

*THE IGLOO OF THE INNUIT.*¹—II.

AMONG the natives of North Hudson's Bay, the first huts of the season, if there is a scarcity of compact snow, are made of ice. Rectangular slabs, three to four by six or six and one-half feet, are cut from some neighboring fresh-water lake where the ice has formed to a thickness of six inches. As a rough approxima-

slabs weigh nearly half a ton. When dragged from the lake, they are turned on edge, and a hole cut through their centre. By means of a strong seal-skin line passed through this hole, two strong men can handle a slab with considerable ease, moving or sliding it long distances. It takes four or five persons to put the first two together, the slight inclination which is given them holding them up when once in po-



MAKING AN ICE-IGLOO.

tion, these slabs may be said to be about the size of an ordinary door. The slabs are placed almost upright, resting on their ends, and joined so as to form a circular pen of from ten to fifteen feet in diameter. Over the top of this the summer seal-skin tent (*toó-pik*) is spread for a roof; being supported by the tent-poles crossing at convenient places, and held in place by a lashing of seal-skin about a foot below the top of the ice-slabs.

In one of the slabs, generally on the side facing the south, a large opening is cut, which is further protected by a smaller storm-igloo having an entrance-hole no larger than the girth of the most corpulent Innuitee of that particular village.

As an aid in cutting, a rectangle is marked on the surface of the ice, having a width equal to the length of the proposed slabs, and from it they are cut with an ice-chisel (*toó-oke*). This chisel is generally a heavy mortising-chisel, securely lashed to the end of a pole from six to seven feet long. I have seen bayonets, sabre or sword points, or sharpened files made to serve the same purpose. The Esquimaux around King William's Land used the spikes from the wrecked ships of Sir John Franklin's ill-fated expedition. The large ice-

After this, two or three are all that are needed to add each slab, until the house is completed. When two slabs are abutted against each other, the edges are trimmed with a snow-knife to give as much bearing-surface as possible; and, when permanently set, snow dipped in water is applied to the joint inside and out, completely closing all crevices, and, when frozen, binding the two as solidly as if but one. A handful is also put in the central hole, which held the seal-skin thong, and the ice-pen is practically air-tight around its sides. The floor of snow has become packed by the treading of the builders; and over it are laid flat stones, on which are spread a great many coarse robes of reindeer, musk-ox, and polar-bear skins, and over these the finer reindeer-skins that make the bed, which occupies over half the floor.

These ice-igloos are as transparent as glass; and before they are covered by the drifting snow, or their interiors dimmed by the smoking of the sooty lamps, a night-scene in one of these villages, especially if it be large, with the brilliant burning stone lamps in full blaze, is one of the most beautiful sights I have ever witnessed, especially in this dreary land. Could one imagine the little Lilliputs living in flat candy-jars with drumhead covers, he would

¹ Continued from No. 28.

have a fair miniature representation of an ice-village.

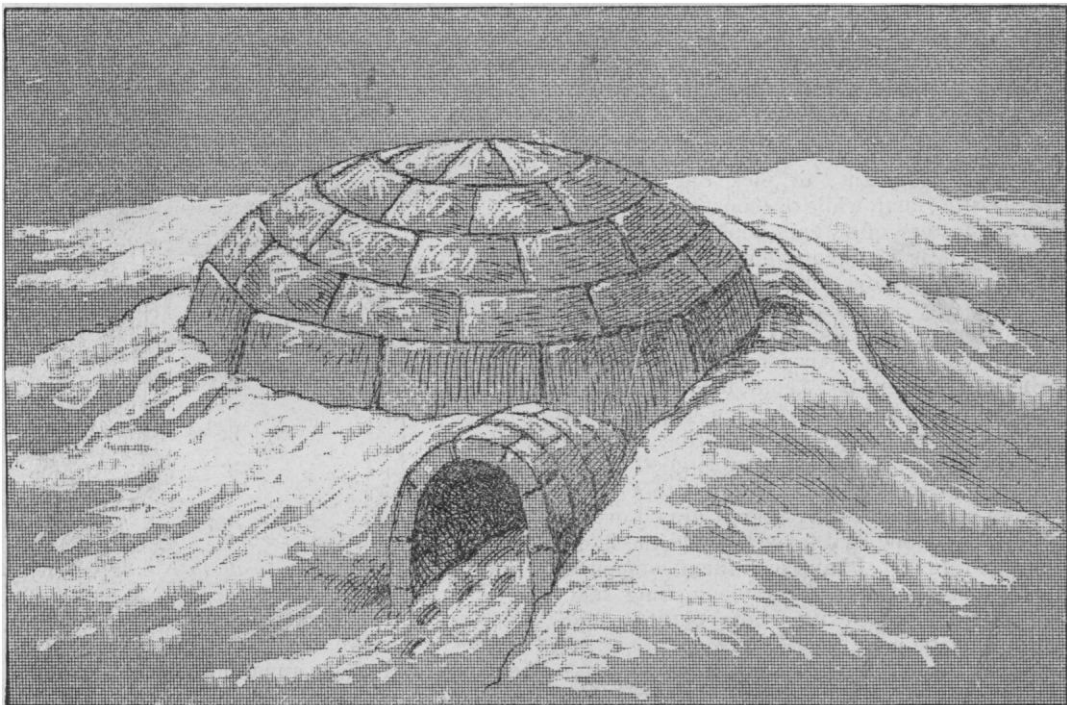
Our canvas tent becoming very uncomfortable on account of the intense cold, which had sunk to nearly -30° F., we had a large ice-igloo constructed, into which we moved on the 1st of November, 1878, and found it decidedly more habitable.

If the village be small, they generally construct an ice-house per day, all working, either cutting out the slabs, hauling them to the igloo site, putting them into shape, or chinking the cracks with wet snow; and this is continued until all are housed.⁴ If a large village, they divide into parties.

