

REPORT
OF THE
CANADIAN ARCTIC EXPEDITION
1913-18

VOLUME XIII: ESKIMO FOLK-LORE

PART B: ESKIMO STRING FIGURES

By

D. Jenness

SOUTHERN PARTY—1913-16



OTTAWA
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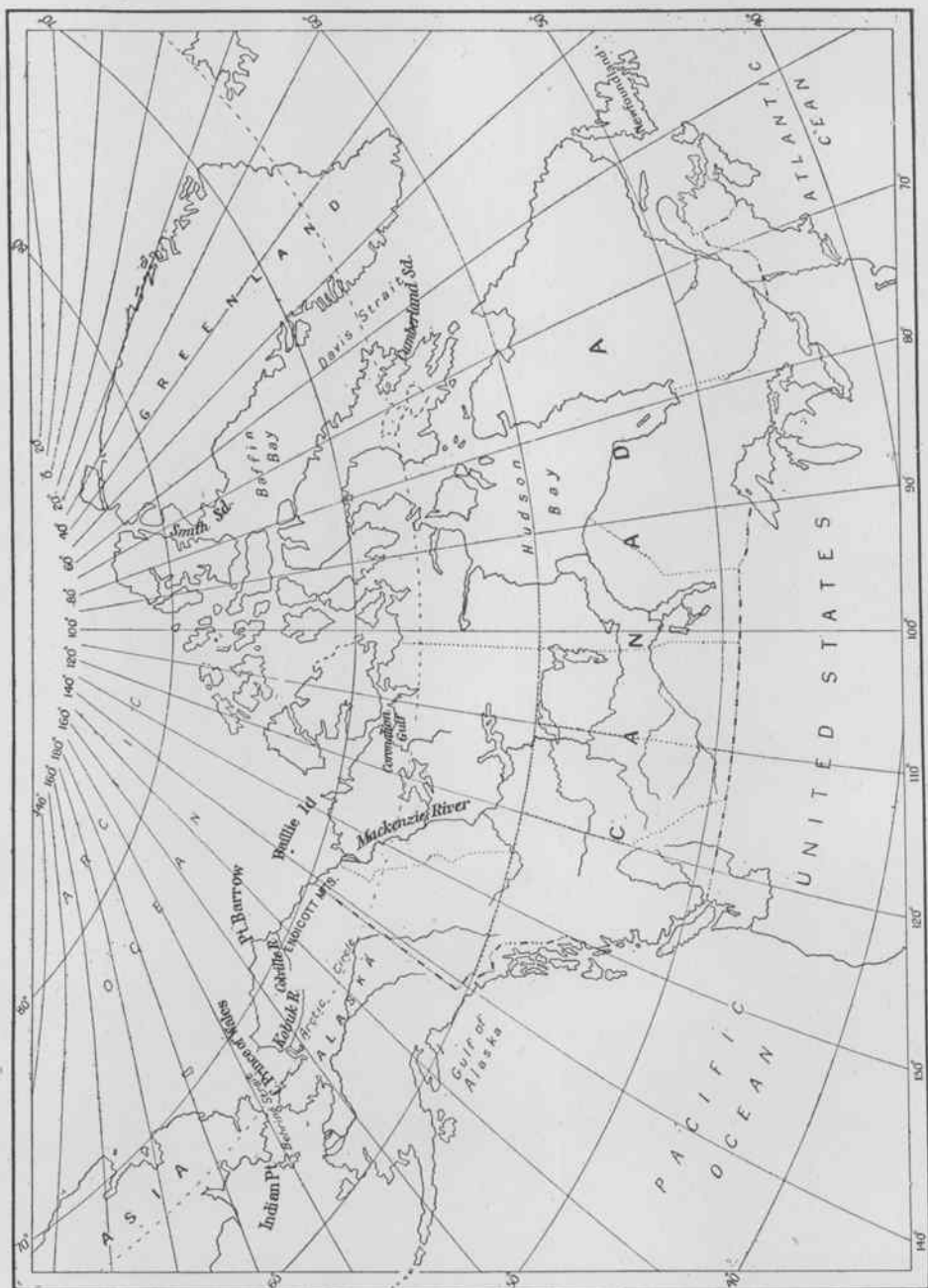
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Localities from which Eskimo string figures have been recorded.

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Eskimo String Figures.

By D. JENNESS

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INTRODUCTION

The collections of string figures described in the following memoir were obtained at different times and in different places during the years 1913-1916. Those from Alaska were gathered in the winter of 1913-1914 from various natives between Barrow and the international boundary, five hundred miles to the eastward. A few Siberian figures were secured in the spring of 1914 from some Indian point Eskimos belonging to the steam whaler *Belvedere*, caught in the ice off this coast. During the same spring I met some Mackenzie delta Eskimos at *Icy reef*, close to the boundary, and obtained some notes on the game in their region; further information was obtained at *Herschel island* during the summer, and from some Mackenzie delta natives in the service of the expedition. The figures from the Copper Eskimos were obtained during the years 1914-1916, when the southern party of the Canadian Arctic Expedition had its headquarters at *Bernard harbour*.

The arrangement of the figures is based upon their opening movements. A secondary arrangement follows the order of their distribution, those which are most widely spread being placed first, then those which are more local. In the case of the local figures, those from Alaska precede those from the Mackenzie delta, and the latter precede those from *Coronation gulf*. Occasionally a figure which was found in one place only has been placed in another setting when it was obviously derived from or connected with a figure from a different locality.

After the figures had been arranged in this way and the MS. virtually completed two other collections of string figures, mounted on sheets of paper and cardboard, were submitted to me for examination. The first collection, submitted by *Dr. F. Boas*, was secured many years ago by *Captains Comer and Mutch* from the Eskimos of *Cumberland sound* and the west coast of *Hudson bay*. The other collection, submitted by *Captain Joseph F. Bernard*, was obtained by him in 1922 from the *Maritime Chukchee* on the Siberian coast between *Capes Nuniamo and Unikin*. No information was obtained as to how these figures were constructed, but about 60 per cent of them could be identified with figures in my own collection. The remainder I have disregarded altogether, partly because of the lack of information as to how they were made, and partly because in many cases the string had been distorted out of all semblance to its original shape. In the Appendix, however, I have given a list of the unidentified figures from *Cumberland sound* and *Hudson bay*.

As far as the literature is concerned, very little has been published concerning Eskimo string figures. The largest collection hitherto made is that of *Dr. G. B. Gordon*, obtained on the west coast of Alaska in 1905;¹ *Mrs. Jaynes* has republished these figures, together with two or three new ones which she obtained from an Eskimo of the same region.² *Klutschak* illustrates three figures from the Eskimos of *King William island*,³ and *Dr. Boas* has published five from *Cumberland sound*.⁴ From *Labrador* and *Greenland* the only figures recorded, to my knowledge, are six that were obtained by *Dr. A. L. Kroeber* from some Eskimos of *Smith sound*.⁵

¹ *Gordon, G. B.* Notes on the Western Eskimo, Transactions of the Department of Archaeology, Free Museum of Science and Art, University of Pennsylvania, Vol. II, part I, 1906.

² *Jaynes, Mrs. C. F.* String Figures. New York, 1906.

³ *Klutschak, H. W.* Als Eskimo unter den Eskimo. Leipzig, 1881, p. 139.

⁴ *Boas, F.* Internationales Archiv für Ethnographie, I, 1888, p. 229; cf. the same author, The Central Eskimo, Sixth Annual Report, Bureau of American Ethnology, Washington, 1888, p. 569.

⁵ *Kroeber, A. L.* The Eskimo of Smith Sound. Bulletin of the American Museum of Natural History, Vol. XII, -899, p. 298.

In describing the different figures I have used the technical terms devised by Drs. Haddon and Rivers.¹

Terminology.—A string passed over a digit is termed a loop. A loop consists of two strings. Anatomically, anything on the thumb aspect of the hand is termed "radial," and anything on the little-finger side is called "ulnar," thus every loop is composed of a radial string and an ulnar string. By employing the terms thumb, index, middle-finger, ring-finger, little-finger, and right and left, it is possible to designate any one of the twenty strings that may extend between the two hands.

A string lying across the front of the hand is a palmar string, and one lying across the back of the hand is a dorsal string.

Sometimes there are two loops on a digit, one of which is nearer the finger-tip than the other. Anatomically, that which is nearer to the point of attachment is "proximal," that which is nearer the free end is "distal." Thus, of two loops on a digit, the one which is nearer the hand is the proximal loop, that which is nearer the tip of the digit is the distal loop; similarly we can speak of a proximal string and a distal string.

In all cases various parts of the string figures are transferred from one digit or set of digits to another or others. This is done by inserting a digit (or digits) into certain loops of the figure and then restoring the digit (or digits) back to the original position, so that they bring with it (or them) one string or both strings of the loop. This operation will be described as follows: "Pass the digit into such and such a loop, take up such and such a string, and return." In rare cases a string is taken up between thumb and index. A digit may be inserted into a loop from the proximal or distal side, and in passing to a given loop the digit may pass to the distal or proximal side of other loops. We use these expressions as a general rule instead of "over and under," "above and below," because the applicability of the latter terms depends on the way in which the figures are held. If the figures are held horizontally, "over and above" will correspond as a general rule to the distal side, while "under and below" will correspond to the proximal side. In some cases when there is no possibility of confusion, we have used the shorter terminology.

A given string may be taken up by a digit so that it lies on the front or palmar aspect of the finger, or so that it lies on the back or dorsal aspect. In nearly all cases it will be found that when a string is taken up by inserting the digit into the distal side of a loop, the string will have been taken up by the palmar aspect, and that the insertion into the proximal side of the loop involves taking up the string by the dorsal aspect of the digit.

Other operations involved are those of transferring strings from one digit to another and dropping the strings from a given digit or digits.

The manipulation consists of a series of movements, after each of which the figure should be extended by drawing the hands apart and separating the digits. In some cases in which this would interfere with the formation of the figure, a special instruction will be given that the figure is not to be extended. Usually it is advisable to keep the loops as near the tips of the digits as possible.

There are certain opening positions and movements which are common to many figures. To save trouble these may receive conventional names; the use of these will soon be apparent, but it is better to repeat descriptions than to run any risk of obscurity.

¹ Rivers, W. H. R., and Haddon, A. C. A Method of Recording String Figures and Tricks. *Man*, II, 1902, p. 147.

Position I.—This name may be applied to the position in which the string is placed on the hands when beginning the great majority of the figures.

Place the string over the thumbs and little fingers of both hands so that on each hand the string passes from the ulnar side of the hand round the back of the little finger, then between the little and ring fingers and across the palm; then between the index and thumb and round the back of the thumb to the radial side of the hand. When the hands are drawn apart the result is a single radial thumb string and a single ulnar little finger string on each hand with a string lying across the palm.

This position differs from the opening position of the English cat's cradle in which the string is wound round the hand so that one string lies across the palm and two across the back of the hand with a single radial index string and a single ulnar little finger string.

Opening A.—This name may be applied to the manipulation which forms the most frequent starting point of the various figures. Place string on hands in Position I. With the back of the index of the right hand take up from proximal side (or from below) the left palmar string and return. There will now be a loop on the right index, formed by strings passing from the radial side of the little finger and the ulnar side of the thumb of the left hand, *i.e.*, the radial little finger strings and the ulnar thumb strings respectively.

With the back of the index of left hand take up from proximal side (or from below) the right palmar string and return, keeping the index with the right index loop all the time so that the strings now joining the loop on the left index lie within the right index loop.

The figures now consists of six loops on the thumb, index, and little finger of the two hands. The radial little finger string of each hand crosses in the centre of the figure to form the ulnar index strings of the other hand, and similarly the ulnar thumb string of one hand crosses and becomes the radial index string of the other hand.

The places where the strings cross in the centre of the figure may be termed the crosses of Opening A."

The term "navaho" is derived from Miss Haddon, who defines it thus¹. "When there are two loops on a digit, a distal one and a proximal one, you are often required to lift the proximal loop over the distal one, and over the tip of the digit on to its palmar aspect. This movement I refer to as "Navahoing" on account of its frequent occurrence among the string figures of the Navaho Indians of New Mexico, U.S.A."

For the purpose of this monograph I have ventured to add three new terms, two of which indicate opening movements from which many figures are derived, while the third denotes a movement which recurs so constantly that the Eskimos themselves have given a special name to part of it. These new terms are:—

Opening B—

Make Position I. Bring the right hand across and with the palm of the right index (*i.e.* from the distal side) take up the left palmar string and return, half-circling the index counter-clockwise. With the back of the left index from the proximal side take up the radial left little finger string. Drop both little finger loops. (See fig. 1.)

¹Haddon, Kathleen. *Cat's Cradle from Many Lands*, London, 1912, p. 5.

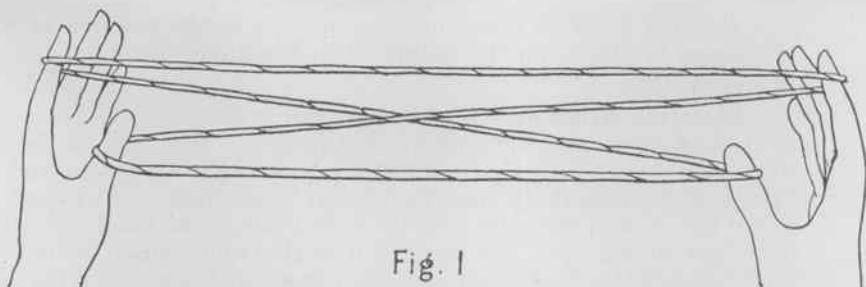


Fig. 1

Opening C—

Loop over the thumb and index of each hand. With the backs of the little fingers from below push back the radial thumb strings, then hook their palms down over the ulnar index strings. (See fig. 2.)

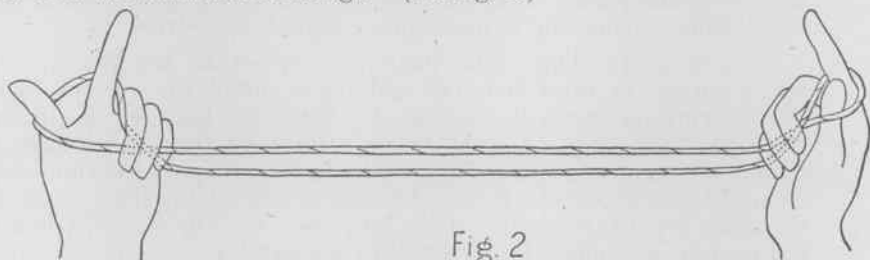


Fig. 2

Katilluik—

Katilluik (Barrow *kätıluk* or *kätıluyık*, "put two things together") is a movement which can take place only at a later stage in the evolution of a figure. It necessitates separate loops on each thumb and index, and describes the transferring of the left thumb loop from the proximal side to the right thumb (or vice-versa, according to which loop lies outside the other). The left thumb is then inserted, also from the proximal side, into both the right thumb loops. Draw the thumbs apart, then with each thumb from the proximal side take up the radial index string of its hand, navaho the thumbs and drop the index loops.

The Mackenzie delta term for this movement is *neovektıluyık* which has the same meaning. Strictly speaking, both terms refer to the first stage of the movement only, the combining of the loops on the thumbs. For an example of the complete movement see No. I, "the two brown bears."

For the drawings of all the figures in this paper I am indebted to Mr. O. E. Prud'homme, artist of the Victoria Memorial Museum, Ottawa.

PHONETIC SYSTEM

VOWELS—

a	as in <i>father</i> .	i	as in <i>pique</i> .	u	as in <i>rule</i> .
ä	as in <i>fat</i> .	ı	as in <i>pil</i> .	α	like the <i>u</i> in <i>but</i> .
e	like the <i>ain fate</i> .	o	as in <i>note</i> .	ə	a short indefinite vowel like the
ε	like the <i>e</i> in <i>let</i> .	ɔ	like the <i>o</i> in <i>not</i> .		<i>a</i> in <i>soda</i> .

CONSONANTS—

	Velar	Back palatal	Front palatal (alveolar)	Dorsal (alveolar)	Dental	Bi-labial
Stop	q	k	tʰ	tˢ	t, d	p
Nasal		ŋ	nʰ		n	m
Voiced spirant	ɣ	ɣ	ʎ, ʝ	j		v(w)
Voiceless spirant		x	ʃ	c		f
Lateral				λ	l	
Trilled				r		
Aspirate	h					

ACCENTS—

- inverted period, indicates a lengthening of the preceding consonant or vowel.
- ' after a vowel, indicates the main stress.
- ' indicates a glottal stop.

Eskimo String Figures.

PART I

FIGURES BEGINNING WITH OPENING A

SECTION I. FIGURES KNOWN ALL ALONG THE NORTH COAST

SUBSECTION A. THE BROWN BEAR CYCLE AND KINDRED FIGURES

I. THE TWO BROWN BEARS

This figure is known to the Diomed Islands as "the two caribou without their horns"; at Point Hope and Barrow it is called *aklak*—"the two brown bears." The same name is given to it by the Inland Eskimos between Barrow and the Mackenzie river, and by the Mackenzie river natives; the latter make a slight variation in the final movements which nevertheless produces the same result. The Copper Eskimos follow the Mackenzie natives in this respect, and call the finished figure *akayyuk*, a word which has the same meaning, "the two brown bears." In Cumberland sound a native who made the figure for Boas wrote its name *aktakjew* or *aktin*, the meaning of which I do not know. There is no figure more widely known among the western Eskimos, and the Barrow and Inland natives commonly challenge each other to a contest of speed in producing it.

The Alaskan method of producing "the bears" is given first:

Opening A.

With the thumbs from the proximal side remove the index loops. With the indices from the distal side remove the little finger loops.

Pass the little fingers from the proximal side, from below, into the proximal thumb loops and into the index loops, hook them over the radial index string, and hold it firmly against the palms.

Pass the indices over the distal thumb loops and with their palms draw the upper transverse string through each index loop, thereby navahoing the indices. Navaho the thumbs.

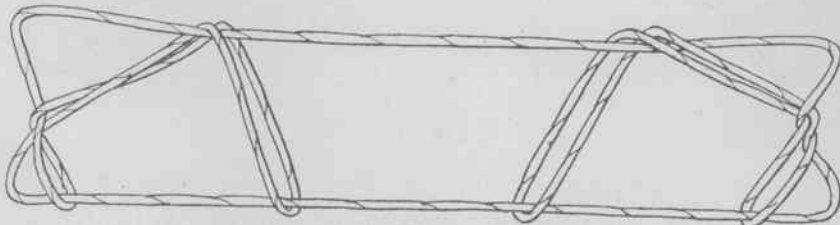


Fig. 3

Katilluk the thumb loops, and remove the new thumb loops to the indices. From each hand a string runs from the ulnar index string to loop round the lower transverse string near the middle. Take each up with the back of the nearer thumb from the proximal side, then with each thumb from the proximal side take up the radial index string of its hand; navaho the thumbs and drop the index loops. You have "the two brown bears."

The Mackenzie and Copper Eskimos proceed in the same way as above up to the stage immediately preceding the navahoing of the thumbs. At that point, instead of navahoing, they drop the thumb loops. A large loop then hangs pendent near each hand on the proximal side of all the strings.

Pass each thumb down on the proximal side of all the strings, and from the distal side (*i.e.* from below) pass it into the nearer of these two loops; then with each thumb from the proximal side take up the radial index string of its hand. Navaho the thumbs and drop the index loops. You have "the two bears."

II. THE TWO CAVES (Mackenzie delta)

The movements in this figure are the same as for "the two bears" as produced in the Mackenzie, only, in the final stage, instead of passing the thumbs into the pendent loops from the distal side, insert them from the proximal side. Continue as before. You have "the two caves."

A Baillie island native made this same figure by a slightly different method. He proceeded as in the Barrow form of "the two bears" up to the stage where in that figure you katilluik the thumbs. At that point he removed the right thumb loop with the left thumb from the distal side, then with the back of the right thumb (*i.e.* from the distal side) removed from under it the original left thumb loop. Finally with each thumb he took up the radial index string of that hand, navahoed the thumbs and dropped the index loops. The difference between this method and the preceding is very slight.

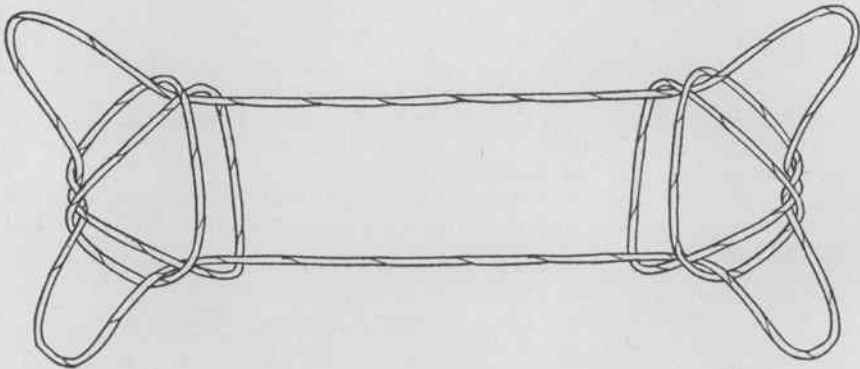


Fig. 4

"The two caves" can be readily made in the same way as the Barrow and Inland natives make "the two brown bears," by a slight variation in the first movement (Opening A). Instead of taking up the palmar string with the indices from the proximal side with their backs, take them up with their palms from the distal side and in returning give them a half-turn outwards. Then proceed exactly as in "the two brown bears." I do not know whether the Barrow natives, however, are aware of the figure.

III. A BROWN BEAR ISSUING FROM A CAVE

This figure I saw among the Mackenzie Eskimos only. Boas has it from Cumberland sound with the name *anesattookjew*, which seems to mean "the one who is sent out."

This is a combination of "the two brown bears" by the Mackenzie method, and "the two caves." With the one thumb take up the pendent loop from the proximal side, with the other from the distal, and proceed as in those figures. You have "the cave" on one side and "the brown bear" on the other.

