

The Country Far North.

A trip from Manitoba north to the polar sea would not now be difficult to make, and would be a most interesting excursion, taking only about twenty days. The distance is about three thousand miles. One thousand two hundred miles would be through a beautiful prairie country, similar to Manitoba. The route is first to Calgary, then by rail to Edmonton, on the Great Saskatchewan. From Edmonton there is a hundred miles of land carriage to the Athabasca river, where the Hudson's Bay Company's steamer, Athabasca, takes the travellers on board and proceeds down one hundred and sixty-five miles to Grand Rapids. The Hudson's Bay Company have constructed a tramway, over which freight is taken past the rapid and is then conveyed in large boats a distance of eighty-five miles down stream to Fort McMurray, where steamer *Grahame* is in readiness to proceed to Fort Chipewyan, on Lake Athabasca. Crossing the upper end of the lake the boat enters Great Slave river and stops at Smith's landing. To the west, towards the Rocky Mountains, is the celebrated Peace River country, and the Peace river enters Slave river at no great distance from the outlet at Lake Athabasca. The steamer *Grahame* navigates the Peace river as well as other waters, and the vast country drained is nearly of the same character as Manitoba, but of much greater extent. The land is equally good. Trees, plants, flowers, birds, beasts and grasses are similar, and farmers have been there scores of years keeping cattle, raising horses and cultivating fields that produce wheat, oats, barley and potatoes, without greater difficulties than are experienced in Manitoba.

From Smith's Landing, on Slave River, there is a portage of fourteen miles past a rapid to Fort Smith, where Hudson's Bay steamer *Wrigley* receives freight and passengers for all points north, and runs down Great Slave River through Great Slave Lake, from which issues the mighty Mackenzie river. The steamer goes almost to the polar sea, and the whole distance run by the *Wrigley* is 1,273 miles. Here and there along the route are Hudson's Bay Company's forts and missionary stations. Traders, travelers, and resident white men, even highly educated and accomplished English ladies are engaged in the work of teaching in those isolated places, as the missions are chiefly in connection with the English Church.

Many large and small rivers enter the Mackenzie. One of the most important is the Liard, equal in size to the Peace river, draining an immense territory, much of which has been examined with care, and it has been found that 13,000 square miles are suitable for the growth of wheat, and a much larger area is adapted for the production of other grain, grasses, and potatoes. All the rivers teem with fish, amongst which are several kinds of salmon. The country produces timber of such size that a traveler is reminded of the great trees of British Columbia, on the other side of the mountains. It is remarkable that all the rivers that flow into the Mackenzie, send in large quantities of driftwood, and some of the white spruce that grow in that region are one hundred and fifty feet

high and five feet in diameter at the stump. Even balm of Gilead are found one hundred and twenty feet high and six feet in diameter. The Peace River country is divided from British Columbia only by the Rocky Mountains.

A railway from Edmonton to Athabasca landing, about a hundred miles over a level country part of it well timbered by spruce, is all that is required to connect the vast river system with the Canadian Pacific railway, and the company had, no doubt, the opening up of the great country in view, when it extended the line of railway to Edmonton. — *Pilot Mound Sentinel*.

Intelligent Machines.

The Bank of England possesses some marvelous machines for weighing gold and silver coin. The grand balance, as it is called, is a ponderous and peculiarly built weighing machine, standing about seven feet high and weighing about two tons. The whole is under a huge glass case, access being gained thereto by a sliding panel. The scale is worked by hydraulic power, and is the most sensitive weighing machine in existence. The foundation, which is of solid concrete, is sunk to a depth of sixteen feet, so that not a jar can affect the clean balance. The manager sets the hydraulic power in motion by means of a small wheel, and then touches an ivory button at the side. Immediately the entire scale, weighing hundreds of pounds, sinks seven inches, and is ready for weighing. On each side the scales are fitted with weights amounting to 400 ounces. When gold is to be weighed, the smaller weights on the balance are withdrawn, and the gold placed on one of the two ledges. The gold bar is made up in 400 ounce bars, and the difference of one thousandth part of an ounce can be detected. A postage stamp being added to the 400 ounce weights, another ivory button is touched and the index jumps a distance of six inches. Thick of it, six inches on the index for a postage stamp!

If a bar of gold contains more than this scale is made to weigh, it will announce the fact. Any other scale would go to this limit and give no sign. Not this one, however. If one quarter of an ounce more than the maximum weight be added, instead of the index moving, there is a pause of a few seconds, and then an electric bell commences ringing. There is something terribly human about this mechanism which declines to execute a task of which it is incapable.

This is the only balance of its kind in the world. The maker has never constructed a duplicate. This triumph of mechanical art cost \$10,000. The silver scale is, of course, not so finely balanced and the two are respectively christened "The Lord Chief Justice" and "The Lord High Chancellor."

In another apartment there are thirty gold weighing machines where sovereigns and half-sovereigns are weighed when sent in by bankers and others. Here, again, hydraulic power is used.

A machine consisting of a complicated system of counter weights looks not unlike a sewing machine as to its lower half. This is completely inclosed in glass. A long

feeder, like a tube cut in half down its length, and made of brass, is set at an angle of forty degrees and is filled with a long roll of sovereigns. These turn as they slip down onto a circular, moveable plate, slightly larger than a sovereign. For a moment the plate seems to be deciding upon the merits of that particular coin, then, as if it has made up its mind conclusively, it deftly turns the coin to the right and it elips down a metal tube into a till below. But if the coin proves to be lighter than the standard weight, the delicate machine turns it to the left and condemns it to the guillotine. Again, one is impressed with the "human" idea of a hand weighing the sovereigns. One can almost fancy that a hidden person is feeling the weight. There is more than a mere mechanical look about the momentary indecision of the scale plate; it is really rather that of an intelligent animal. These machines weigh coins at the rate of twenty-six per minute, and a day's weighing amounts to \$500,000. The light coins are taken to the guillotine—another hydraulic triumph—and dropped down a long tube. As they slip through, a sharp knife clips the coin neatly down the centre and allows it to fall out at the slot at the side; and, to carry out the guillotining notion, they fall into a small basket. They are not cut in two, but the cut is more than half way through, and this prevents the banker who has paid them in from again circulating them, although he can take them away after they are clipped. This he never does, but takes the weight value of the gold.

Not Safe to Laugh at Pa.

As a matter of fact a boy should never laugh at his father until he (the boy) is eighteen years of age at least. Earlier than that it is not safe. A boy over near the university has for several evenings stood up to eat his meals, and all because he neglected the above rule of conduct. His father takes great pride in a Hambletonian colt he is raising. The old man fairly delights in pattering around the stable, and he can hardly wait until that colt is four years old and trots a mile in harness in 2.03½ as it surely will. The other morning the old pater was fussing around in an old silk hat and equally venerable great coat, pitchfork in hand, and while he was working about the colt's heels the boy gave the animal its feed. The colt does not allow any familiarities while feeding, and when the old man, in stooping position backed up against him, the colt lashed out with both feet. The man stood so near that the kick broke no bones, but he was shot as from a catapult right through the clapboards on the side of the barn. His head was driven through his tile, and when he extricated himself from the splinters the rim of his headgear hung around his head like a ruff. He regarded the whole business as rough, and delivered an oration through his hat which the boy regarded as amusing. The youngster laughed. First he stood and laughed, then he laid down and laughed, and rolled over and over, and hugged himself, and still laughed. But when that devoted father got clear from the wreckage he seized the nearest strap, and the boy has not smiled once since. The boy knows now that he is not big enough to laugh at his father. — *Minneapolis Tribune*.