing the houses of St. John very distinctly through our glasses, passing Cape Race by night, and then away we went to the southward of Sable Island—a run exhilarating enough to add ten years to a man's lease of life. However, off to the southeast

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of Cape Cod the wind came foul, and from that time on it was a weary beat, with no break in the monotony save on the morning of Sunday, Nov. 2, when, just at daybreak, the second mate rushed into the cabin to tell the Captain that land was in sight, dead ahead. It was not only in sight but we were so close to it that when the ship was got around and headed off shore a cast of the lead showed just one foot of water under her keel. We were jut half way between Absecon and Barnegat lights, on the Jersey coast.

Next morning a tug and a pilot came alongside, and the day was passed in towing up the Delaware. The pilot brought the news that the *Fluorine*, which had sailed with us from Kajartalik harbor, in the Arsuk Fiord, had arrived the day before.

We sailed from St. John, N. B., on Saturday, Aug. 30. We were taken in tow by the *Fox* in Arsuk Fiord on Thursday, Sept. 25, and on the same day moored to the dock at Ivigtut. We left Ivigtut on Friday, Oct. 10, but were detained in the fiord by the ice until Tuesday, the 14th. Then we got away for good, and at 4 o'clock on the morning of Nov. 4, election day, we dropped anchor at Philadelphia.

Coming up from the ferry after reaching New York, I had the luck to meet the downtown friend with whom I had talked on that hot Saturday afternoon when I was just starting on my journey. We shook hands cordially, and then a queer look came over his face, and he said, as he drew a small map of North America from his pocket:

"I've been carrying this to prove to you that I know now that you did not stop in Alaska when on your way to Greenland."

JOHN R. SPEARS.

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BIBLIOGRAPHY

RINK, Dr. Henry, 1877. *Danish Greenland, Its People and its Products*. London: Henry S. King.
URL: <https://archive.org/details/cu31924032358388>

SOURCES

NEW YORK SUN: Digitized images of the newspaper (editions of Dec. 28, 1890 and Jan. 4, 11, 18, 25, 1891) were retrieved from URL <http://chroniclingamerica.loc.gov/>.
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