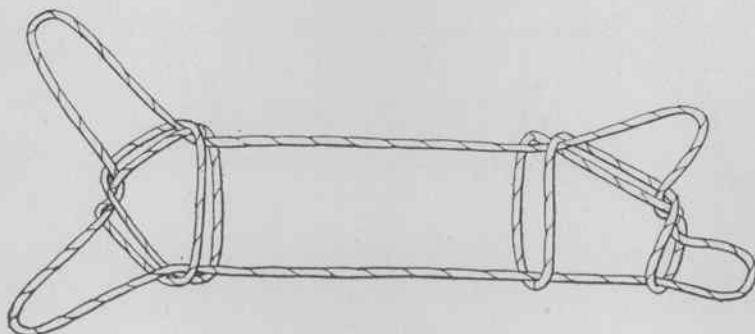


Fig. 5

IV. THE TWO MOUNTAIN SHEEP

This figure is called "the two mountain sheep" (*amnek*) by the Barrow and Inland Eskimos. A Port Clarence native, however, called it "the two rabbits," while to a Diomed Islander it was known as "the two caribou with their horns." (This was the native who called "the two brown bears" (No. 1), "the caribou without their horns.") The Mackenzie and Coronation gulf Eskimos called the figure "the two brown bears with their ears." Boas has the same figure from Cumberland sound with the name *nepetakjew*, "two animals mating?"

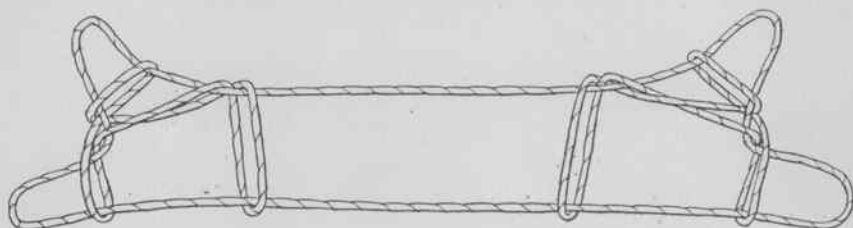


Fig. 6

Make "the two brown bears." Remove the thumb loops to the indices. With the back of each thumb take up from the proximal side the proximal hind leg string of each bear. Repeat all the movements of "the two brown bears" from the point where you katilluik the thumbs. At the final stage you have "the two mountain sheep."

V. THE TWO CARIBOU WITH THEIR HORNS (Port Clarence)

The same Port Clarence native who called "the two mountain sheep" "the two rabbits" developed it into "the two caribou with their horns" by exactly the same process as "the two mountain sheep" was developed from "the two bears."

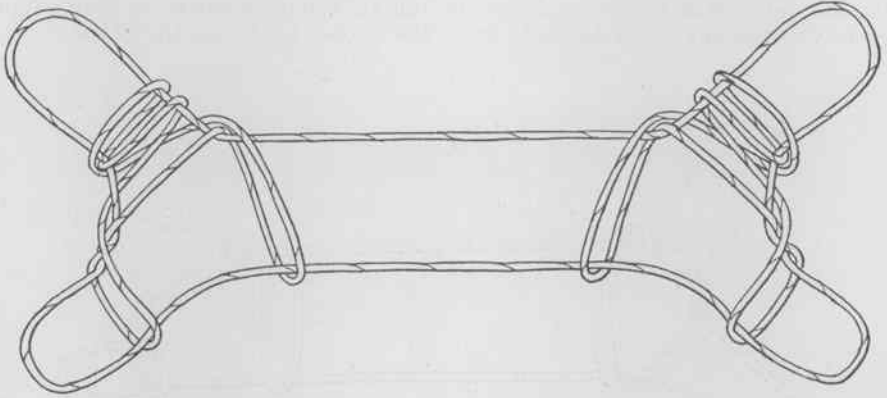


Fig. 7

VI. THE TWO BROWN BEARS AND THEIR CUBS

aklak aklayaklu (Inland and Mackenzie Eskimos).

Make "the two brown bears."

Reverse the little fingers in their loops.

With the backs of the indices take up the opposite palmar strings (as in Opening A).

With the thumbs from the proximal side remove the index loops.

With the indices from the distal side remove the little finger loops.

Insert the little fingers from below from the proximal side into the proximal thumb loops and into the index loops, and hook them down over the radial index strings.

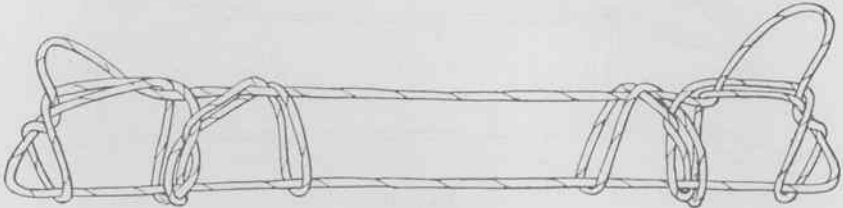


Fig. 8

Pass the middle fingers into the index loops from the proximal side and hold down with them the distal thumb strings while with the palms of the indices from the distal side you draw the upper transverse string through the index loops. Drop the thumb loops.

Opposite each little finger there is a string which runs from the palmar string to loop round the lower transverse string.

Take this string up with the back of each thumb from the proximal side just after it passes under the lower transverse string to run up to the middle, then with each thumb from the proximal side take up the radial index string of its hand. Navaho the thumbs and drop the index loops. You have "the two brown bears," one on each side, each followed by its cub.¹

VII. THE BROWN BEAR AND THE SHAMAN (Inland Eskimos of N. Alaska)

Opening A.

With the thumbs from the proximal side remove the index loops.

With the indices from the distal side remove the little finger loops.

With the back of the left little finger push back from below the proximal ulnar thumb string and on the distal side of the other two ulnar strings hook that little finger over the radial index string.

With the back of the right little finger from below push out the proximal ulnar thumb string, then on the proximal side of the ulnar index string hook that little finger over the radial index string of the right hand.

With the palms of the indices from the distal side draw the upper transverse string through the index loops, thereby navahoing the indices.

Navaho the thumbs, and katilluik the remaining thumb loops.

Near the left hand there is a string that runs from the palmar string to loop round the lower transverse string, after which it continues to the upper transverse string.

There is also another horizontal string that runs on the proximal side of all the other strings from one palmar string to the other.

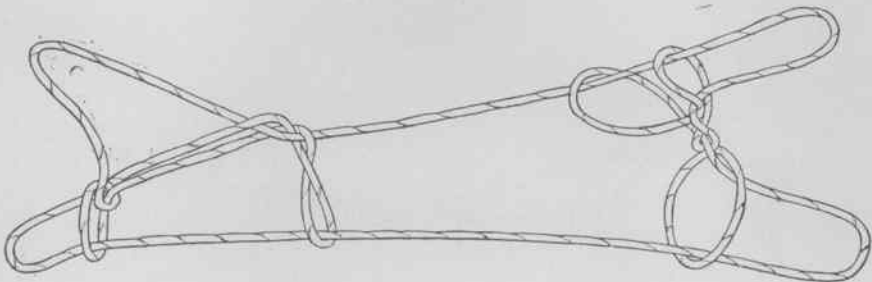


Fig. 9

Take up the former of these strings with the left thumb from below from the proximal side, and the horizontal string similarly with the right thumb from the proximal side; then with each thumb from the proximal side take up the radial index string of its hand. Navaho the thumbs and drop the index loops. You have "the brown bear" on one side and "the shaman" on the other.

¹ The "cubs" may be increased in number by simply repeating the process, if the string is long enough.

VIII. THE DOG DRAGGING THE SLED
qi'miq uniaktoaq (Barrow and Mackenzie)

Position 1.

With the back of the right index from the proximal side take up the opposite palmar string, as in Opening A.

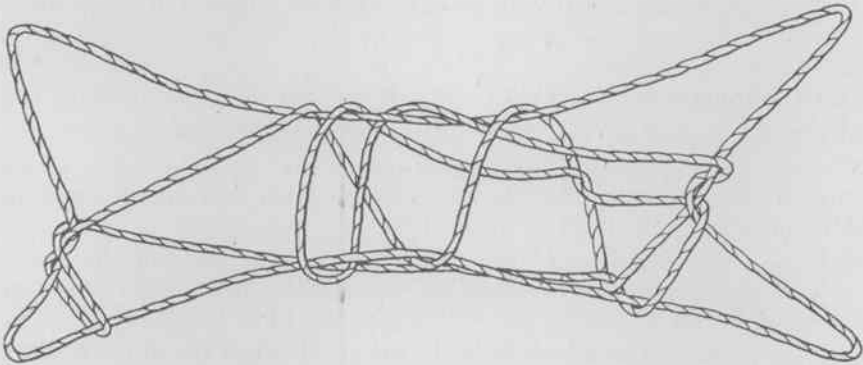


Fig. 10

With the left index similarly take up the opposite palmar string, but outside the right index loop where it passes between that index and the right little finger.

Proceed exactly as in "the two brown bears," save that with the right little finger you push back the distal ulnar right thumb string, instead of the proximal, as in the left hand.

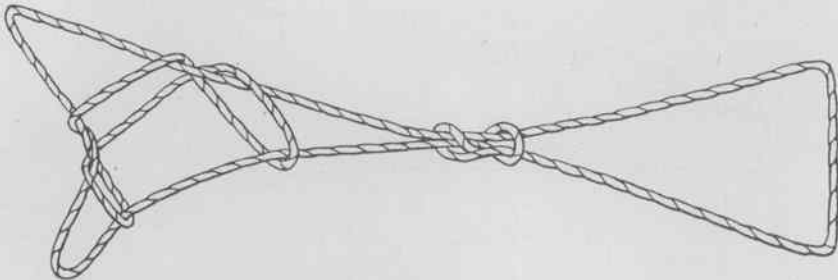


Fig. 11

At the end you have "the dog" on the left and "the sled" on the right. Drop the right little finger loop, and untangle the knots near the right hand. The "dog" goes off to the left, leaving a knot near the right hand, its fallen master.

IX. THE DOG AND ITS ORDURE = *qim'iq ānaqtoaq* (Mackenzie)THE BIRD AND ITS NOOSE = *ānāqopātciaq* (Coronation gulf)

Position I.

With the thumbs from the proximal side take up the opposite palmar strings (the left thumb taking up the right palmar string outside the new right thumb loop, as in "the dog dragging the sled"). With the indices from the distal side remove the little finger loops.

Insert the little fingers from below from the proximal side into both the thumb loops and hook their palms over the radial index string on the proximal side of the ulnar index strings.

With the palms of the indices from the distal side draw the upper transverse string through the index loops and navaho the thumbs.

Katilluik the thumbs.

Transfer the thumb loops to the indices.

From the right palmar string there are two strings, one running horizontally to the middle, the other diagonally to loop round the upper transverse string.

Insert the right thumb into the right index loop from the proximal side, and twist its back round these two strings; then insert the left thumb from the proximal side into both right thumb loops, take up with each thumb the radial index string of its hand, navaho the thumbs, and drop the index loops.

At the back of the figure, *i.e.* on the distal side of all the strings, there are now two horizontal strings in the middle. (There are two others running parallel to them on the proximal side.)

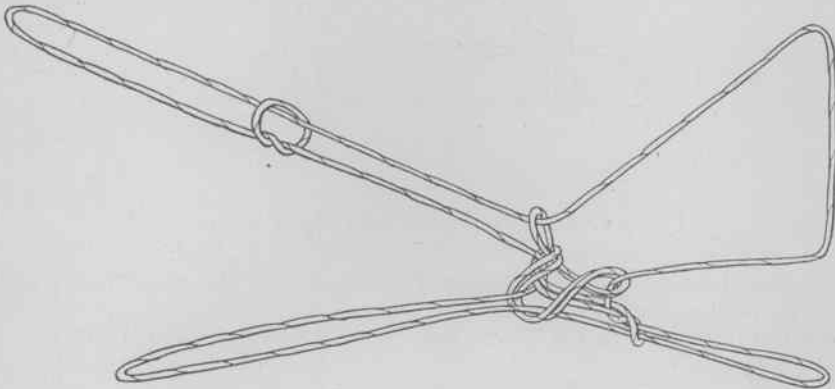


Fig. 12

With the palm of the right index from below, on the distal side of all the strings, raise these two horizontal strings at the back, then pass the index through the right thumb loop from the distal side, and with the palm of the index draw out, and through the thumb loops, the lower transverse string, taking it up where it is intersected between two loops.

Again pass the right index with its loop through the right thumb loop from the distal side, and, dropping the left little finger loop, transfer the right index loop to the left little finger from the distal side.

Pull out to the left the loop in the middle nearest the left thumb. You have on the left "the noose," and on the right "the bird" with its head uplifted; or, according to the Mackenzie natives, "the dog's ordure" on the left and "the dog" departing to the right, the head of the "bird" according to the Coronation gulf natives being "the dog's tail."

X. A RACK OR PLATFORM

The Inland Eskimos of N. Alaska, from whom this figure was learnt, call it *iqiyyaq*, which means the rack or platform outside the house on which meat, clothes, etc. are stored. The process of making the figure is very similar to that of "the two brown bears."

Opening A.

With the thumbs from the proximal side remove the index loops.

With the indices from the distal side remove the little finger loops.

Insert the little fingers from below from the proximal side into both the thumb loops, and hook them over the radial index string, holding it firmly against the palms of the hands.

Pass the indices from the distal side into the thumb loops, and with their palms draw through the upper transverse string, thereby navahoing the indices.

Release all loops except the index and little finger loops.

A diamond with double sides is formed in the middle. The two bottom sides have each a proximal and a distal string.

With the back of each thumb from the proximal side take up the nearer proximal string of the diamond at the bottom.

Katilluik the thumbs.

You have "the rack."

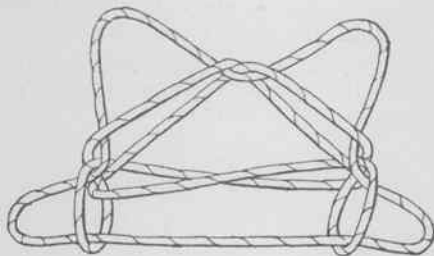


Fig. 13

XI. *nuyalikyuk*¹ (CORONATION GULF)

Opening A.

With the thumbs from the proximal side take up the ulnar index strings and drop the index loops.

With the indices from the distal side remove the little finger loops.

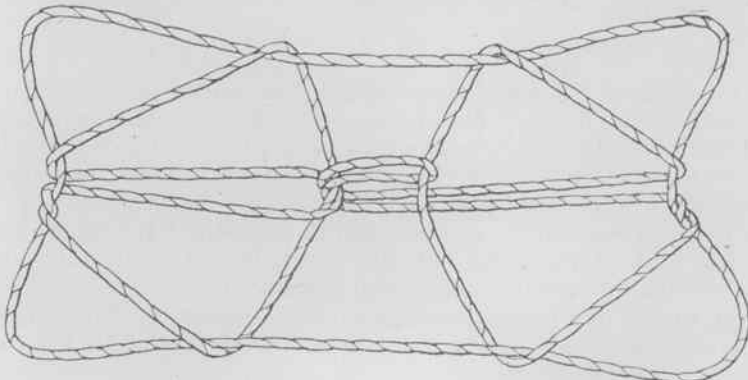


Fig. 14

¹*nuyalik* is a spirit living in the sky, who carries a long hook. Occasionally he has descended to earth and killed people with his hook, consequently he is greatly feared by the natives.

With the backs of the little fingers from the proximal side push back both the ulnar thumb strings, then hook their palms over the radial index strings.

With the palms of the indices from the distal side draw through the upper transverse string.

Navaho the thumbs, then katilluik them. You have "the evil spirit with his hook," the "hook" being the short horizontal loop in the middle of the figure.

XII. TWO MEN HAULING ON A SLED

This name, *noqt:γγyuk*, or "two men hauling on a sled," was assigned to the figure by some Eskimos from the west end of Coronation gulf. Some natives from Bathurst inlet, however, at the eastern end of the gulf, called it *numiγ-aqt:γγyuk*, or "two men having a tug-of-war in a dance house."

Opening A.

Pass the indices into the thumb loops from the distal side and remove its loops.

With the thumbs from the proximal side take up the two ulnar index strings and drop the index loops.

With the indices from the distal side remove the little finger loops.

With the backs of the little fingers from below push back the two ulnar thumb strings, then hook their palms down over the radial index strings.

With the palms of the indices from the distal side draw through the upper transverse string, and drop that loop from the thumbs.

Katilluik the thumbs.

You have the "two men hauling on a sled."

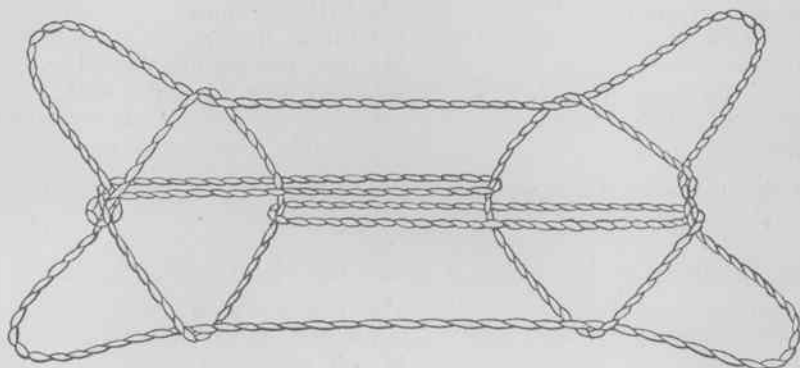


Fig. 15

XIII. THE LITTLE OLD MAN

This figure and its developments have rather a curious distribution. In its simplest form you have what an Inland Eskimo from the Colville river called *anāyugaqčγanuluk*, "the little old man;" he accompanied it with a chant. Another Inland native, who lived farther east, in the region of the Endicott mountains, called it by the same name, but accompanied it by a slightly different chant. A Mackenzie native also gave it the same name, but his chant was different again from either of the other two; moreover, whereas the Inland natives had

both interpreted the figure as "an old man dragging a bearded seal," the Mackenzie native considered the animal a beluga. The change perhaps was only natural, since bearded seals are rare in the Mackenzie delta, whereas the beluga is extremely common. But a woman at Baillie island called the figure *nātaγnaq*, "burbot," and continued it to produce "a dog dragging a sled," both of which have separate figures to the west (see Nos. XXXIX and VIII). At Indian point you have a figure, "the reindeer dragging a sled," which closely resembles the Baillie island figure of "a dog dragging a sled," being likewise a development of "the little old man" or "the burbot," though the Indian point natives appear to have no separate name for that figure. Finally, when you reach Coronation gulf, you find this first figure, "the little old man," called *hātqun*, i.e. "the broad snow-knife with the triangular butt on the handle."

Position I.

With the palm of the right index from the distal side take up the opposite palmar string and return, pointing it outwards in so doing.

Similarly, with the palm of the left index, take up the opposite palmar string, but outside the right index loop.

With the thumbs from the proximal side remove the index loops.

With the indices from the distal side remove the little finger loops. Pass the little fingers from the proximal side, from below, into the thumb loops, and on the proximal side of the ulnar index strings hook their palms over the radial index strings and draw them through.

With the palms of the indices from above hook out the upper transverse string, thereby navahoing the indices.

Navaho the thumbs, and katilluik the remaining thumb loops.

You have "the little old man dragging a bearded seal." The Colville Eskimo chanted:

anāyruqaqcγaγuluk
noqit'əq noqit'əq
ātataγoaqγoaγa
uγγuγγoa-a-pan
iγāγaqtoāγōācukpuna
kikcīrəq

The little old man
Is hauling, hauling.
My poor old grandfather
When he gets a bearded seal
I want to eat some cooked blubber.
It (the line) has snapped.

At the last word, *kikcīrəq*, drop the left little finger loop; the line is broken in the middle.

The Eskimo from the Endicott mountains chanted:

anāyruqaqcγaγuluk
noqet'əq noqet'əq
anāγōāγoaγa
iγāγaqtoγoaγicīrəq
noqet'əq noqet'əq
ye' kiktəγautirəq

The little old man
Is hauling, hauling.
My old grandmother
Is going to have some cooked blubber.
He is hauling, hauling.
Ah, his line has snapped.

In both these chants the old man is considered to have struck a bearded seal, but as he tries to haul it in his line snaps.

The Mackenzie natives, who think of him as spearing a beluga, chant:

teγyug'agnik nutcukpuna
nutcukpuna aiyaγa
teγyug'agnik nutcukpuna
nutcukpuna aiyaγa
pituaγuhyəq

Its old tail I am pulling
I am pulling ai ya.
Its old tail I am pulling
I am pulling ai ya.
It (the line) broke loose.

The Baillie island woman, who called the figure "the burbot," knew no chant with it, nor have the Copper Eskimos, who call it "a snow-knife," any song. They consider the triangle near the right hand to be the bone butt at the extremity of the knife handle, the two transverse strings running parallel side by side in the middle its handle, and the quadrilateral near the left hand the blade.

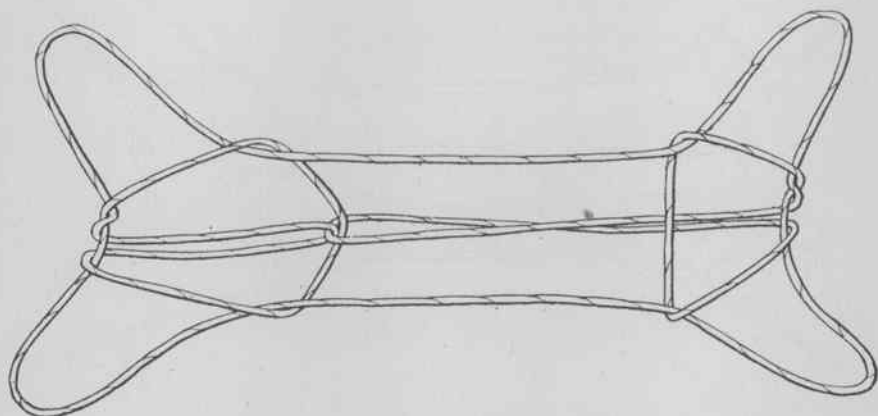


Fig. 16

The Baillie island woman continued the figure to produce "a dog dragging a sled" in the following manner:

Replace the left thumb by the left index.

From the radial left index string there is a string which runs to the middle, and, passing through a loop, continues to the lower transverse string.

With the palm of the left thumb, from the proximal side, draw down this string, applying the thumb just below the upper transverse string; then with the back of the same thumb take up the ulnar little finger string of that hand and draw it through.

Drop the left little finger loop and transfer the left thumb loop to the left little finger from the proximal side. This gives you the sled on the left.

Near the right hand there is a string which runs from the radial to the ulnar little finger strings across the back of the little finger. Insert the right index into the little finger loop from the distal side and with its palm raise up this string. Now behind all the strings take up with the palm of the index the radial right thumb string and navaho the index.

Pass the right thumb down on the proximal side of all the strings, pressing its ulnar string before it, and with the back of it from the proximal side take up the ulnar little finger string. Drop the right little finger loop and transfer the right thumb loop to the little finger from the proximal side. You have "the dog" on the right dragging "the sled" on the left.