Sometimes the Innuits will retain their ice-igloo, even after the snow has become fit for building-purposes, the seal-skin tent being removed, and a new dome-shaped roof made of snow-blocks. Such cases, however, are extremely rare; and unless this combination igloo is covered in thoroughly with deep snow-drifts, or with snow thrown upon it to a depth of at least four to six feet, it will not compare in comfort with that of snow alone. The relative conductivity of the two materials, snow and ice, readily explains the reason. The ice also condenses the moisture of the breath, and

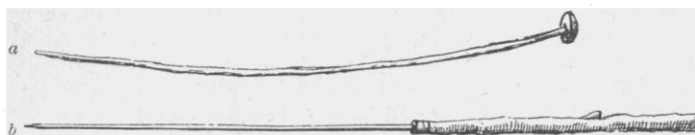
the steam from cooking, more readily upon its cold, smooth surface; and this becomes at last an almost unbearable annoyance, — an annoyance which can be comprehended without explanation. The advantage of this igloo of ice is in its straight upright walls, which give more room than the slanting sides of the snow-house, while it is also easier to build, the ice portion being already constructed. We lived in such an igloo during the winter of 1878-79; but none of the Innuits around us retained theirs, and often complained of the cold when in ours, and referred it to its peculiar construction. I might add, however, that our three bedrooms or bed-iglous, which were attached to and communicated with the main one of ice, were wholly of snow.

As the reader must have already surmised from the hints given from time to time, the true igloo is built of snow, those already described being used but a very small portion of the year. It is used on all their winter journeys, even for a single night; and, as contrary to the prevailing belief, the Innuits travel the most during this season, one can see that a person sharing their life and travels would have many opportunities, during two long winters with them, to see igloo-building and igloo-life in nearly all its aspects.



AN ICE-IGLOO WITH SNOW CAPPING.

When the native has decided to relinquish his house of ice for one of snow, or on a sledge-journey has decided to go into camp,—in short, is going to build an igloo,—the first thing done is to get out the ‘snow-testers,’ with which they determine the compactness, depth, and general availability for building-purposes of the snow-drifts. The ancient style of snow-tester, *a*, and



SNOW-TESTERS, ANCIENT AND MODERN.

those yet used by the Esquimaux who have no trading communications with the whalers and explorers, is one made from reindeer-horn, about the diameter of a little finger, and probably three feet long. One end is sharpened, and the other, formed as a button about the size of a quarter of a dollar, is held in the palm of the hand. The modern tester, *b*, is simply the iron rod of the seal-spear with the barb removed.

Having halted on some lake that they know by certain signs has not yet frozen to the bottom,¹ the men scatter out like skirmishers along the deep snow-drifts near the shore, and commence prodding with their testers. Finally a shout from one shows that he has been successful; and, leaving the tester sticking in the snow to mark the spot, he and the others return to the sledges, which are then brought up, and the building commences.

It takes considerable experience, coupled with good judgment, to pick out the best building-site; and, while the constant prodding with the testers oftentimes looks foolish to a spectator, it is no inconsiderable part of the performance. Snow which looks perfect on the crust may be friable beyond use a few inches deeper, and this the tester will reveal. Soft drifting snow may cover a bank of splendid building-material. Again, the drift may be freely interspersed with hidden stones and bowlders, which the testers will bring to light if freely used. This testing for good snow generally occupies from ten minutes to a quarter of an hour: but I have seen it drawn out to an hour, or so long as it takes to build the igloo itself; and, in fact, I have seen them compelled to abandon the most favorable looking lake after having skirted its whole outline, and move on to the next.

¹ This is generally done by lying flat on the ice, and placing their eyes as close to it as the nose will allow, when some varying peculiarities of the ice-colors decide their conjectures.

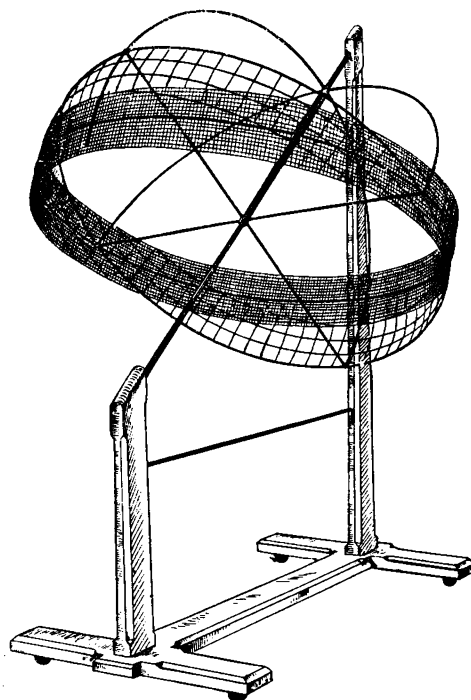
(To be continued.)

ILLUSTRATIVE APPARATUS FOR ASTRONOMY.

THE accompanying figure represents an apparatus designed for use in teaching astronomy. It is mounted so that the axis on which it rotates is parallel to the earth's axis. Two circles represent the equinoctial and ecliptic, and on the latter is a strip of wire cloth to represent the zodiac. The circles are of such a size that the meshes of the cloth (in this case a half-inch) are one degree in size, and larger meshes of five degrees are made, extending to the circle of the equinoctial. The northern halves of the two colures help to hold all in position. The lower part of these latter circles are dispensed with, so that one may conveniently stand near the centre, the frame being of such a height as to bring the centre nearly on a level with the eye.

It helps the beginner to obtain a clear conception of the fundamental circles so often referred to, of their actual position in the

heavens, and their apparent diurnal change of motion. It enables him also to represent the sun, moon, and planets in their correct



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