Insert the left thumb into the middle of the figure above the lower transverse string and, dropping the left little finger loop, sharply draw the strings tight. "The dog" has broken its trace, "the sled" is left dangling on the left, and "the dog," dragging its broken trace, is speeding away to the right.

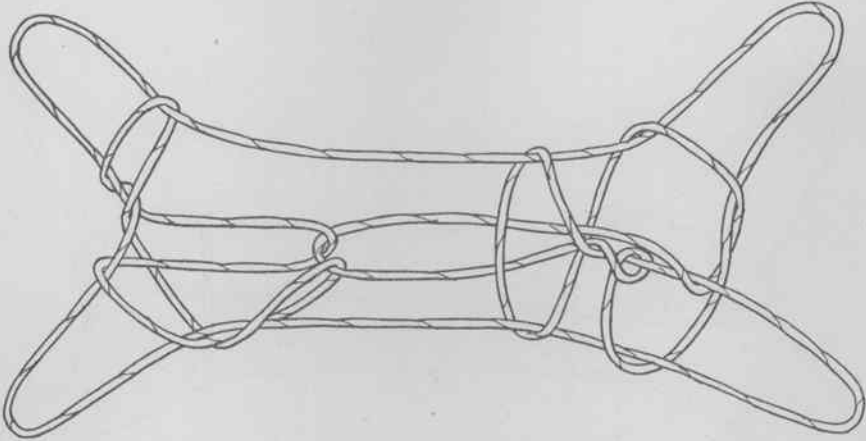


Fig. 17

XIV. A REINDEER DRAGGING A SLED (Indian point, Siberia)

Make "the little old man" (No. XIII).

On the left you have a quadrilateral, one side running from the upper transverse string to pass through a loop in the middle before continuing to the lower transverse string.

Remove the thumb loops to the indices.

With the back of the right thumb from the proximal side take up the string of the triangle that runs between the radial and the ulnar little finger strings. At the same time, with the back of the left thumb from the proximal side take up the string of the quadrilateral that runs from the upper transverse string to the middle.

With the right thumb from the distal side remove the left thumb loop, then, drawing the original right thumb loop out from under it, transfer it to the left thumb from the proximal side. Invert the right thumb loop counter-clockwise so as to make it straight.

With each thumb from the proximal side take up the radial index string of its hand, navaho the thumbs and drop the index loops, taking care not to draw the strings too taut.

Transfer the thumb loops to the indices.

In the middle two strings cross one another on the proximal side of all the other strings; the one comes from the radial right little finger string, and subsequently passes round the lower transverse string, the other from the left ulnar index string and does the same.

With both thumbs from below take up these two strings where they cross, then from the proximal side take up with each thumb the radial index string of its hand, navaho the thumbs and drop the index loops. You have "the reindeer" on the right, and "the sled" on the left.

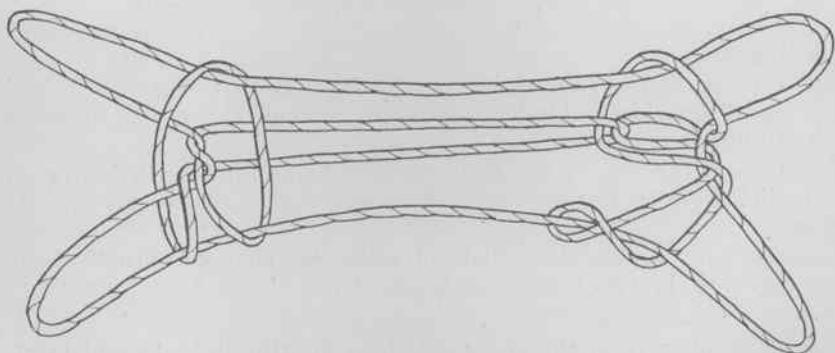


Fig. 18

Remove the thumb loops to the indices.

With the palm of the right middle finger from the distal side take up the radial little finger string of its hand just after it passes behind the string that runs from the ulnar little finger to the index strings. At the same time insert the left thumb into the figure to the right of "the reindeer" just above the lower transverse string. Chant:

*aiyalromana tanäpcaŋku-un
coqaŋna-ya tanäpcaŋku-un
qomiŋata-a täpakteŋata-a
aiyalroman qoiŋe
qäpqaqotq*

Aiyalromana wanted to go somewhere.
His sled runner wanted to keep going
?
Aiyalromana's reindeer team
Broke its trace.

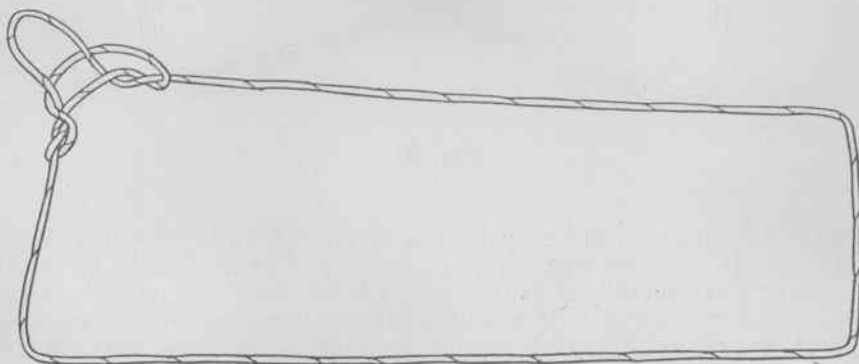


Fig. 19

At the word *qäpqaqotq* drop the little finger strings. The figure breaks up, "the reindeer" disappearing altogether to the right, while "the sled" is left hanging, a disconnected loop, on the left.

SUBSECTION B. THE LITTLE FINGER CYCLE

XV. THE LITTLE FINGER = *tiqoqyaq* (Barrow, Inland and Point Hope Eskimos)¹THE ANUS = *tiq* (Mackenzie and Coronation gulf)

Opening A.

Pass the ring fingers from the distal side into the little finger loops and take up from the distal side, behind all the other strings, the radial thumb string. Drop the thumb loops.

Again insert the ring fingers from the distal side into the little finger loops, and, releasing the little fingers, insert them from the proximal side into the ring finger loops.

Pass the thumbs over the radial index strings and take up with them from the proximal side the two radial ring finger strings.

Drop the index loops.

Pass the indices from the distal side into the thumb loops and twist their backs round the two strings that run medially from the palmar strings.

Drop the thumb and the little finger loops; pass the remaining three fingers of each hand into the index loops, and grasp with them the radial strings.

A triangle is formed in the middle, with its apex pointing downwards; by see-sawing the hands it can be made larger or smaller.

Let some other person pass his little finger into the triangle; then distend the ulnar strings so that the finger is nipped tight. It can be released, however tightly held, by bending it round, passing it between the two ulnar strings that cross on the outside of the other two, then bending it back again, when it slips out quite readily.

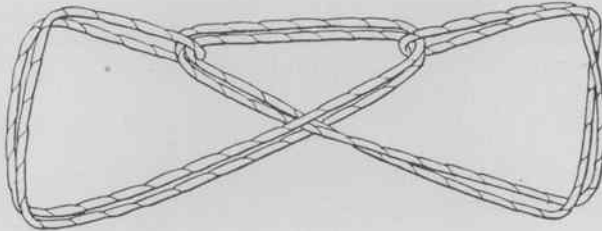


Fig. 20

"The little finger" can be made in a variety of ways, of which three are given below. It is the starting point of a number of figures, while, on the other hand, two or three completed figures, *e.g.* "the fish-net," can be converted into "the little finger." A Point Hope native, who had learned the European figure commonly known as "the cat's cradle," converted that also into "the little finger."

SECOND METHOD

Loop over the indices.

Thread one index loop through the other and exchange them on the indices, then proceed as in the first method when the corresponding stage is reached.

¹ Dr. G. B. Gordon has this figure from Cape Prince of Wales, with the name of "Trap."

THIRD METHOD

Loop over the thumbs and indices of each hand.

Close the remaining fingers of each hand over the transverse strings and turn the hands inwards and downwards so that each thumb-index loop slips off and falls over the transverse strings.

With the thumbs and indices draw out the two transverse strings.

Two loops now cross the transverse strings. Shake them so that one passes over the top of the other, holding the loops meantime in the hands.

With the backs of the indices take up these crossing loop strings (the side strings of a triangle), and drop the hand loops. Hold the index loops in the hands and you have "the little finger."

FOURTH METHOD

Position 1, left hand only.

Pass the other end of the loop under the palmar string from the proximal side and lay it back on the palm, making a small circle thus:

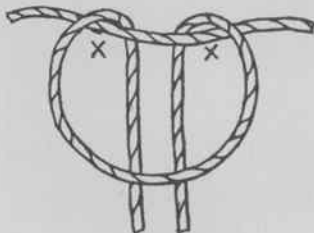


Fig. 20a

Insert the left thumb into the circle from above (*i.e.* from the outside) and the left little finger similarly on the opposite side of the two pendent strings (at x and x, Fig. 20a) and circle them upwards so that they take up the two strings at these places. The old radial thumb and little finger loops drop off in this movement; hold them in the right hand.

Lay the left hand loops on the knees and, carefully withdrawing the left thumb and little fingers, take up with the left thumb and index the old ulnar left thumb and the radial little finger strings and grasp them firmly in the hand. You have "the little finger."

XVI. THE LITTLE FINGER MADE DOUBLE¹ (Colville river Eskimos)

Make "the little finger."

With the backs of the indices push out the sides of the triangle, then, dropping the thumb loops, take up with the thumbs from the proximal side the ulnar index strings.

Pass the middle fingers from the distal side under the two transverse strings in the middle and close them against the palms.

With the right thumb from the proximal side remove the left thumb loops, then insert the left thumb into the right thumb loops from the proximal side.

In the middle is a square, the top side being a portion of the upper transverse strings.

With the backs of the thumbs take up the side strings of the square and navaho the thumbs.

¹ I have seen this figure amongst the Inland Eskimos only.

Drop the index loops and reverse the loops on the thumbs. You have the original "little finger" doubled, the one being below the other. Drop all but the little finger loops and you have the single "little finger" again.

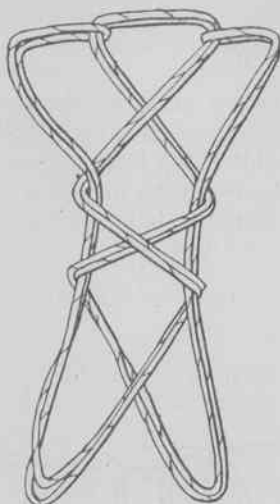


Fig. 21

XVII. THE TWO YOUTHS

This figure was found everywhere along the coast from Cape Prince of Wales, in Alaska, to Coronation gulf.

Make "the little finger."

Pass the indices over the base of the triangle, twist their backs round the side strings and point them outwards.

Katilluik the thumbs.

Transfer the thumb loops to the indices and circle them counter-clockwise.

You have "the two youths."

A Cape Prince of Wales woman sang this chant:

nukätpiayuluk itqum uvin^suaqciyatn Boy, is going to whistle
at you.

Whereupon each of the two youths was supposed to answer:

uvin^suaqtiniayut^scuya akaiyaruy^s

The Mackenzie natives chant:

nukätpiabuk ätataluptik gelukena^svatik "Young men, your grandfather is
itqmun putit^sik. bending his bow. Look at his
back."

After which the player whistles and makes "the little finger" again. (Drop the index loops and you have "the little finger" again.)

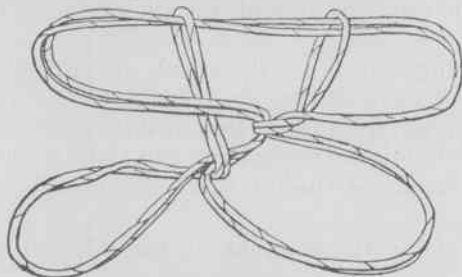


Fig. 22

XVIII. TWO DOGS FEEDING OUT OF ONE BOWL

This figure is known from the Kobuk river in northern Alaska all along the coast to Coronation gulf. The Alaskan natives call it "two dogs feeding out of one bowl" (*poꝛyutaq ātautciq qi'miaꝛyuk āluptuk*). In the Mackenzie the natives say: *qum'ik ukwak āluk ukwak itꝛyman quꝛciꝛyuk*, "Those two dogs, those who are feeding, when he—their master—came in he cried *quꝛ quꝛ* to drive them out." The Coronation gulf natives call the figure *qum'ik āluktoꝛyuk*, "two dogs feeding."

Make "the little finger."

With the backs of the index fingers push out the two strings that form on each side the sides of the triangle, hook their palms over the base of the triangle, and point them out again.

Katilluik the thumbs.

Remove the thumb loops to the indices from the distal side and circle them clockwise. You have "the two dogs feeding."

(Drop the index loops and you have "the little finger" again.)

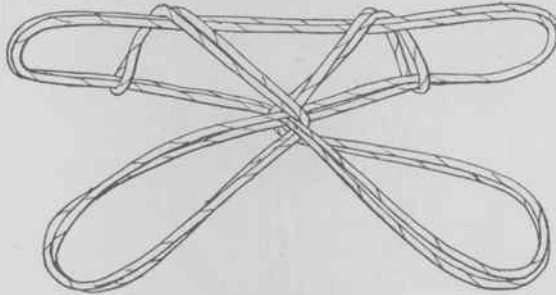


Fig. 23

XIX. THE YOUNG MAN FEEDING HIS DOG (Inland Eskimos of North Alaska)

This figure is a combination of the two preceding. With the left index take up the base of the triangle in the same manner as in "the two youths," with the right index as in "the two dogs." Continue as in those figures, and you have "the young man" on one side and "the dog" on the other.

(Drop the index loops and you have "the little finger" again.)

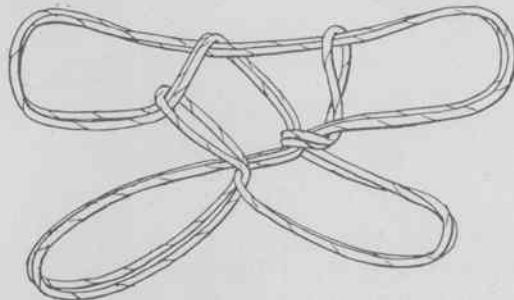


Fig. 24

XX. AN ADZE = *ulimaun* (Inland Eskimos of North Alaska)

Make "the little finger."

With the backs of the indices take up the two side strings of the triangle and point them outwards, withdrawing the thumbs from their loops.

With the thumbs from the proximal side take up the ulnar index strings.

Insert the middle fingers from the distal side in the middle under the transverse strings and close them against the palms.

Katilluk the thumbs, but without dropping the index loops at the last.

Release the middle fingers, and placing the tips of the thumbs together, draw them out towards you. The four strings running side by side to the centre are the handle of "the adze," the triangle at the bottom its blade.

(Drop all but the little finger loops and you have "the little finger" again)

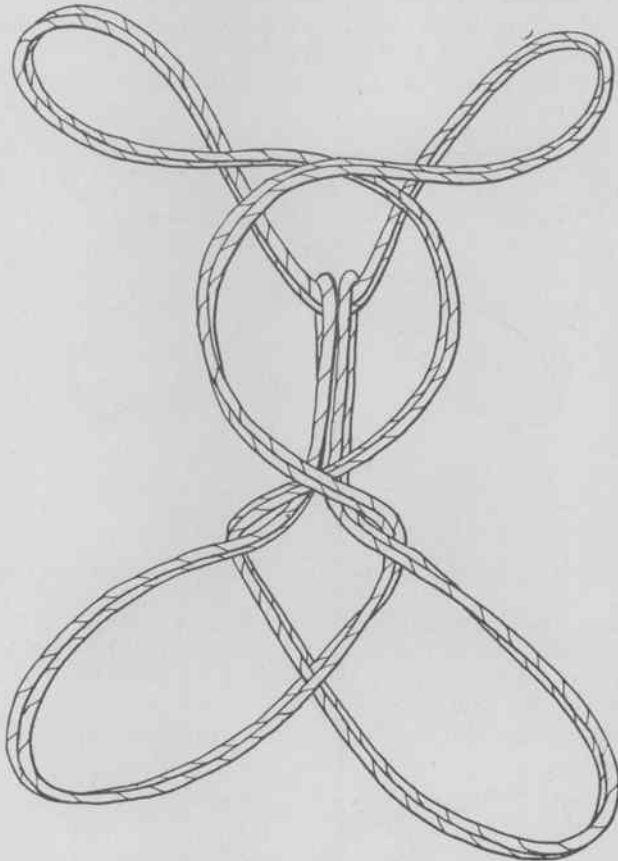


Fig. 25

XXI. THE BEAVER

At Cape Prince of Wales and at Point Hope this figure is called *paluktaq*, "a red fox." On the Kobuk river, at Barrow, and by the Inland natives of North Alaska it is called *kiviatuk*, "the beaver." I have no record of it among the Mackenzie river Eskimos, but in Coronation gulf it is called *qalvik*, "the wolverine."

Dr. Gordon's figure "No Name" reproduces all the movements of this figure up to the final stage, which his informant (a King island native) had evidently forgotten. Boas has a figure from Cumberland sound called *teratchea*, "the ermine"; it differs very slightly from "the beaver" and may have been produced in much the same way.

Make "the little finger."

With the backs of the indices from the distal side push out the side strings of the triangle.*

Drop all but the index loops, and inserting the remaining three fingers of each hand into them from the distal side, release the indices and reinsert them from the distal side.

Now lay the right hand loops over the left index so that the two ulnar right index strings (*i.e.* the upper transverse strings) become the distal radial left index strings and the two radial right index strings the proximal ulnar left index strings. The right hand is thus released altogether.

Pass the right index from the proximal side under the two distal radial left index loops (the old right index loops) and hook it over the two distal ulnar left index strings (the original radial left index strings); then point both indices upwards so that they protrude through a small circle of double strings; separate the two hands.

With the left thumb from the distal side remove the left index loops.

Pass the left little finger from below from the proximal side into the left thumb loops and, pressing down the ulnar strings, allow the two lower transverse strings to slip off; then hook the little finger down over them.

Pass the left index from the distal side into the thumb loops and with its palm draw through the two upper transverse strings. You have fig. 26.

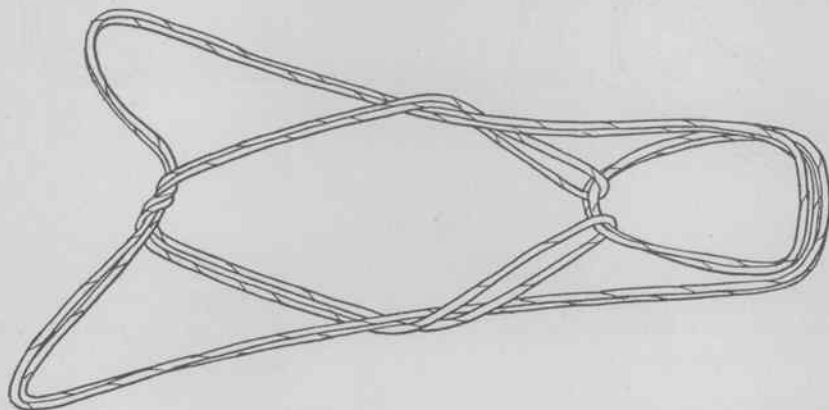


Fig. 26

Over near the right hand on the back of the index there is a kind of knot which readily opens out and is seen to be formed by two strings running perpendicularly and bounded above and below by two looping strings.

Drop the left thumb loops and, passing that thumb into the left index loop from the proximal side and moving it to the right, on the distal side of the two strings that run from the left palmar string to cross the upper transverse string, take up with its palm these two perpendicular strings.

Drop the right index loops, and with that finger from the proximal side remove the left thumb loops.

Hold the right index loops in the right hand and turn the knuckles inwards. You have "the beaver."

The Inland Eskimos of North Alaska chant:

kuγiayuk nuγakpakcaqciγatın

Beaver, he is going to throw his
spear at you.

and "the beaver" is supposed to reply:

*nuγakpakciγandı cuna
nāk'axiγuna ki*

I will not let him hit me with his
spear, I shall dive ki.

The Kobuk river Eskimos chant:

*kuγiayuk kuγiayuk
qaγ'əppakcaqciγatın
qaγ'əppakcaqciγatın*

Beaver, beaver, he is going to shoot
his arrow at you, to shoot his
arrow at you.

and "the beaver" answers:

nātkaiyayuna

I shall dive.

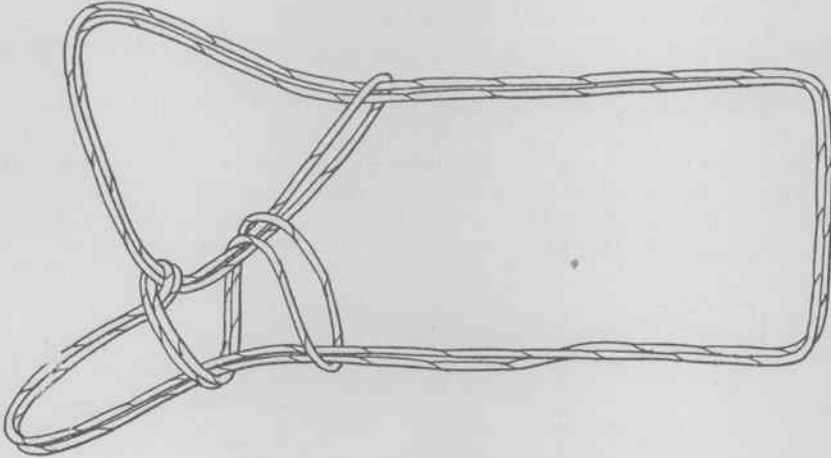


Fig. 27

The more usual opening for this figure is by the third method of making "the little finger," when the second movement brings you to the point marked * in the above description.

XXII. THE OPENING OF THE DOOR

This Mackenzie Eskimo figure, which is called *upkwəqtəq*, "the door is open" follows the method of "the beaver" up to its final stages. The two figures must have a common origin, since some of the movements are very unusual and complicated.

Proceed as in "the beaver" until you reach Fig. 26.

At that point pass the right little finger into the right index loops from the proximal side, push out to the distal side the strings that form the knot (they resolve into two vertical strings), then drop the index loops.

Half-circle the little finger counter-clockwise and hold its two loops in the right hand.

With the thumb and index of each hand spread apart the two upper transverse strings. You have "a closed door."

Say *upkweyin*, "open the door," and drop the left little finger loop. The figure disappears—"the door" is open.

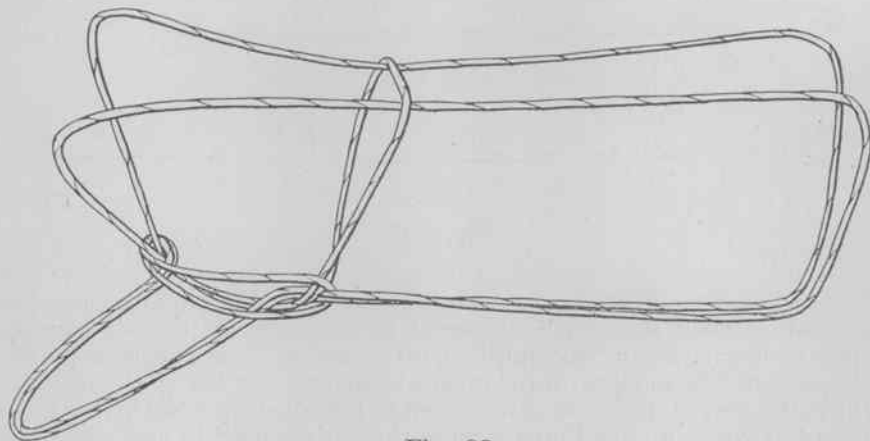


Fig. 28

SUBSECTION C. MISCELLANEOUS FIGURES WIDELY DISTRIBUTED

XXIII. TWO TOY LABRETS

This figure is made in two stages. An Eskimo from Nome and another from Port Clarence knew the first stage only, and called it *tutānokinʷ*, "your two toy labrets." The Mackenzie river natives called it *tutaqpāc:iāk*, "two big labrets," while in Coronation gulf, where labrets are unknown, it was called *tuātuāyūlciāk*, which was said to mean "two small stones." The second stage I found only at Barrow and among the inland natives of North Alaska.

Opening A.

With the thumbs from the proximal side raise the ulnar little finger strings, then from the distal side, *i.e.* with the backs of the thumbs, take up the radial little finger strings and drop the index loops. Now the Barrow and Inland natives chant as fast as they are able:

tutānokinʷ iyaqpaγin

Your two toy labrets have you finished
them before me?

qaḡālciaḡanunāγlān

Right up to their conclusion (?)

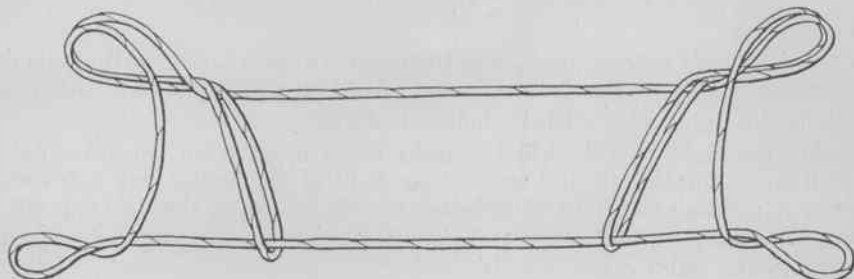


Fig. 29

Now rapidly pass the index fingers from the distal side in between the proximal and distal radial thumb strings and with their palms draw through the upper transverse string, dropping the thumb loops and saying:

ka āne ūiayākpīn^y

Come, be off, I have raced you.

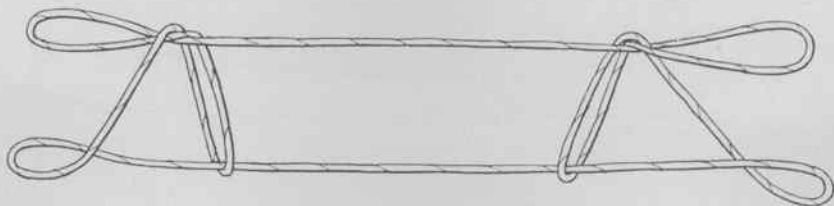


Fig. 30

The last movement is the final stage in the making of many cat's cradle figures, and, in association with the words given above, is believed to possess the power of driving away "the spirit of cat's cradles" (see Appendix, p. 182 B). Every stage must be made with the greatest rapidity, lest the spirit should out-race the performer. I did not find this belief in the Mackenzie or Copper Eskimo region, but at Nome and at Port Clarence the natives used to chant at the end of the first stage, which alone they knew:

i'lerici i'lerici

(meaning unknown)

neγniāqpain ūiāqpain

I shall eat you, I have raced you.

teni

Off with you.

At Cape Prince of Wales, Opening A is believed to have the same power, in conjunction with the same chant. Make Opening A each time the word *i'lerici* is uttered, dropping the index loops again; finally for the third time make Opening A, accompanying it with the words *neγniāqpain*, etc.; and at the last word *teni* flaunt it in the face of the spirit.

XXIV. THE CARIBOU OR THE RABBIT

This figure has been recorded by Dr. G. B. Gordon from St. Michael, where he gives it the name of "caribou" (*tuktuk*). Except in North Alaska, it has the same name everywhere along the coast to Coronation gulf, as well as in Cumberland sound, Baffin island. But the Barrow and Inland natives of North Alaska call it "rabbit" (*ukalūq*), and the Inland natives even continue it through further stages. Accordingly, although both Dr. Boas and Dr. Gordon have described how the figure is made, I shall repeat the description, and give the subsequent stages as the Inland natives make them.

Opening A.

Circle the right index round the little finger strings, take up with it the radial right thumb string from the distal side and return, dropping the right thumb loop.

Circle the right index with its loops clockwise.

Insert the right thumb into the right index loops from the proximal side and with the right thumb and index take hold of the radial left index string, and draw it through the right thumb-index loops, allowing these to slip off.

Drop the loop on the left thumb and replace it by the loop held up in the right thumb and index.

Hold the right little finger loop in the right hand. You have "the caribou" or "rabbit."

The Inland natives then say:

ukaliq kaxlaluk ukaliq kaxlaluk Rabbit

and with the left index from the distal side draw out the upper transverse string, taking it up between the head and body of the rabbit and dropping the left thumb loop. Then they add:

aciuman picik'a Because he was bad he shot it.

and with the left thumb draw out the lower transverse string from between the rabbit's legs, with the words:

alvinam ak'a skinned it.

In the final stage you have the man who skinned it.

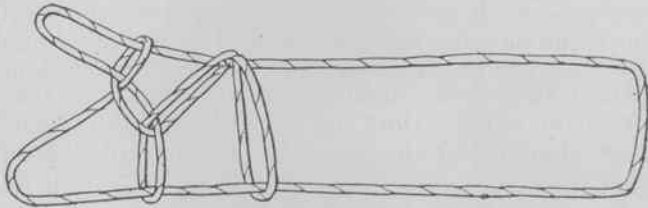


Fig. 31

XXV. THE CARIBOU IN THE WILLOWS

This figure, which comes from Barrow, is a modification of the previous one, since after the opening movements have been made all the subsequent steps are the same. The opening is found in two other figures, the Indian point figure *tayärot* (see No. LXII) and "the breast bone" (see No. CXLVIII), the latter being a figure that is known all along the coast from Barrow to Hudson bay.

Loop behind the thumbs, middle fingers and little fingers. Bring the hands together and with the index and ring fingers of each hand take up the palmar index and ring finger strings of the opposite hand, then draw the hands apart.

Proceed exactly as in "the rabbit" (No. XXIV) after Opening A has been made in that figure.

At the conclusion you have "the caribou amongst the willows." The Barrow natives say, *tu'tuqoq onaqoqman uqpicicimaqtoaq äcin niγλαγman avilaqtoq*, "The caribou, it is said, when it became hot, stayed in the willows, but when it grew cool it went away."

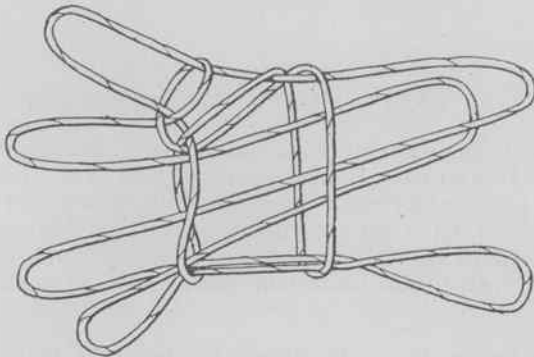


Fig. 32

Drop the middle and ring finger loops and you have the caribou going away (the same figure as in "the rabbit or caribou").

XXVI. THE RABBIT = *ukaluq*

This figure is known under the same name by the Diomedes island, Barrow, Inland, Mackenzie, Coronation gulf and Hudson bay Eskimos. It is almost identical with No. XXIV, but differs in the mode of its formation. The two seem to have been confused by the Barrow and Inland natives, who name both figures "rabbit," while the other Eskimos call the former figure "caribou." For another instance of confusion see No. XCVII.

Hold the loop between the left index and the left thumb so that about two inches of one end falls over the back of the thumb. Hold the remainder of the string—the long pendent loop—in the left hand, pass the right thumb and index from above through the loop on the back of the left thumb, then with the right thumb from the proximal side take up the proximal ulnar left thumb string; simultaneously with the right index from the distal side take up the distal ulnar left thumb string. Draw out the new right thumb and index loops.

Circle the left thumb clockwise (inwards, then upwards and outwards).

Pass the left little finger upwards on the distal side of all the strings and with its palm draw down the radial right thumb string.

With the right thumb and index lift up the strings on the back of the left thumb, then with the back of the left thumb remove the right index loop from the distal side and navaho the left thumb.

Spread apart the two strings of the long pendent loop which still remain in the right hand and you have "the rabbit."

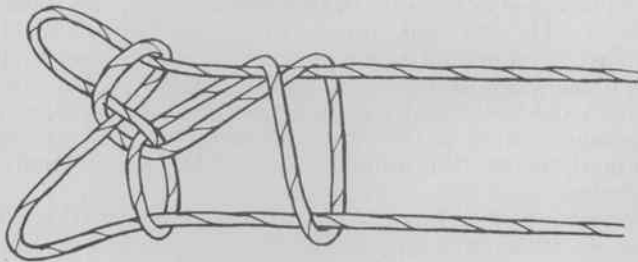


Fig. 32a

XXVII. THE RAVEN = *tuluṛyaq*

This figure has been recorded from Indian point, Siberia, from Point Hope, from Barrow, from Inland natives who wintered behind the Endicott mountains south of Collinson point, and from Coronation gulf. Everywhere it has the same name, "the raven." I have no record of it from the Mackenzie, but do not doubt that it exists there also. Boas found it in Cumberland sound, and Kroeber in Smith sound, in both places under the same name, "raven."

Opening A.

Pass the ring fingers from the distal side into the little finger loops and take up with them from the distal side, but on the proximal side of all the other strings, the upper transverse string, and return, dropping the thumb loops.

Again insert the ring fingers from the distal side into the little finger loops and, releasing the little fingers, insert them from the proximal side into the ring finger loops.

Pass the thumbs over the radial index strings and take up with them from the proximal side the two radial ring finger strings.

Drop the index loops.

With the palm of the right index from above take up the two radial right thumb strings.

Pass the left index into the left thumb loop from the distal side and with its back take up the two strings that run from the left palmar string to loop round the upper transverse string.

Drop the thumb loops.

Insert the left thumb under the radial left index strings and with its back take up the two strings that run from the left palmar string to loop round the upper transverse string.

Insert the right thumb from the proximal side into the left thumb loops, then with each thumb from the proximal side take up the radial index string of its hand, navaho the thumbs and drop the index loops.

A triangle is formed in the middle, just below the transverse string.

Pass the left index into this from the distal side and with its palm take up the lower transverse strings and return.

Drop the right little finger loops, and, passing that finger from the proximal side into the left thumb loops, transfer to it from the distal side the left index loops and return.

With the backs of the indices separate the two radial strings on each thumb. You have "the raven," with its head to the right.

The Barrow natives then sing:

qyo-qyo-qyo

and, dropping the right little finger loop, continue:

qi'miaγoaloαγoq tuγpqaγa

His pet dog, they say, made it fly away.

If you point the right index down you see "the dog" over near the left hand.

They add, dropping the left little finger loop, and opening out the hands, palms upwards:

nuyialukumiayun qolautcaγa

To his cloud he (the raven) passed over it.

"The cloud" is seen, also near the left hand.

Finally they add, dropping the left index loops:

ānaγalutayāγoq aqcaγalukātaqtoq

Its ordure, they say, rolled away. (It travels over to the right.)

From Indian point comes the chant:

puγukalika puγukalika-a-a

Raven, raven

qimiyaiyiyā-a-a

Little dog

caliyaiyiyā-a-a

Female raven

aynaγaiyiyā-a-a

Little daughter

(i.e. a pup was watching a pair of ravens and their young one.)

An Inland Eskimo from the Endicott mountains chanted these words:

qyo-qyo- qi'miaγoaloαγoq

"Kro kro. His pet dog, they say, made it fly away went underneath.

tuγpqaqpa anakovalātanāγuyoyq

The fog gathered over it."

ālautcaqpa

nuyialukuwixanaγuyoyq

qolautcaqpa

In Coronation gulf, where the developments of "the raven" seemed to be unknown, a woman chanted what was probably part of a dance song:

tuluḡaqa taina ka tuluḡaḡalu
iḡām'ieni neḡimuyman
tainaka poḡoḡtəḡ

The raven thus, yea, the raven.
 Its bait (?) when it ate thus it snapped
 it up in its beak.

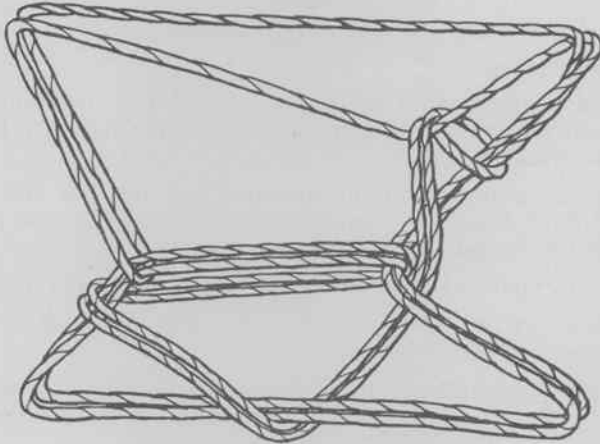


Fig. 33 "The Raven"

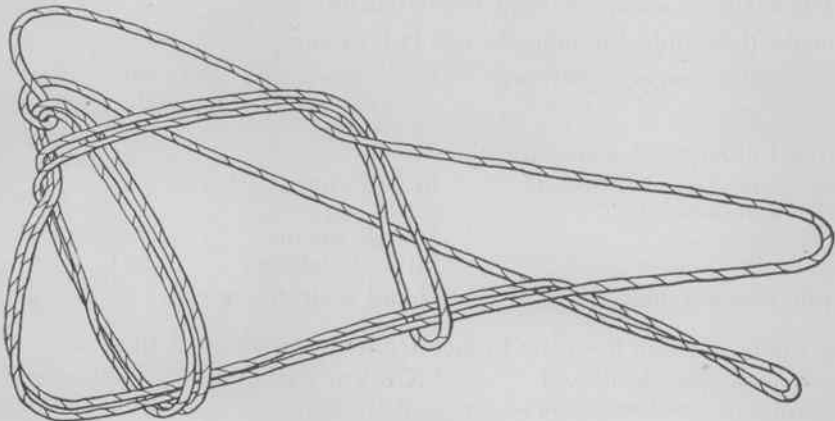


Fig. 34, "The Pup"

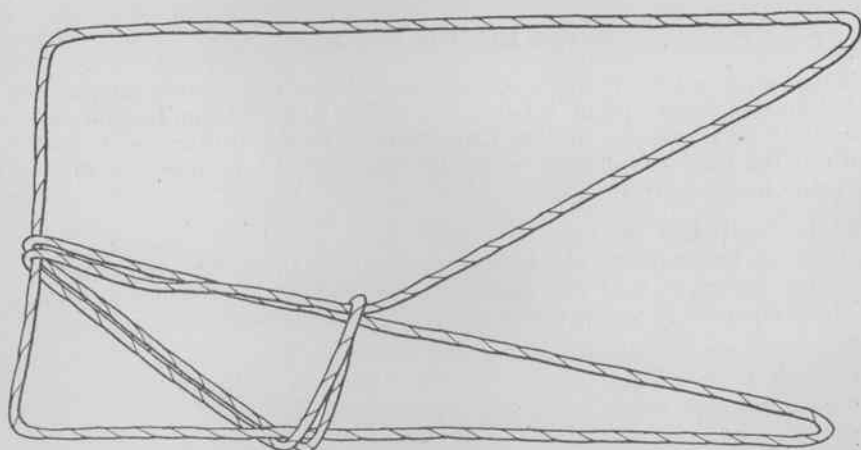


Fig. 35, "The Cloud"

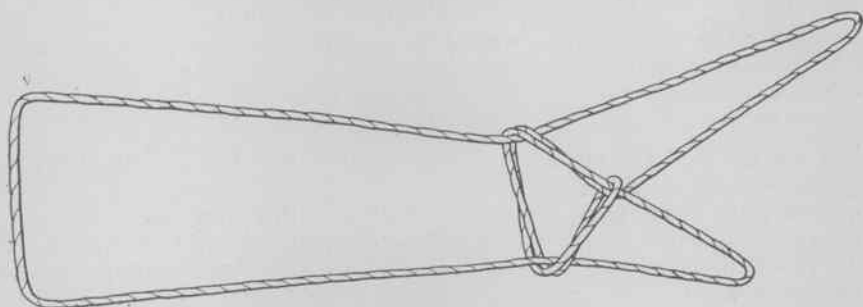


Fig. 36, "The Dog's Ordure"

XXVIII. THE WOLF

This figure is given with the name "koftsik" by Dr. Gordon, coming from Nunivak island. Some Indian point natives called it "the dog" (*qitmiq*). From Port Clarence to Coronation gulf it bears the name of "wolf," (*amaγc̄q*). The figure which Dr. Boas found in Cumberland sound bearing the name of "wolf" seems to be the same. The Eskimo "wolf" is the same as the Klamath Indian figure "porcupine," given in Mrs. Jaynes' book on string figures.

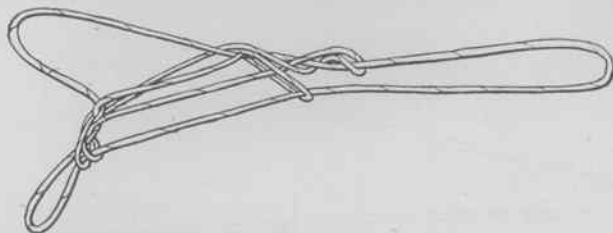


Fig. 37

Some Barrow natives sang a chant with this figure, but they seemed to have adapted it from the chant of the next figure, "the red fox," merely substituting the word *amaγc̄q* for *qaiγc̄q̄c̄q̄*. Other Barrow natives had no chant for "the wolf," but knew "the red fox" chant, which was also current amongst the Inland natives. As Dr. Gordon has already described the method by which this figure is made, it is unnecessary to repeat it.

XXIX. THE RED FOX

This figure is known to the Chukchee as "the fox," according to Bogoras. The Eskimos of Indian point, Siberia, call it "the dog." From Barrow to Coronation gulf it is known as the "red fox," and Kroeber illustrates it from Smith sound as "the fox." It closely resembles "the wolf," but there is a slight alteration in the initial movements.

Make Position 1.

With the backs of the hands take up from the distal side the opposite ulnar little finger strings so that you have a loop on each wrist.

Make Opening A and proceed exactly as in "the wolf."

The Indian point Eskimos sing the following chant:

<i>anokätägaqtağa ya</i>	Short-Breath (name of dog),
<i>anokätägaqtağa ya</i>	Short-Breath,
<i>qolmun paḡalukto-oq</i>	He ran up-hill,
<i>acikmun paḡalukto-oq</i>	He ran down-hill,
<i>anoqcaḡiqanun äcäḡaqtoq</i>	He passed through a windless place,
<i>zliägaqtoq</i>	He went through it.

Then turning the hands downwards so that the wrist loops slip off, and drawing the strings taut, they continued:

<i>qimäihaq paḡaluktoq</i>	The dog ran,
<i>amiqmun ätgaqtoq</i>	Inside it went.

The Barrow and Inland natives, who call the figure "the red fox," (*qaiyqtoq*), sing:

<i>qaiyqtoqora paḡeopaḡa</i>	A red fox with a long tail
<i>änoḡailamun aḡpat'eq</i>	Ran to a place where there was no wind,
<i>anoḡailamun aḡpat'eq</i>	Ran to a place where there was no wind,
<i>avätaniḡluḡulu</i>	Either around him
<i>qolaniḡluḡulu</i>	Or above him
<i>mu-hu mu-hu</i>	(The fox's cry).

At the words *mu-hu mu-hu* release the wrist loops. By swaying the right hand the fox is made to run.

The Mackenzie natives call the figure *cikcimagtoaqtoq*, "a red fox waving its tail," and the Coronation gulf Eskimos *tikcimagtoaqtoq*, with the same meaning. In the latter place there is no chant, but the Mackenzie Eskimos sing:

<i>paḡeopaḡa paḡeopaḡa</i>	Its tail, its tail,
<i>cikcimagtoaqtoḡu aiyaḡa</i>	Was waving in the air, <i>aiyaḡa</i> ,

adding, while dropping the wrist loops:

<i>änoḡailamun aulayin'</i>	Be off to a windless place.
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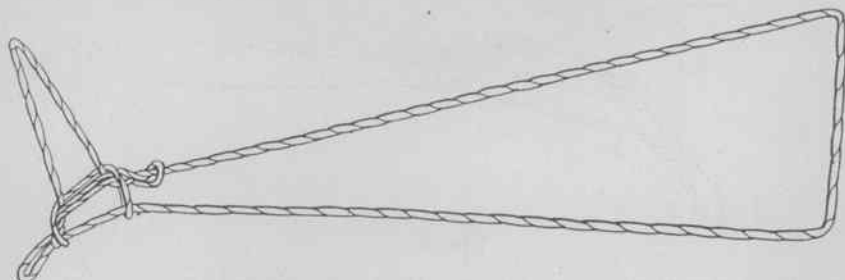


Fig. 38

(There was one slight difference in the final stage of the figure between the Indian point natives and those of Alaska and the east. The Indian point Eskimos retained the right thumb loop, whereas the others usually dropped it.)

XXX. THE DOG

This figure is known to the Barrow and Inland Eskimos of North Alaska, in the Mackenzie delta and in Coronation gulf, everywhere with the same name, "the dog."

It has been described by Dr. Gordon from Nunivak island, where it is called "a dog on a leash" (*kaymuchta*). It differs from the two preceding figures only in the introductory stage. The Barrow natives chant with it:

<i>ānāātataλut</i>	?
<i>mitqutaλut</i>	With long hair (?)
<i>maiγuāluaqtuaγālukupaho</i>	?

The Inland natives sing:

<i>qi' miāluaγukci āniαλi</i>	Your dog, let it out.
<i>qi' miāluaγukci āniαλi</i>	Your dog let it out.
<i>āniαuilāciaq tamna</i>	It never goes out, that dog Aqcikona,
<i>aqcikona maq</i>	maq.

At the word *maq* draw the leash tighter. The right (or left) hand radial string is released and is used to whip the dog out.

The Mackenzie natives sing:

<i>qim' iliaγucieγluk ānuaiuy</i>	Dog, get your harness on.
<i>aiyaya</i>	
<i>ānuαγukcaunaγo ānuaiuy</i>	Don't break it, get it on.
<i>aiyaya</i>	
<i>ānuαγudjoq</i>	It broke the harness.

At the final words the two radial right or left strings, according to how the figure is made, break off; they represent the breaking of the harness.

Coronation gulf natives have no chant.

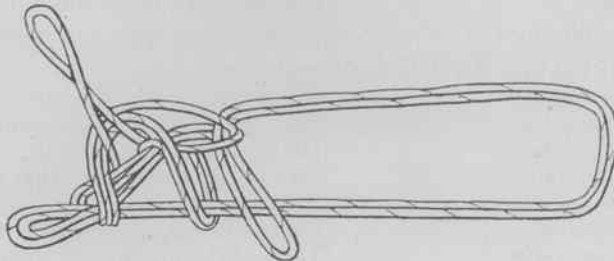


Fig. 39

XXXI. THE ARMS

Dr. Gordon has described this figure from Nunivak island as "the arms" (*moguk*). By the Barrow and Inland natives it is called *tālyγγoq*, which means "he holds his arms up." The Mackenzie and Coronation gulf natives give it the same name, only in those dialects the word follows the ordinary rules of phonetic change and becomes *tālyγγoq*. No chant accompanies it in any of these

places. The same figure, with the same name, appears in Boas' collection both from the west coast of Hudson bay and from Cumberland sound on Baffin island. A Port Clarence (Alaska) Eskimo said that he had seen a continuation of it which produced *niuk*, "the two legs," but he had forgotten how to make it. Probably it was the same as Dr. Gordon's *eruk*, which has the same meaning. I never saw or heard of it elsewhere.

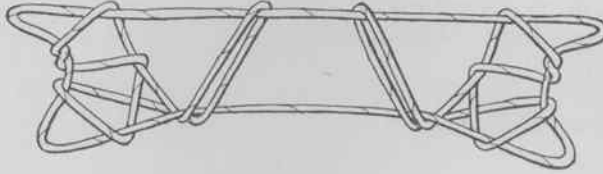


Fig. 40

XXXII. A MAN CARRYING A KAYAK

Dr. Gordon calls this figure "the seagull" (*t'keyack*), which he says was the name given to it at Nunivak island. A Port Clarence man called it *icuyayayq*, but did not know what the word meant. From Barrow to Coronation gulf it bears names which all mean "a man carrying a kayak"; at Barrow it is *maqigtuaqtq*, among the Inland natives of North Alaska *maqagtq*, in the Mackenzie river and in Coronation gulf *maqagtq*. Is it possible, therefore, that Dr. Gordon confused the local word for "kayak" with the word for "sea-gull," which from Barrow to Coronation gulf is *navyag*? Boas has the same figure from Cumberland sound with the name *kutakjew*, the meaning of which I do not know.

"The man's legs" are the two loops that wind round the lower transverse string. "The kayak" is on his back—the two wings of Dr. Gordon's "seagull." The Barrow natives accompany the figure with this chant:

maqigtuaqtq maqigtuaqtq
yuyuwiymin pamuya-a
ateqtuya-a
cavyaqbuk tucaγupku
atqaqtuya-a

He is carrying his kayak, his kayak,
 From (Lake) Yuyuvik to the other side.
 I come down to the sea.
 The old drum, when I hear it,
 I come down from the hills.

(Another version gives *ateqtuya-a* for the last word.)

The Inland Eskimo chant is slightly different:

qayamun maqagtq
maqagtq maqagtq
qayamun maqagtq
cavyanut pamuya
atucavlyya-a-a
ateqtuya ateqtuya
cavyaqblun cavyaqblun
ateqtuya

He is carrying his kayak,
 He is carrying it, is carrying it.
 He is carrying his kayak,
 Our (?) drum to the other side,
 Bringing it to use (?)
 I come down, I come down.
 The old drum, the old drum,
 I come down.

The Mackenzie river and Coronation gulf Eskimos have no chant.

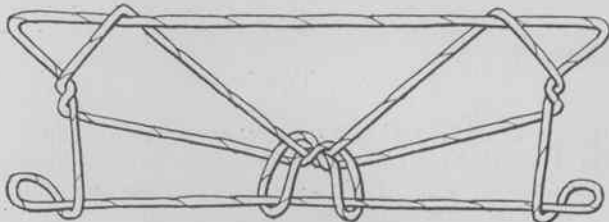


Fig. 41

XXXIII. THE SPIRIT OF THE LAKE

This figure is known from Barrow to Coronation gulf, both in its simple form, where only one "spirit" is produced, and in the more complete form where there are two, one on each side. The Barrow and Inland natives call it *tātciptōryyāya*, i.e. "the spirit of the lake." In the Mackenzie delta and in Coronation gulf it is called *kilivvaq*, "a mammoth." There, however, the double figure is more common, so that the name is nearly always in the dual, *kilivvak*, "two mammoths." Boas has the double figure from Cumberland sound with the name *kelekbatchea*. The Mackenzie natives know of the mammoth from the fossil ivory and bones which have been found in their region, but none have ever been found in the country of the Copper Eskimos, and the *kilivvaq* is known to these natives only by tradition or by report from the western natives. What meaning the Cumberland sound Eskimos attach to their name for the figure is uncertain.

The movements are similar to those of two or three other figures, e.g. "the man carrying a kayak" (No. XXXII) and "fish nibbling at a hook" (No. XXXIV).

Position 1.

With the palm of the right index take up the opposite palmar string and return.

Pass the left index down on the proximal side of the radial little finger string, and with its palm take up the ulnar little finger string and return.

With the palm of the left index from the distal side draw through the radial thumb string, thereby navahoing the index.

Pass the left thumb down, pressing its ulnar string before it, and with its back from the proximal side take up the radial little finger string. Raise the thumb again and with its palm press down on the proximal side of all the strings the radial index string, then, from below the ulnar little finger string, draw out with its back the radial little finger string. Finally with the palm of the thumb draw through the thumb loop the ulnar little finger string where it crosses the palm of the thumb.

Now drop the index loops on both hands and the right little finger loop. Insert the right hand from the proximal side into the right thumb loop and circle it once counter-clockwise.

You have "the spirit of the lake." The Barrow and Inland people say:

tātciptōryyāya iqcināqtoaq tātumnaqtoaq nātqōqeyautilūynun imeyiaqtōqprōli-i.

"The spirit of the lake is dangerous, it should be avoided. Going to a place where people have arrows let it drink."

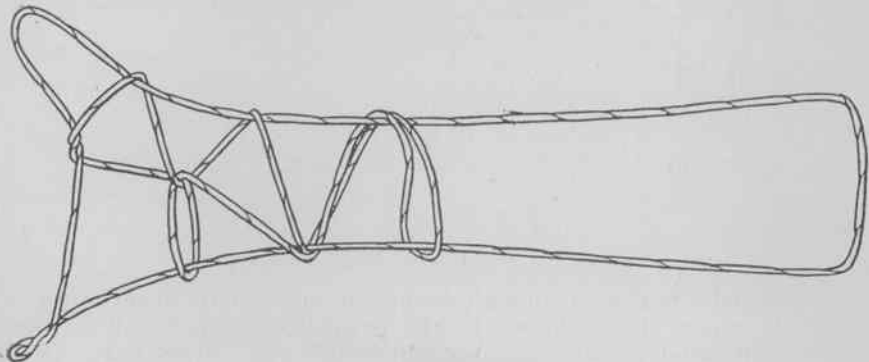


Fig. 42

TWO SPIRITS OF THE LAKE

Position 1.

With the palm of the right middle finger take up the opposite palmar string and return.

With the palm of the left middle finger similarly take up the right palmar string just before it passes behind the little finger.

Pass the indices down on the proximal side of the middle finger and radial little finger strings and with their palms take up the ulnar little finger strings.

Continue as in the single "spirit of the lake," only executing all the movements with both hands instead of with the left hand only.

At the conclusion drop first the middle finger loops, then the index loops.

You have a "spirit" or a "mammoth" on each side.

(To unravel drop the thumb loops.)

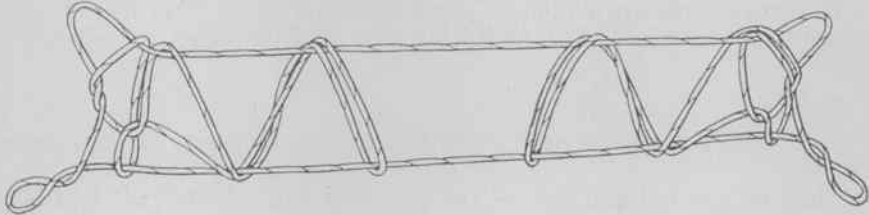


Fig. 43

XXXIV. FISH NIBBLING AT A HOOK

This figure is merely a variation of the single "spirit of the lake" or "mammoth." I have seen it only among the Copper Eskimos, who call it *mikiyätciaq*, "a small fish-bait." The Mackenzie natives give this name *mikiyätciaq* to an entirely different figure which is known to the Copper Eskimos under the name of *nwinagtuagtoryyuk* (see No. CXVIII). The Copper Eskimo figure of "fish nibbling at the hook" is the same as that given by Dr. Gordon from the Anvik Eskimos of Alaska with the name "lake fish."

Position 1.

Bring the hands together and with the back of the right index take up the left palmar string and return.

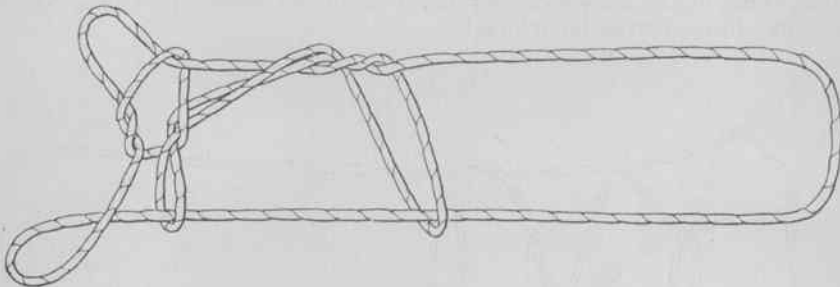


Fig. 44

With the palm of the left index take up the radial little finger string of its hand, not the ulnar. Continue as in "the spirit of the lake," only at the end circle the right hand clockwise, not counter-clockwise. You have the "fish nibbling at the hook."

XXXV. THE POST

This figure is known to the Inland Eskimos as *miluktuaγq*, but no one seemed to be quite certain what the word meant. One native explained it as derived from *miluktuaq*, "she suckles a child." Another said that he thought it meant the leaf of the convolvulus. In the Mackenzie river region, however, it is called *sukaγotaluk*, "the door post," and continued on to produce "the white fox" which ran away when the post fell. The Copper Eskimos, who seem not to know the development into "the fox," called the first figure *cukaγyuk*, "the two sticks which support the lamp."

Opening A.

Pass the thumbs over the other strings and from the proximal side take up the ulnar little finger string and return.

Push the index loops through each other and interchange them on the indices.

With the thumbs from the proximal side take up the radial index strings and navaho the thumbs.

Press down the ulnar index strings and you have "the breast," conical in shape with the nipple below; or, by another interpretation the two perpendicular strings immediately below are "the door-post." This is the completion of the first figure.

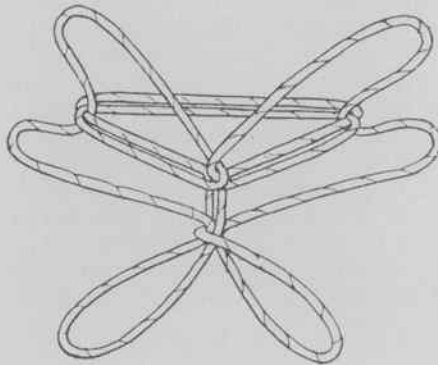


Fig. 45

The Mackenzie Eskimos at this stage say:

cukaγotaluk teriγän'ialum imnaγavatin ulγoin

"Door-post, the white fox is about to urinate against you. Fall on it."

Drop the thumb loops. "The post" has fallen, and you are left with an upper and a lower transverse string and two diagonal strings that loop round each other in the middle.

Transfer the right index loop to the thumb.

With the right thumb from the proximal side remove the little finger loop.

Pass the right little finger into the right thumb loops from the proximal side, press down the ulnar strings, allow the transverse string to slip off, then hook the little finger down over it.

With the back of the right index from the distal side push back the proximal radial right thumb string, then with its palm draw out the upper transverse string.

A parallelogram is formed in the middle. With the palm of the right thumb from the proximal side take up the side of the parallelogram which runs from the middle of the figure to the lower transverse string, then take up with it from the proximal side the radial index string.

Navaho the thumb and drop the right index loop.

Drop the left little finger loop and the fox will run away towards the right.

Say:

teriān'ialum mālikcuāluagluγo ān'uika

"The white fox, when the post tried to fall on it, ran away."

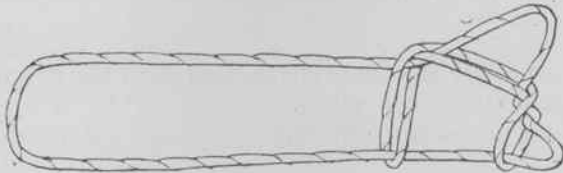


Fig. 46

XXXVI. TWO BIG EYES

This figure was called *πικγυτάκ*, "two snow-shovels," by a Cape Prince of Wales native. At Barrow and among the Inland Eskimos it bore the name *ιγιγιγοκ*, "two big eyes," but a figure obtained prior to the final movement was called *πικγυτάκ*, which also means "two snow-shovels." A Mackenzie native called the final figure *πικκुकάτciāk*, the meaning of which he did not know. Coronation gulf natives call it *πικηυγγυκ*, which is said to mean "a man with his arms raised above his head." A figure that is very similar, and must entail only some slight modification in the movements, is known to the Chukchee and to the eastern Eskimos. The Chukchee call it "whale's head," on the west coast of Hudson bay it is known as "shears" and in Cumberland sound it is called *anawhokshan*, the meaning of which I do not know. It is not improbable that there is some error in my description and figure given below, and that the figure known from Alaska to Coronation gulf is exactly the same as the Chukchee and Eastern Eskimo figure.

Opening A.

With the palms of the indices from the distal side take up the upper transverse string and drop the thumb loops.

With the thumbs from the proximal side, on the proximal side of all the other strings, take up the radial little finger and proximal ulnar index strings.

Pass the thumbs over the index strings, raise up with them, from the proximal side, the ulnar little finger string, then also from the proximal side take up with them the distal radial index strings, and draw them through, thereby navahoing the thumbs.

Drop the little finger loops.

There are now three medial transverse strings running parallel to the upper transverse string.

Pass the little finger upwards on the proximal side of all the strings and with their palms hook down the uppermost of these medial transverse strings at their side sections.

Pass the middle fingers from the proximal side into the index loops and close the two fingers over the radial strings; then with the palms of the indices draw through the upper transverse string and drop the thumb loops.

There are two strings, one on each side, running vertically on the proximal side of all the other strings from the upper to the lower transverse strings. Take up each of these strings from the proximal side with the back of the thumb that is nearer to it.

Katilluik the thumbs, and drop the index loops.

Insert the middle fingers from the distal side into the thumb loops.

Looping round the upper transverse string are two "eyes" formed by double strings.

Pass the indices into these from the distal side, each into the nearer one, and with their palms draw through the upper transverse string.

Withdraw the thumbs from their loops, retaining the middle fingers there. You have "the snow-shovels" (*pikγutak*), according to the Barrow and Inland natives. Drop the middle finger loops and you have "the two eyes," or, according to the Cape Prince of Wales Eskimo, "the two snow-shovels."

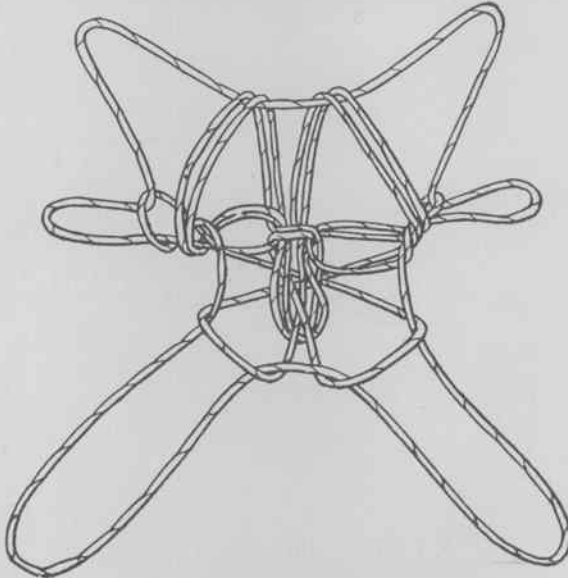


Fig. 47, "The Two Snow-Shovels"

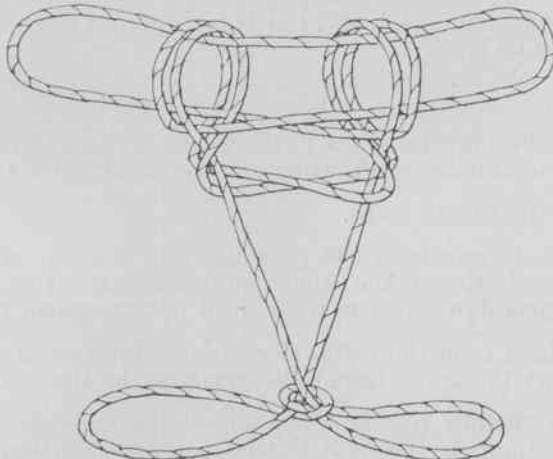


Fig. 48, "The Two Big Eyes"

The Chukchee and Eastern Eskimo figure, which closely resembles the "two big eyes" is shown in fig. 48a.

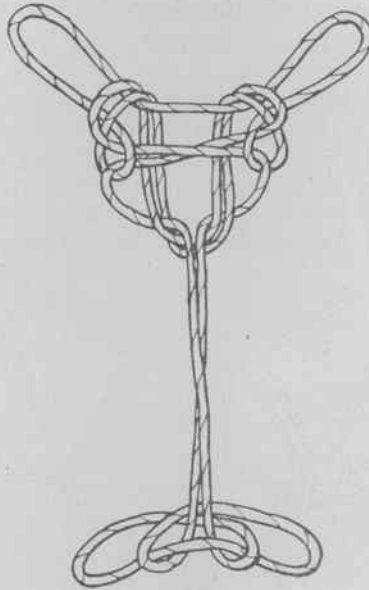


Fig. 48a

XXXVII. THE SCAPULAE

This figure is known by the same name, *keacuk*, "the scapulae," among all the Eskimos from Barrow to Coronation gulf. The Mackenzie natives have also another figure which they call *keacuk*, but it is produced in an entirely different manner (see No. XLVI).

Opening A.

Pass the thumbs down proximal to the index strings and from the proximal side take up the radial little finger string and the ulnar index string.

Drop all but the thumb loops.

Pass the little fingers from the proximal side into the thumb loops and, moving them towards the middle, allow the transverse string to slip off, then hook the little fingers down over it and hold it firmly against the palms.

With the indices from the distal side remove the two distal radial thumb strings, leaving only the upper transverse string on the thumbs.

Katilluik the thumbs (by first twisting the left thumb round the right thumb loop, then dropping the right thumb loop and inserting it into both the left thumb loops from the proximal side, etc.).

With the indices spread apart the proximal and distal radial thumb strings. You have "the scapulae."

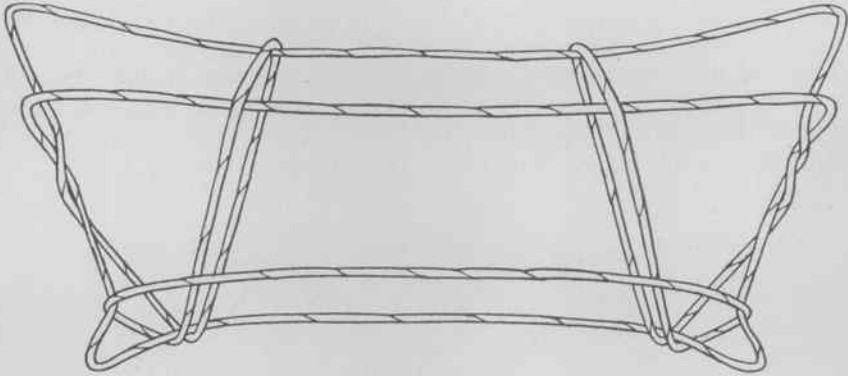


Fig. 49

XXXVIII. THE MEETING OF TWO BROTHERS-IN-LAW

The name given to this figure by the Inland natives is *cäkeçuk paqtuk*, "two brothers-in-law meet." Coronation gulf natives call it "two small ribs" (*tulimätciäk*). I am not sure whether it is found in the Mackenzie river region.

Opening A.

Pass the thumbs down proximal to the index strings and with their backs take up the ulnar index string.

Drop the index loops.

With the thumbs from the proximal side remove the little finger loops.

From this stage proceed exactly as in "the scapulae" (No. XXXVII).

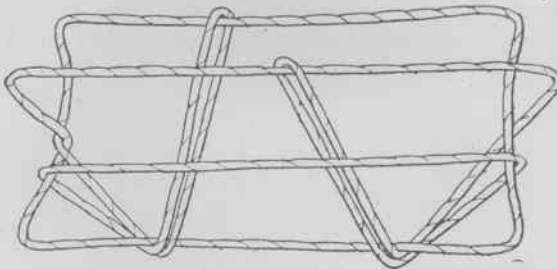


Fig. 50

XXXIX. THE BURBOT = *nätaynaq* (Barrow and Inland Eskimos)

This figure is called by the Barrow and Inland Eskimos of North Alaska *nätaynaq*, "the burbot."

The Mackenzie natives do not recognize it as a separate figure, but only as an incidental stage in the making of *nuyaktöçyuk* (No. XLI).

Opening A.

With the thumbs from the proximal side remove the index and little finger loops.

Pass the little fingers into the thumb loops from the proximal side, and, moving them towards the middle, allow the lower transverse string to slip off, then hook the little fingers down over it and hold it firmly against the palms.

Pass the indices into the thumb loops from the distal side and with their palms draw through the upper transverse string.

Drop the thumb loops. You have "the burbot."

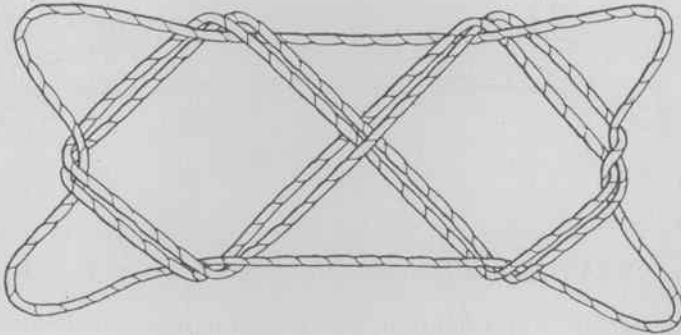


Fig. 51

XL. THE BOW = *picikci* (Barrow and Inland Eskimos)

Make the preceding figure, "the burbot."

With the back of each thumb from the proximal side take up the side of the diamond which runs across the back of the little finger of the same hand, then with the thumbs from the proximal side take up the radial index strings. Navaho the thumbs and drop the index loops. You have "the bow."

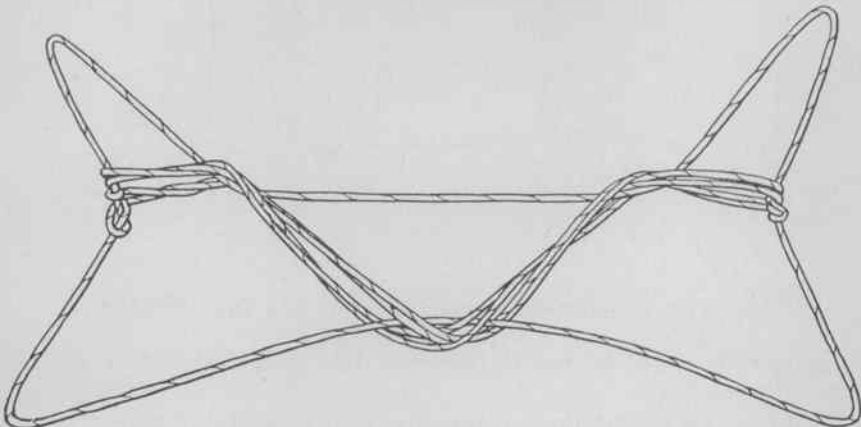


Fig. 52

XLI. A WOMAN PULLING ANOTHER BY THE HAIR

This figure is known to the Inland natives as *nuyaktomanaq*, and to the Mackenzie natives as *nuyaktogyyuk*, while in Cumberland sound Boas gives it the name *nooyatajew*. All these have the same meaning, "hair-puller." The Copper Eskimos have a figure superficially similar which they also call *nuyaktogyyuk*, but it is really quite different and produced in a much simpler manner (see next figure, No. XLII).

Make "the burbot."

Of the two strings which run from the upper transverse string to the palmar string on each side, one makes a single loop round it, the other a double.

With the back of each thumb from the proximal side take up the former of these strings on each side.

Katilluik the thumbs.

With the back of each thumb take up from the proximal side the two strings that run on each side from the upper to the lower transverse string.

Remove the left thumb loops to the right thumb from the proximal side, then draw over them the two original right thumb loops and place them on the left thumb.

With the thumbs from the proximal side take up the radial index strings, navaho the thumbs and drop the index loops.

From the palmar string on each side there are two strings which run on the proximal side to loop round the lower transverse string. With the back of each thumb take up the two that are nearer to it. Katilluik the thumbs. You have "the two women," one tugging the other's hair. If you sway the hands they gradually part in opposite directions.

The Inland Eskimos as they sway their hands chant:

nuyaktomanaq ta'ya
nuyaktomanaq ta'ya
ai'piyokum nuyagäleya
imiqtayyuniwäygo
qeyuqtayyuniwäygo
nuyagäleya

Hair-pulling (?)
 Hair-pulling.
 The other wife's hair she pulled it.
 Because she would not bring water,
 Because she would not bring wood,
 She pulled her hair.

The Mackenzie natives seem to have no chant.

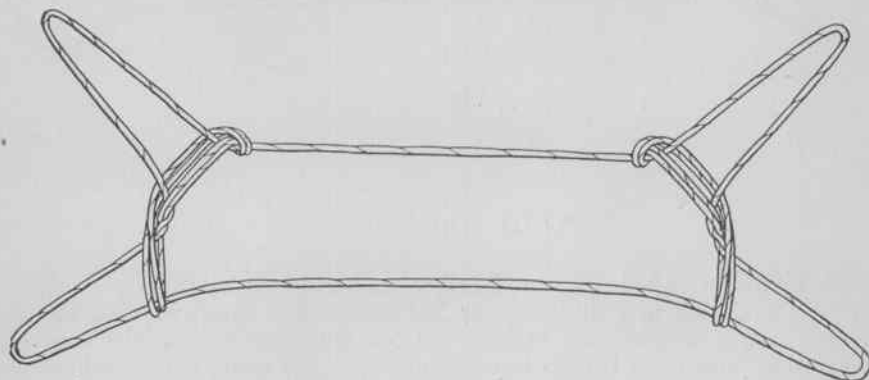


Fig. 53

XLII. HAIR-PULLING = *nuyaktoryuk* (Copper Eskimos)

This figure bears some resemblance superficially to the previous one, and has the same name, which suggests that the Copper Eskimos learned the correct figure "hair-pulling" from the Mackenzie or Hudson bay natives, but forgot it again; in trying to recall it they arrived at this approximation.

Opening A.

With the palms of the indices from the distal side take up the upper transverse string.

Drop the thumb loops and transfer the index loops to the thumbs.

With the indices from the distal side remove the little finger loops.

Pass the little fingers from below into the thumb loops from the proximal side and, pressing back the ulnar strings, hook their palms over the radial index strings.

Insert the indices from the distal side into the thumb loops, and with their palms draw through the upper transverse string, thereby navahoing the indices and the thumbs.

Katilluik the thumbs.

You have "the two women" going away, one towards each hand.

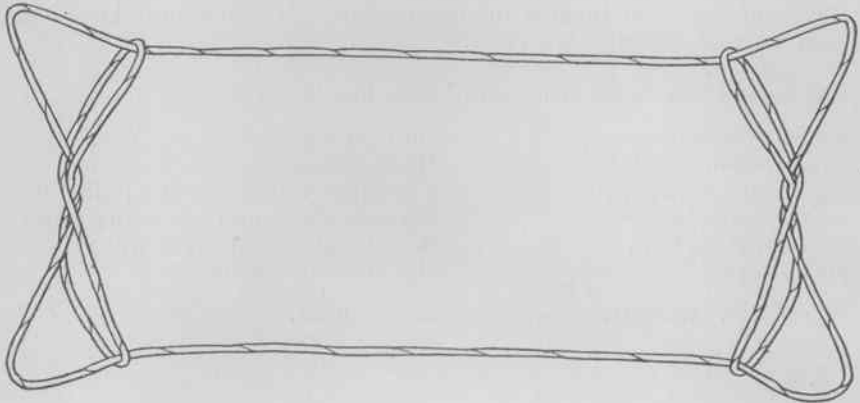


Fig. 54

XLIII. THE BELUGA

This figure is called by the Barrow and Inland Eskimos *cicuaq*, "the beluga." The Mackenzie and Copper Eskimos call it *qiläluḡaq*, which in the Mackenzie dialect means "the beluga." Boas obtained it from the west coast of Hudson bay and from Cumberland sound with the same name "white whale or beluga," but Kroeber, who found it among the Smith sound Eskimos, calls it "narwhal." In both this and the succeeding figure, "the seal," the movements are very unusual and complicated.

Opening A.

Pass the middle fingers into the little finger loops from the distal side and with their palms take up the ulnar thumb string on one side and the radial index string on the other (the same string, but the one of the two diagonals which passes over the other).

Drop the little finger loops.

Turn the middle fingers down and insert the ring and little fingers into the middle finger loops from the proximal side, releasing the middle fingers.

The ulnar left index string crosses over and loops round the radial right index string, then runs under the ulnar right thumb string to the left palmar string.

Bring the left index across and with its palm take up this string just before it passes under the ulnar right thumb string, and return.

Pass the right middle finger into the right thumb loop from the proximal side (*i.e.* so that the back of the middle finger pushes out the ulnar right thumb and the radial and ulnar right index strings) and draw across with its palm the two radial left index strings.

Similarly pass the left middle finger into the left index loops and with its palm take across the right ulnar thumb string, drawing it through the left index loops.*

Pass the left thumb into the left middle finger loop from the distal side and draw through with its back the radial right index string just where it loops round the two ulnar left index strings.

Drop all the loops on the right hand except the little finger loop, and the ring, middle and index loops of the left hand.

Dropping the left thumbloop, with the left thumb and index take hold of what was the radial right index string, and with the right thumb and index take hold of the same string after it loops round another string.

Separate the two hands, placing these loops on the thumbs.

You have "the beluga."

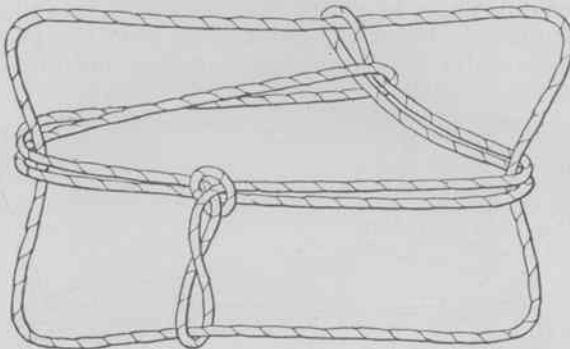


Fig. 55

The Inland Eskimos continue as follows:

There are two strings which run from each palmar string up to a short string that loops round the upper transverse string.

Pass the indices from the distal side in between these two strings on each side and with their palms from the distal side draw out the upper transverse string.

Drop the thumb loops and say:

αγεωνιαχλια ιν'ιγα

"He disembowelled it and hung it up."

You have "the beluga" hung up to dry.

(To disentangle the figure repeat this last movement.)

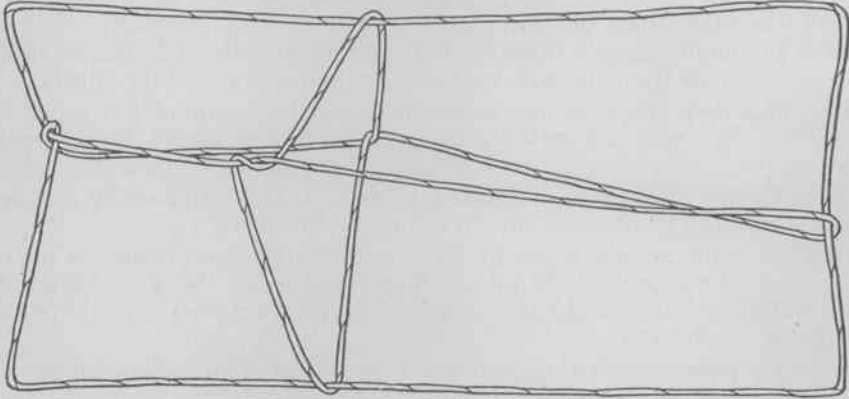


Fig. 56

XLIV. A SEAL = *nätcegyuk* (Coronation gulf)

This figure is a modification of the preceding.

Proceed as in "the beluga" up to the stage marked *.

With the palm of the left thumb from the distal side take up the radial right thumb string (*i.e.* twist it round the other end of the upper transverse string).

Drop the right thumb loop over to the left of the left thumb, taking care that it does not fall over that thumb, then insert the right thumb from the proximal side into the left thumb loop.

Between the middle finger loops are two diagonal strings that intersect each other. Pass the thumbs in below the index loops from the proximal side and with their backs take up the two lower strings of these diagonals, one with each thumb, and draw them through.

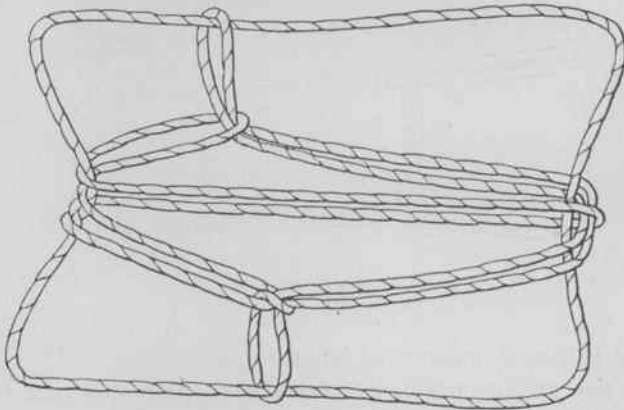


Fig. 57

Drop all the loops except those on the little fingers and the thumbs. You have "the seal."

To disentangle the figure pass the indices into it from the distal side, and raising the two strings which run on each side from the palmar string up to the string that loops round the upper transverse string, draw through with their palms the upper transverse string.

Remove the index loops to the thumbs and repeat this movement on the distal transverse string. All the loops dissolve.

XLV. THE GULLET

This figure is called *txluxyuk* by the Barrow and Inland natives, *txluxyuk* by the Mackenzie and Copper. The meaning is the same, "the gullet," probably of a caribou. It is developed among the two latter peoples to produce, in the one case "the scapulae" of the caribou, amongst the Copper natives its "head," although according to some it is the head of a musk-ox, not a caribou.

Opening A.

Pass the thumbs over the radial index strings and raise from the proximal side the ulnar little finger strings; then with the backs of the thumbs draw the radial little finger strings through between the radial and ulnar thumb strings, allowing these thumb loops to slip off.

Point the indices inward and on the distal side of all the strings remove, with the palm of the right index, from the proximal side, the left index loop, then insert the right index into both the left index loops.¹

Insert the ring and middle fingers into the index loops from the proximal side and hold down with them the ulnar strings while with the backs of the indices you draw through the ulnar thumb strings, thereby navahing the indices.

Withdraw the ring and middle fingers.

You have "the gullet." Spread the fingers with their loops wide apart and "the gullet" is distended; bring them together and "the gullet" is contracted and "starved."

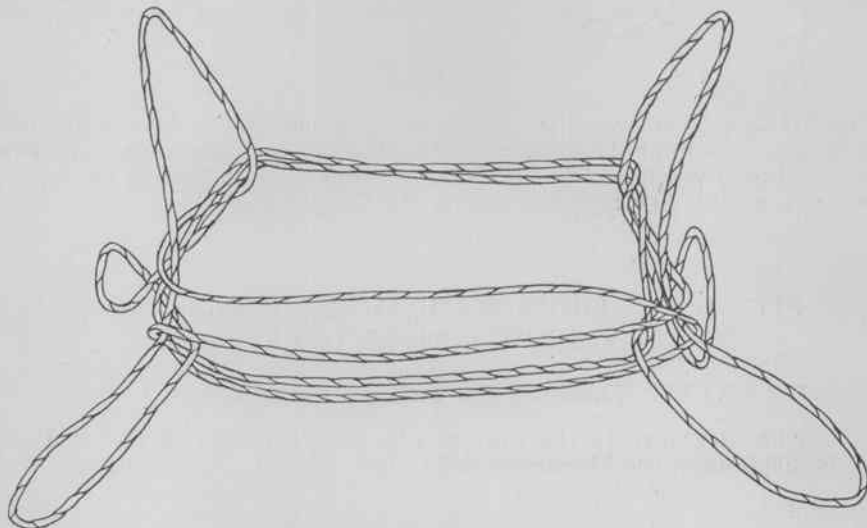


Fig. 58

¹ In every case of this kind where two loops are combined care must be taken, as in the movement of 'katilluik,' to remove that loop which runs inside its companion loop on the opposite finger or thumb.

XLVI. THE SCAPULAE OR THE HEAD OF THE CARIBOU

Make "the gullet."

Drop the index loops and invert the loops on the thumbs to make the strings run straight.

Put the thumb loops together, then from the proximal side take up the ulnar little finger strings and navaho the thumbs.

Near each thumb a string runs up from the lower transverse string to loop round the upper transverse string.

Pass the indices into the loop it thus makes just below the upper transverse string and draw through the horizontal string which runs parallel and just below the upper transverse string.

Spread apart the thumb and index loops and you have "the scapulae," or, according to the Copper Eskimos, "the head" of a caribou or musk-ox, the loops that by the Mackenzie natives are considered "the scapulae" being the up-standing horns.

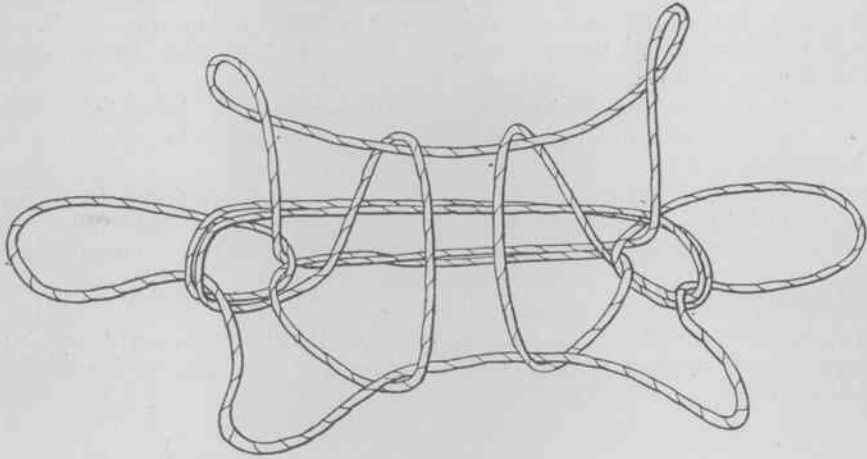


Fig. 59

The Mackenzie natives then continue by grasping the two radial index strings in one hand and the two radial thumb strings in the other. Separate the two hands and you have "the little finger," or, as they call it *atiq* (see fig. 20). I have not seen this development among the Copper Eskimos.

SECTION 2. FIGURES FOUND IN ALASKA AND MACKENZIE RIVER ONLY

XLVII. THE FISH-NET TORN BY POLAR BEARS

This figure is known to the Barrow and Inland natives of North Alaska, and to the Eskimos of the Mackenzie delta.

Opening A.

Pass the thumbs over the radial index strings and take up with them from the proximal side the radial little finger strings.

With the backs of the middle fingers on the distal side of the index loops take up the ulnar thumb strings.

Drop the thumb loops.

Pass the thumbs over the radial index strings and take up with them from the proximal side the ulnar little finger strings.

Drop the index loops and transfer the middle finger loops to the little fingers and both little finger loops to the indices.

With the ring and little fingers from the proximal side remove the thumb loops.

Pass the thumbs into the little finger loops from the proximal side and with their palms draw down the distal ulnar index strings, then with their backs from the proximal side take up the ulnar little finger strings.

Drop the little finger loops and with the little fingers from the proximal side remove the thumb loops.

Transfer the index loops to the thumbs, and, inserting the indices into the thumb loops from the distal side, draw out with their palms the upper transverse string. Drop the thumb loops.

You have "the fish-net."

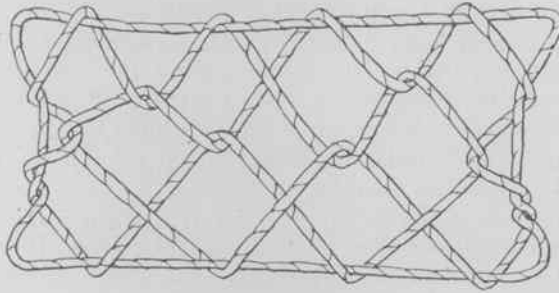


Fig. 60

To obtain "the two polar bears" which tore "the net."

There are four strings looping at different places round the upper transverse string, and four others corresponding to them that loop round the lower transverse string. They make "four eyes" at top and bottom. Transfer the index loops to the thumbs.

Pass each index from the distal side in between the first and second "eye" from the bottom corner of the same hand just above the lower transverse string, raise with it all the strings of the figure, and pass it out again through the corresponding place just below the upper transverse string. Now with the palms of these indices draw through the upper transverse string at each of these places and drop the thumb loops.

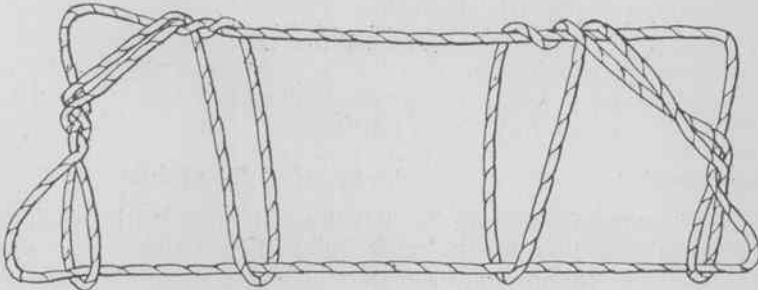


Fig. 61

"The net" disappears, and "two polar bears" are seen going away in opposite directions.

XLVIII. THE KAYAK

This is the figure described by Dr. Gordon from King island, to which he gives the name, "kayak." It is known by the same name to the Barrow, Inland, Mackenzie delta, west coast of Hudson bay and Cumberland sound Eskimos. I could find no chant at Barrow, merely the words *qayaq ciämutiya*, "the ice broke up the kayak," uttered while dropping the little finger loops, when "the kayak" disappears. The Inland natives from the Endicott mountains have a chant for the figure, which is known also to the Mackenzie delta Eskimos.

At Barrow the figure is produced more simply than by Dr. Gordon's method. Whether the Mackenzie Eskimos follow the Barrow method or not I failed to notice. The Barrow natives proceed as follows:

Opening A.

Pass the thumbs down proximal to the radial index strings and with their backs from below take up the ulnar index strings. Release the indices.

With the thumbs from the proximal side remove the little finger loops.

Pass the little fingers from below from the proximal side into the thumb loops and, moving them towards the middle, allow the lower transverse string to slip off, then hook the little fingers down over it.

(Hitherto the method is the same as Dr. Gordon's.)

With the palms of the indices from the distal side turn out all the radial thumb strings and release the thumbs.

Allow the transverse string to slip over the tips of the indices, then, passing each thumb through the index loop of its hand, take up with it this transverse string from below and draw it out to the proximal side of all the strings.

Katilluk the thumbs, then spread apart with the indices the two loops on the thumbs. You have "the kayak."

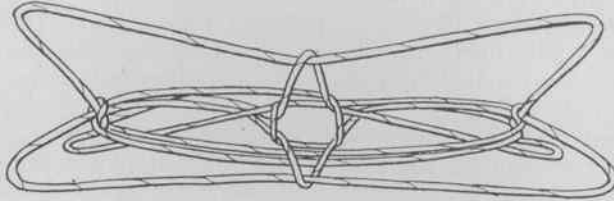


Fig. 62

The Inland and Mackenzie chant is:

<i>qayaγätciäq</i>	A bad kayak
<i>yuyuyüätciäm qilaunoγatın</i> came over the top of you.
<i>pavitik'in nāpaλ'uk</i>	Your double-bladed paddle hold it upright.
<i>kinγuin</i>	Capsize.
<i>ānoqopätciaq</i>
<i>aqcibuqotuyaqtaγın</i>	Move along the ground.

At the word *ānoqopätciaq* drop the little finger loops. With the right thumb from the proximal side take up the radial right index string.

Navaho the right thumb and drop the index loop.

The meaning of the word *ānoqopätciaq* is unknown to me. A Copper Eskimo figure (No. IX) has a name that is almost identical, but that was said to be derived from *ānak*, "a noose," and *qopätciaq*, which was thought to be the name of a bird. No such meaning can be applicable here.

XLIX. THE BROWN BEAR CUB

In this figure, or series of figures, the Inland natives produce successively "a brown bear cub," "a white bear cub," "a young beaver," "a young man," and "a small rope." The whole series goes by the name of the first of these objects, "the brown bear cub" (*ayluaiya*). The Eskimos of Cape Prince of Wales have a rather similar chant, which is said to accompany a cat's cradle figure, probably the same as this one. A Mackenzie native knew the figures and remembered that there was a chant accompanying them, but could not recall the words. Boas has the first figure, "the brown bear cub," from Cumberland sound with the name *sissiwatto*, the meaning of which I do not know.

Opening A.

Push the index loops through each other and interchange them on the indices.

Passing the left thumb over the radial left index string remove with it from the distal side the left index loop.

With the left thumb from the proximal side remove the left little finger loop.

Pass the left little finger into the left thumb loops from the proximal side and, pushing down all the ulnar strings, allow the lower transverse string to slip off, then hook the little fingers down over it.

Pass the left index into the left thumb loops from the distal side and with its palm draw out the upper transverse string.

Drop the left thumb loops.

You have now a diamond near the left hand, three sides of which are formed by double strings.

Pass the left thumb into the left index loop from the proximal side, bend it back to enter the diamond from the distal side and the right thumb loop from the proximal side, and, twisting the back of the left thumb round the radial left index string, draw that string out clear of all the loops.

With the left thumb from the proximal side take up the radial left index string.

Drop the right thumb and little finger loops, and taking hold of the radial right index string between the left thumb and index, release the right index.

Pass the right index into the left thumb loops from the proximal side and draw back with it through the thumb loops its old loop which is being held between the left thumb and index.

Drop the left thumb loops, so that you have left only a loop on the left index, another on the left little finger, and a third on the right index.

Circle the right index loop twice counter-clockwise and hold it in the right hand. You have "the brown bear cub."

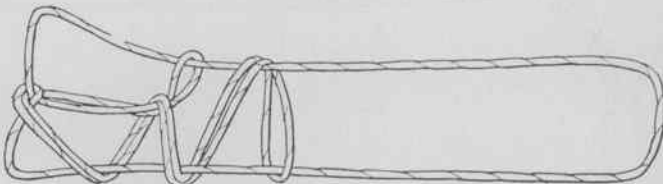


Fig. 63

Chant twice:

aḡluḡātcuma kaviāya

Brown bear cub

and, releasing the right hand loop, draw out with it the lower transverse string, taking hold of it just to the left of the first loop to the right. You have "the polar bear cub."

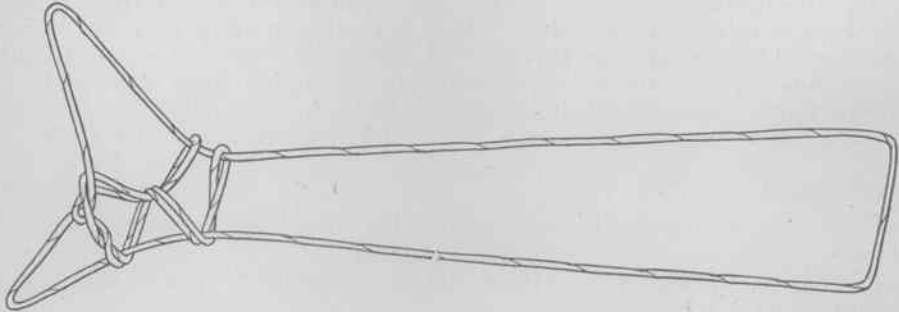


Fig. 64

Chant twice:

nānuaiya kaviāya

Polar bear cub

and similarly draw out the upper transverse string behind the first loop from the right. You have "the young beaver."

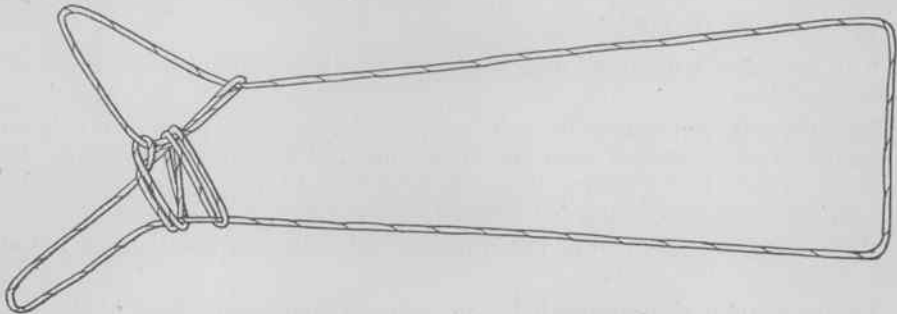


Fig. 65

Chant twice:

kivaiya kaviāya

Young beaver

and draw out likewise the next loop. You have "the young man."

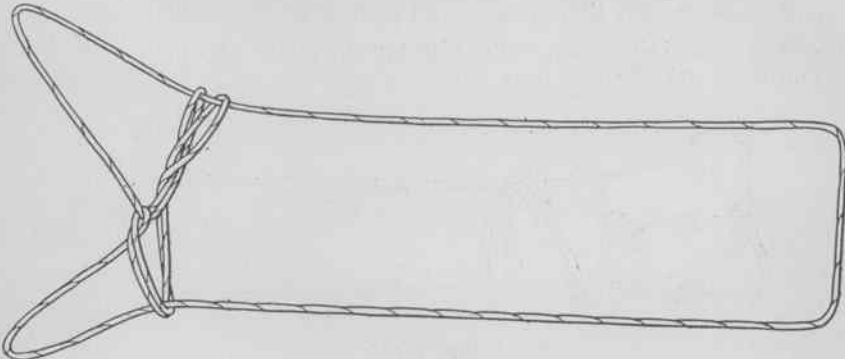


Fig. 66

Chant twice:

inʷaiiya kaviāya

Young man

and draw out the lower transverse string again behind the first loop on the right ("the man's legs"). You have his "rope" hanging on the left hand corner of the upper transverse string.

Chant twice:

aklunauya kaviāya

His small rope

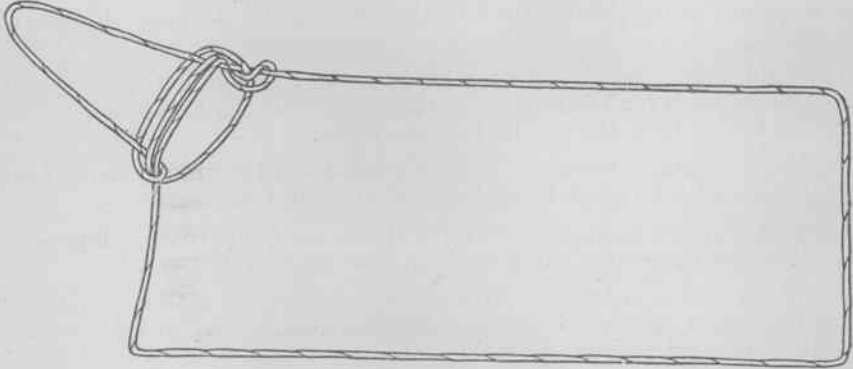


Fig. 67

The Cape Prince of Wales chant ran:

*nānuwa nānuwa
qariya qariya
kiyaγya kiyaγya
kivγyγcure kivγyγcure
aklunauya aklunauya
aγlowa aγlowa*

Polar bear cub, polar bear cub.
Wolverine cub, wolverine cub.
Shoulder-blade, shoulder-blade.
Fish-net, fish-net (?)
Small rope, small rope.
Killer whale, killer whale.

L. THE DUCK

This figure was first obtained from an Eskimo woman of Cape Prince of Wales. Unfortunately I omitted to record the Eskimo name for the duck, so as to identify the species. An Inland Eskimo from the Cólville river made a very similar figure, but called it *qopānγoq*, which he said was a small bird. Probably it is the same as the *qopān·oag* of Coronation gulf, the Lapland Longspur, which the northern Alaskan natives variously name *kupaxluk*, *kupax·loaluk* and *putukivukluk*. This Inland native knew the continuation of the figure into "two youths" which resembled the figure that the Cape Prince of Wales woman called "two men," but while the woman went on to develop other figures from it, the Inland native ceased at this point. In the Mackenzie there is a figure almost identical, the difference arising in one of the later movements. There it is called *tuγmiaqpak*, "the eagle," which amongst the Copper Eskimos bears the name of *qopān·oagraqγyuk*, "the big longspur." This might almost suggest that *qopān·oagraqγyuk* or *qopān·oagpak* (both suffixes mean "big") was originally one name for the eagle in the Mackenzie also, that these natives learnt a figure *qopān·oag* from the Inland Eskimos, forgot it, but arrived at an approximation to it which they called the big *qopān·oag*, "the eagle." I have never seen the figure in Coronation gulf.

Opening A.

Circle the indices clockwise so that they take up from the distal side the radial little finger strings as well as their own ulnar strings.

Insert the middle and ring fingers into the index loops from the proximal side and hold down with them the radial index and the ulnar thumb strings.

With the palms of the indices draw through from the distal side the radial thumb strings.

Allow the radial thumb strings to slip off, but, pressing down with their palms the ulnar strings,¹ take up with the backs of the thumbs the ulnar little finger strings.

Turn the little fingers inwards,² remove the right little finger loop to the left little finger from the proximal side, then insert the right little finger from the proximal side into both the left little finger loops.

With the palms of the little fingers draw down the thumb loops from the proximal side and hold them firmly against the palms of the hands.

Drop the thumb loops and transfer the index loops to the thumbs. Just below the upper transverse string on each side there is an "eye."

Insert the indices into these from the distal side and with their palms draw through the upper transverse string, without releasing the thumb loops. You have "the duck" with outspread wings.

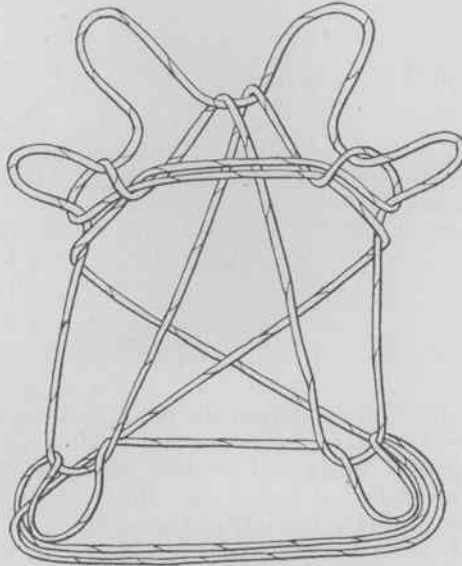


Fig. 68

The Cape Prince of Wales woman chanted:

qaiyaγovvq piṅṅ
pamiukavvq piṅṅ
cunatak-iaq qaitpāta tiymirut
ica-a qoyniaγpiuy
a-a-a-a e-e-e-e p-r-r-r-r-

Red fox up there,
 With its long tail up there,
 Something—when the birds come,
 When their wings appear in the distance
 a-a-a-a e-e-e-e p-r-r-r-r

¹ It is at this point that the Maekenzie figure "The Eagle" branches off. See next figure (No. LI).

² The Inland figure branches off here.

At the sound of p-r-r-r in the chant release the thumb loops. You have "two men" facing each other.

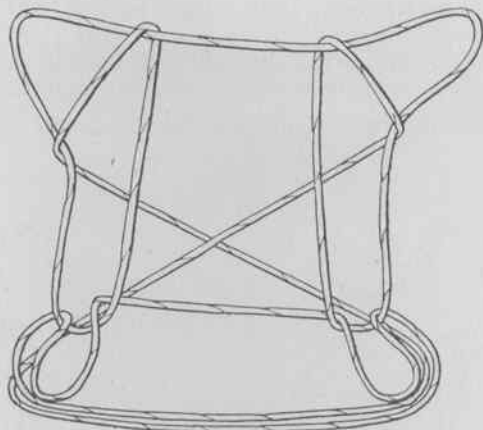


Fig. 69

Hold the left hand out, the right hand in, and say:

e-e puiktaγγacia uma uγγia

I'm going to shoot that bird, I made it fly.

Now hold the right hand out and the left hand in and say:

*uwaηaεptaυq miuktaγγacia
uγγin*

I'm going to hit it with a stone too, even if you did make it fly.

Again hold the left hand out and say:

qa ātatin cowilaq

Your grandfather has no knife
(sneeringly).

Right hand out:

qa ātatin cowiqa'toq coqa'mik

Your grandfather has a knife made of
whalebone.

Left hand out:

qa ātatin umiaγilag

Your grandfather has no boat.

Right hand out:

qa ātatin umiāqa'toq netikamun

Your grandfather's boat is made of
rotten boot-soles.

Left hand out:

ki tiulukuyukpiluk

Well, let's fight it out.

Then "the two men" begin to fight.

Push the index loops through each other three times; this indicates the men fighting.

Now hold the index loops up high, drawing all the strings very tight. Pass the right thumb into the middle of the figure just below the tangled strings, and drop the index loops. "The two men" have become "two sticks," one on each side of the thumb, running down to the little fingers (*nāvaγiayautak*).

(I am not sure from my notes of the exact position of the thumb, consequently the figure for the two sticks is uncertain).

Dropping the little finger loops, pull out the two lower transverse strings with the left thumb in one direction and the right thumb in the other. The figure breaks up—a spirit has carried off the men. (*tunγay neγitkik*.)

L. (a) THE LONGSPUR

Proceed as in the last figure up to the stage marked ². At that point, turning the little fingers inward, take up with the palm of the right little finger the left ulnar little finger string, and with the palm of the left little finger the right radial little finger string, then draw these loops through one another.

Proceed as in "the ducks." You have "the longspur."

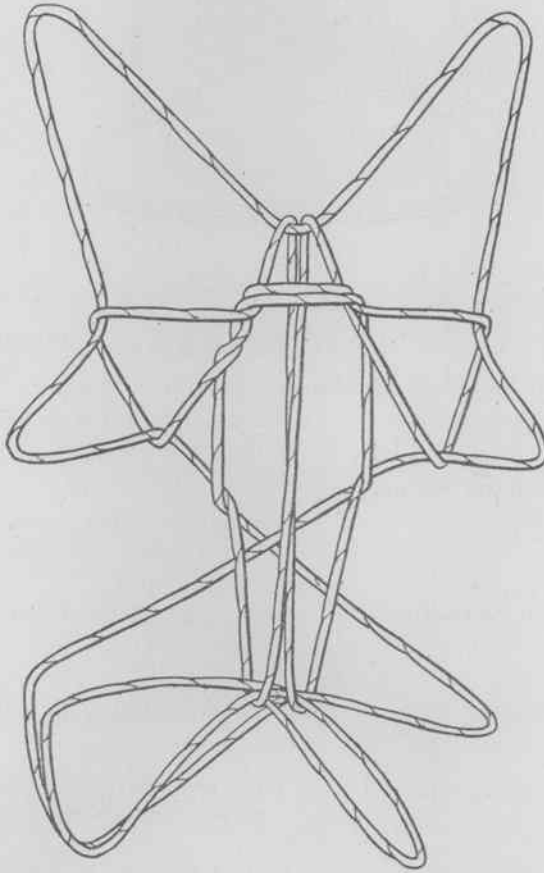


Fig. 70

Chant:

qopanγoq ica-a-a-a
εγίγλαum πυημηγαν qamaηγani

cio-oq cio-oq cioq

Then, dropping the thumb loops:

nukätπιαηuloäluyog
τυηpγαλαqpak

The longspur its wing.
At the foot of a mountain on its sheltered
side
(The bird's note).

Two small boys made it fly away.

You have "the two small boys" in place of the birds.

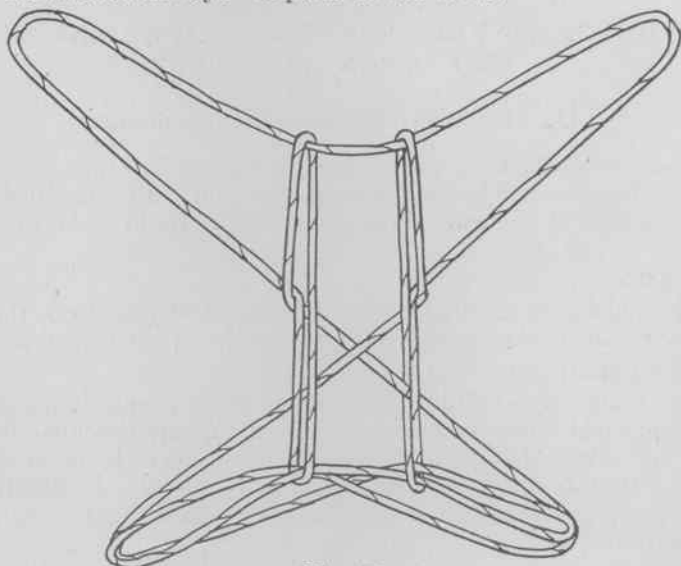


Fig. 71

LI. THE EAGLE = *tymiaqqak* (Mackenzie)

Proceed as in the preceding figure, "the duck," up to the stage marked ¹.

Combine the thumb loops before taking up with them the ulnar little finger strings. Then proceed exactly as in "the duck," only navaho the little fingers. You have "the eagle."

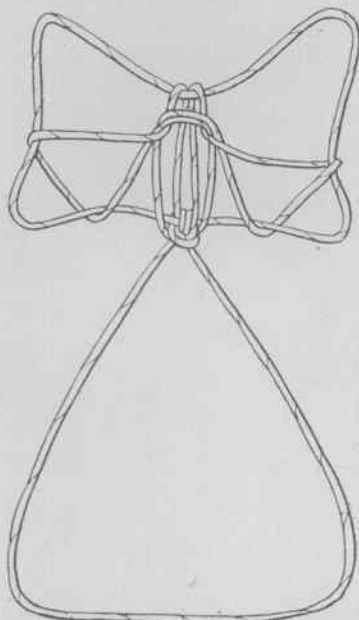


Fig. 72

To resolve the figure drop the thumb loops, saying *acuyäcuyogtsq* (meaning unknown), and take hold of the upper and lower transverse strings in the middle as usual.

SECTION 3. FIGURES FOUND IN MACKENZIE DELTA
AND CORONATION GULF

LII. TWO MEN CARRYING WATER-BUCKETS

This figure bears the same name, *umiqtaqtoryuk*, "two men carrying water," in both the Mackenzie delta and Coronation gulf. In Boas' collection from Cumberland sound it is called *eglootooto*, which would seem to mean "two together."

Opening A.

Pass the indices round under the little finger strings from the distal side and with their palms take up and draw round the upper transverse string.

Drop the thumb loops.

With the palms of the thumbs press down the proximal radial index strings, and with their backs from the proximal side lift up the two little finger strings, both radial and ulnar, then with their palms push down the ulnar index strings, one with each thumb, inside the two strings that cross in the middle.

Invert the loops on the thumbs so that they pass through from the proximal side and point outwards.¹

Pass the left middle finger from below into the middle of the strings just below where the two radial thumb strings intersect, and hook its palm over the upper transverse string (the proximal radial index string) and draw it down outside of all the strings.

Now pass the middle finger, pointing inwards, over the top of the index loops, and with the palms of the thumbs draw through the thumb loops the string that passes over the back of the middle finger.

Pass the thumbs with their loops downwards on the proximal side of all the strings, pressing their new ulnar strings before them, and with their backs on the distal side of the ulnar little finger strings draw out the radial little finger strings.

Finally pass the backs of the thumbs under the lower transverse string from the proximal side, and with their backs take it up, thereby navahoing the thumbs.

Drop the index loops.

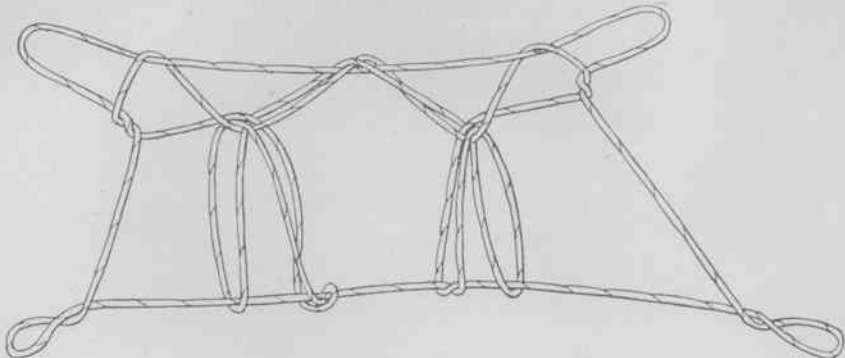


Fig. 73

You have "the two men carrying water-buckets"; their feet are on the lower transverse string in the middle, the toes pointing towards each other. Immediately behind them are their buckets, the loops that pass round the lower transverse string, one on each side.

¹ The steps in the next figure *yayaiye* are the same up to this point.

LIII. *yaɣaiye*

This figure was obtained from some Coronation gulf natives, who gave it the above name, but could not tell me the meaning of the word.¹ It would be the same as the preceding figure, but for a slight movement in the middle of the process which is less intricate than the corresponding one in "the water-buckets," and for the final movement. Possibly it arose from the attempt of some native to recall "the two water-carriers."

Proceed as in "the two water-carriers," up to the stage marked ¹.

With the palms of the thumbs from the proximal side draw the upper transverse string through the thumb loops.

Pass the thumbs proximal to all the strings, pressing its new ulnar loop before it, and with their backs on the distal side of the ulnar little finger strings draw out the radial little finger strings.

Drop the index loops. You have *yaɣaiye*.

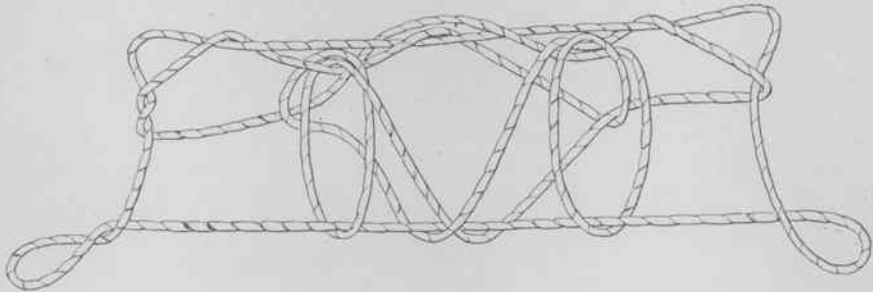


Fig. 74

LIV. Two MUSK-OXEN

This figure is called *umuymatciäk*, "two musk-oxen," by both Mackenzie and Copper Eskimos, but in Boas' collection from the west coast of Hudson bay it is called "ground mole." All the first series of movements are identical with those in "the two big eyes" (No. XXXVI).

Opening A.

With the palms of the indices from the distal side take up the upper transverse string and drop the thumb loops.

With the backs of the thumbs from the proximal side take up the radial little finger and the proximal ulnar index strings, then, passing them down on the distal side of the index strings, raise up the ulnar little finger strings from the proximal side; finally, with the backs of the thumbs, from the proximal side, but on the distal side of all the strings, take up the distal radial index strings, and draw them out through all the strings, thereby navahoing the thumbs.

Drop the loops on the little fingers,² and, passing these into the thumb loops from the proximal side, hook down through all the strings with them the uppermost transverse string that runs from one palmar string to the other.

Insert the middle fingers from the proximal side into the index loops, then with the palms of the indices draw through the upper transverse string from the distal side and drop the thumb loops.

¹ It may be connected with the Mackenzie word *yaɣaiyag*, which means 'he is tired.'

² Up to this stage the movements coincide with those of 'two big eyes' (No. XXXVI).

Two strings run perpendicularly in the middle from the upper to the lower transverse strings on the proximal side. With the palm of each thumb from the proximal side raise up the nearer of these strings, then from the proximal side take up with them the radial index strings.

Navaho the thumbs and drop the index loops.

You have "the two musk-oxen," one against each hand, facing in opposite directions.

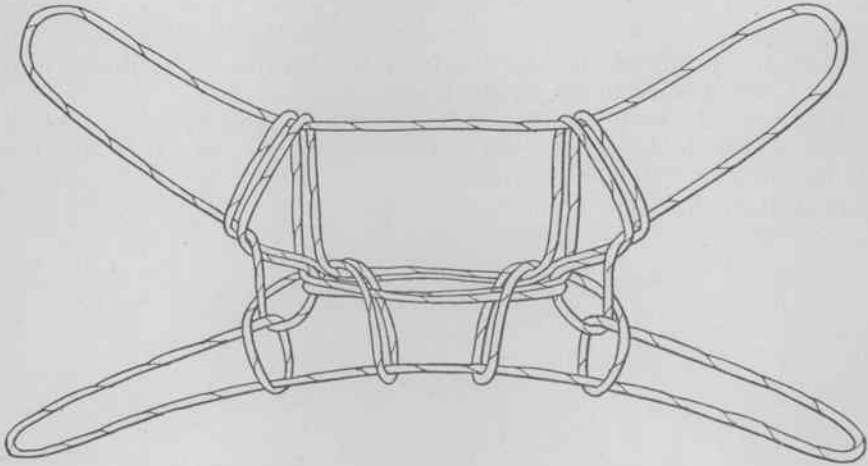


Fig. 75

LV. TWO BULL CARIBOU

This figure is called *payneyyuk*, "two bull caribou," by the Mackenzie and Copper Eskimos.

Opening A.

With the thumbs from the proximal side remove the index loops, then from the distal side the little finger loops (passing the thumbs over the radial little finger strings into their loops).

Pass the little fingers from below from the proximal side into the thumb loops, press down the ulnar strings, allow the two transverse strings to slip off, then hook the little fingers down over them.

Pass the indices into the thumb loops from the distal side, press back the diagonal strings, then hook their palms over the distal radial (the distal transverse) string.

Drop the two distal loops on the thumbs and katilluik the remaining loop (the upper transverse string).

Transfer the thumb loops to the indices.

In the middle two strings run from upper to lower transverse strings, one on each side. With the back of each thumb from the proximal side take up the nearer one of these strings below the middle transverse string.*

Katilluik the thumbs.

Transfer the thumb loops to the indices.

A string runs from the radial to the ulnar little finger strings on the proximal side near each hand. Take each up with the back of the nearer thumb and carefully katilluik.

As you navaho the thumbs two horizontal strings are thrown over all the strings to the back. Seize both of these with the right index and middle finger, draw them down behind all the strings to the bottom, then, removing the thumb loops to the indices, insert the thumbs into them from below so that there are two loops on each thumb.

With the thumbs from the proximal side take up the radial index strings, navaho the thumbs, drop the index loops, and transfer the thumb loops to the indices.

At the bottom of the figure two strings, one on each side, run from the radial little finger strings to loop round the lower transverse string about the middle of its course.

Take each up between the radial and ulnar little finger strings with the backs of the thumbs from the proximal side, then take up the radial index strings. Navaho the thumbs and drop the index loops.

At the back of the figure there is on each side a string which runs from the radial to the ulnar little finger strings, after which it continues up to loop round the upper transverse string.

Pass the indices down on the distal side of all the strings and take up with the palm of each this string where it passes between the radial and ulnar little finger strings; then with the palms of the indices from the distal side draw the radial thumb strings through the index loops, thereby navahoing the indices.

Drop the thumb loops. You have "the two bull caribou," one on each side, facing in opposite directions.

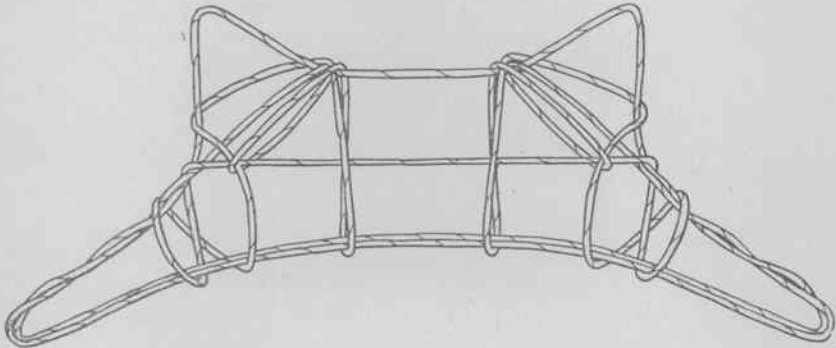


Fig. 76

LVI. THE TWO MOUNTAIN SHEEP

This figure is a modification or continuation of the preceding figure, "two bull caribou." It is known to the Eskimos of the Mackenzie delta, Coronation gulf, west coast of Hudson bay, and Cumberland sound. The Mackenzie delta natives call it *umnek*, "two mountain sheep," and produce it by branching off during the early stages in the making of the "two bull caribou." The Coronation gulf Eskimos call it *aqeeyoatciak*, "the stomach of a caribou," and develop it from the final figure in the "two bull caribou." I do not know how it is produced by the eastern Eskimos; the Hudson bay natives call it "seal entrails," and those of Cumberland sound *acleheyawatchea*, the meaning of which is unknown to me.

(a) Mackenzie delta method:

Proceed as in "the two bull caribou" up to the stage marked *. Then, instead of "katilluiking," with the right thumb from the proximal side remove the left thumb loop. Draw the old right thumb loop over the new loop and place it from the proximal side on the left thumb.

With each thumb from the proximal side take up the radial index loop, navaho the thumbs, drop the index loops and transfer the thumb loops to the indices.

Take up with the back of each thumb from the proximal side the string that runs on each side from the radial to the ulnar little finger strings on the proximal side and katilluik. You have "the two mountain sheep."

(b) Coronation gulf method:

Make "the two bull caribou."

Remove the index loops to the thumbs.

With the palms of the indices on the distal side of all the strings lift up on each side the nearer horn of "the caribou" (*i.e.* the string that passes from radial to ulnar thumb string on the distal side).

Now with the palm of each index draw through the radial thumb string of its hand from the distal side. Drop the thumb loops.

You have the two halves of "a caribou's stomach."

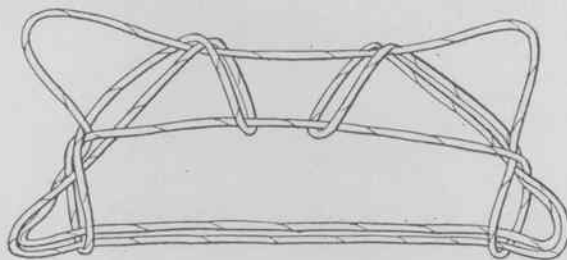


Fig. 77

LVII. TWO FAWNS

The Mackenzie natives call this figure *noḡācak* or *noḡātciak*, the Copper Eskimos *noḡātciäk*. Both words mean the same, "two young fawns."

Opening A.

Pass the indices into the little finger loops from the distal side and on the proximal side of the ulnar thumb strings take up the upper transverse string and return.

Pass the thumbs down on the proximal side of all the strings, pushing their ulnar strings down with them, and with their backs from the proximal side take up the lower transverse string. Raise them again and with their palms draw through each thumb loop the upper transverse string.

Again pass the thumbs down as before, pushing down with them their ulnar string, and on the inside of the ulnar little finger strings draw the radial little finger strings through the thumb loops with the backs of the thumbs from the proximal side. Then pass them down below the lower transverse string, and where this crosses the palm of each thumb draw it out through the thumb loop.

You have left only one loop on each thumb.

Drop the index loops. You have "the two fawns," one on each side, facing in opposite directions.

(All the last movements with the thumbs recur in several other figures. See Nos. XXXII, XXXIII, XXXIV.)

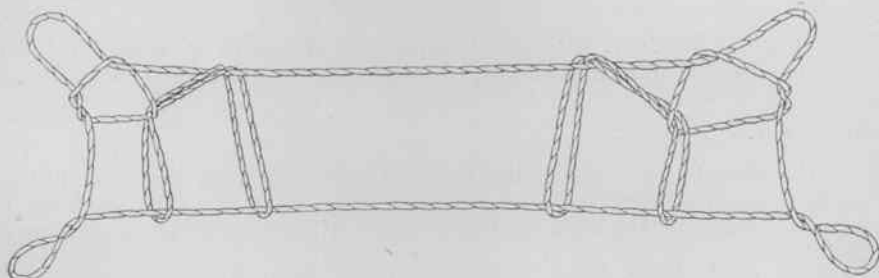


Fig. 78

LVIII. TWO SMALL SEAGULLS = *nauyätciäk* (Mackenzie river and Coronation gulf)

The movements of this figure are rather unusual.

Opening A.

Pass the thumbs down on the proximal side of the other strings and from the proximal side take up the ulnar little finger strings.

Pass the little fingers into the index loops from the distal side and hook them down over the ulnar thumb strings.

Drop the index loops.

In the middle two diagonal strings cross each other.

Pass the indices from the distal side into the upper quarter thus formed above the diagonals, and hook their palms round behind the lower string of each diagonal and draw it out, turning the indices outward.

Turn the little fingers also outward, retaining only their proximal loops. Straighten these loops, then remove the index loops to the little fingers.

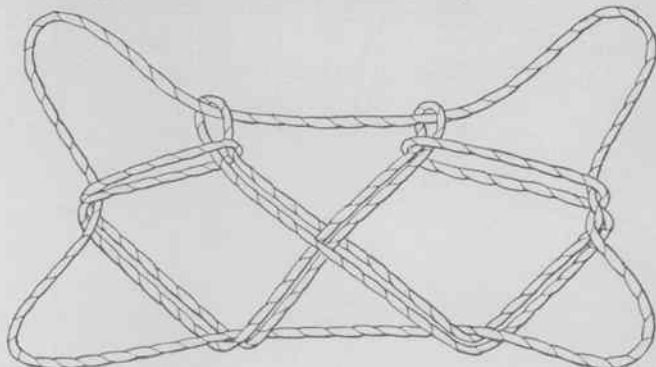


Fig. 79

Navaho the thumbs, then with the palms of the little fingers hook down and through the little finger loops the transverse string that has just been dropped from the thumbs. You have "the two sea-gulls."

SECTION 4. FIGURES WITH ONLY A LOCAL DISTRIBUTION

LIX. THE WALRUS = *aiivq*

This figure is identical with the "scapulae," or "head of a caribou" (No. XLVI) except for the final movement. It was learnt from a Barrow native.

Opening A.

Pass the thumbs over the radial index strings and from the proximal side raise with them the lower transverse string, then with their backs from the proximal side draw out through the thumb loops the radial little finger strings.

With the palm of the right index (or the left, according to which loop lies outside the other) remove the left index loop from the proximal side, then insert the left index into both the right index loops.

Each index now carries two loops and points inwards.

With their backs draw the ulnar thumb strings out through the index loops, then drop the index loops.

Invert the loops on the thumbs so as to make them straight, then with the left thumb from the proximal side remove the right thumb loop and reinsert the right thumb from the proximal side into both left thumb loops.

Pass the left thumbs down and from the proximal side take up with them the ulnar little finger strings and navaho the thumbs.

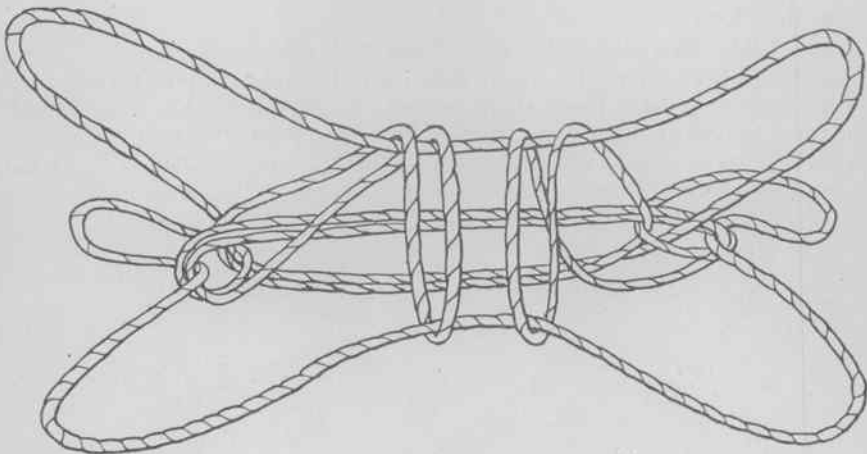


Fig. 80

Below the upper transverse string there are now five strings running horizontally parallel to it. Pass the indices into the thumb loops from the distal side and with their palms take up the uppermost of these five strings and draw it out through the thumb loops. You have the walrus with its two gleaming ivory tusks.

LX. A SMALL BOAT

This is the figure given by Dr. Gordon from Diomed Island, where he says it bears the name of "Kochlinee," and means "a Siberian house." A Port Clarence native called it *umēscat*, "a small boat," and an Inland Eskimo from behind Barrow gave it the same name. Both knew the development into "two men" (*in^suk*).

The Inland native sang the following chant with the first figure:

umēscat qūlqūci tānmaγutci

Little boat down there, are you stopping
to camp?

and the people in the boat reply:

tānmaγukcuilaγut

We don't intend to camp.

After which the chant continues:

*cunik qaqlaq cunik tāhriaqluηnik
iqwalutikγoq avanmun
aulalaqtuk*

? ? ? ? ?

Being afraid, it is said, in opposite
directions they went away.

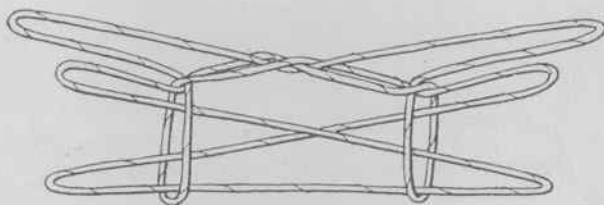


Fig. 81

LXI. TWO BROWN BEARS ISSUING FROM TWO CAVES BELOW A MOUNTAIN

The Inland natives of North Alaska, from whom this figure was learnt, give it the above name (*aklak cūikin āniruk*). It is an altogether different figure from "the two caves" known to the Mackenzie natives (see No. II), but greatly resembles the last figure, "a small boat," in its movements.

Opening A.

Push the hands from the distal side through the thumb loops, thereby converting the ulnar thumb string into the proximal radial index string.

Pass the thumbs distal to the proximal radial index string and take up the distal ulnar little finger string from the proximal side and draw it through.

With the right thumb and index take hold of the radial left thumb string, release the left thumb and reinsert it into its loops from the distal side. Do the same with the right thumb.

Carefully turn the palms downwards, and, passing the thumbs down on the proximal side of all the strings, pressing their ulnar strings before them, take up with them from the proximal side the ulnar wrist (the proximal ulnar little finger) string and return.

Remove the loops that pass over the backs of the hands. You have "the two caves beneath the mountain."

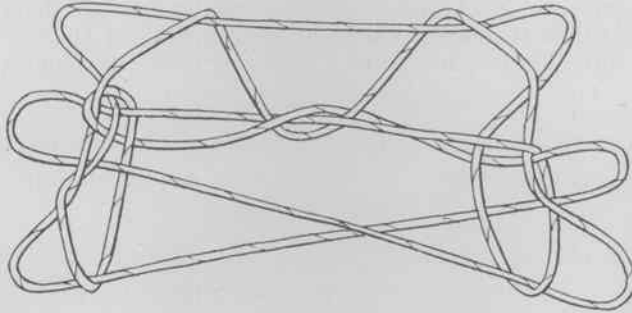


Fig. 82

Drop the index loops. You have "the two brown bears" that came out of them.

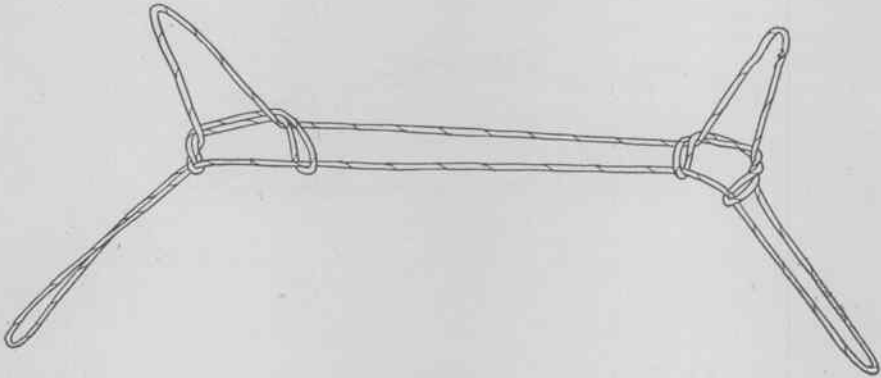


Fig. 83

LXII. *tayäγot*

This figure, which comes from Indian point, Siberia, greatly resembles the last figure (No. LXI). It describes the adventures of some men called *tayäγot*.

Loop behind the thumbs, middle fingers, and little fingers of each hand.

Bring the hands together and with the index and ring fingers of each take up the palmar index and ring finger strings of the other hand, then draw the hands apart.

Draw up the upper transverse string in the mouth and push the fingers through the thumb loops from the distal side, then drop the string from the mouth.

Pass the thumbs over the proximal radial index string and from the proximal side take up the proximal ulnar little finger string and navaho the thumbs.

Remove the loops over the hands, and chant:

*tayäγot tayäγot
qimaγutaqtuγut*

The tangarot people
We ran away to hide (release the index
loops)

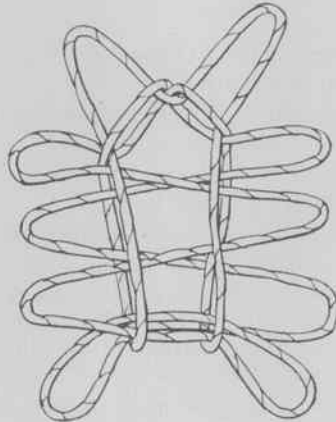


Fig. 84

*akliyekut akliyekut
miqloqaγaqtuγut*

? ?

We made a tent (release the middle fin-
ger loops—you have a tent)

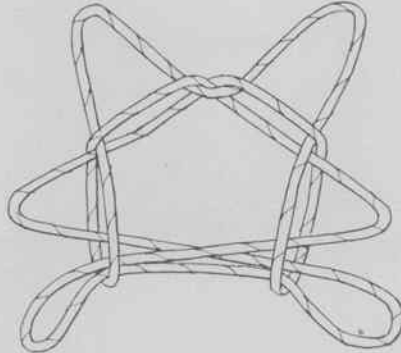


Fig. 85

*klaγäpit klaγäpit
qimaγutepiqagtut*

? ?

They ran away (drop the ring finger
loops—two men are going away).

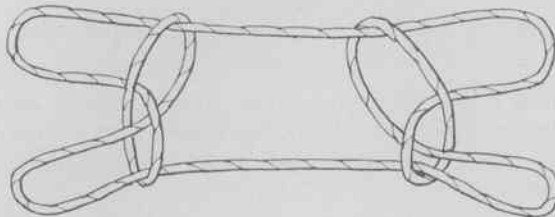


Fig. 86

LXIII. Two Rocks

The name given to this figure, *cuḡātuk*, was said to designate two rocks somewhere out in the sea close to the coast. It was learnt from some Barrow natives.

Opening A.

Pass the thumbs over all the strings and from the proximal side take up with them the ulnar little finger strings.

With the backs of the middle fingers on the distal side of all the strings take up the proximal ulnar thumb strings.

Drop the thumb loops, and with the thumbs from the proximal side remove with them the index and middle finger loops.

With the indices from the distal side remove the little finger loops.

Pass the little fingers from the proximal side into the thumb loops from below, and, moving them towards the middle, allow the proximal ulnar strings to slip off. They cross just outside the little fingers. Now hook each of the little fingers down over both these strings, draw them through the thumb loops and hold them firmly against the palms of the hands.

Pass the indices into the thumb loops from the distal side and draw out with their palms the upper transverse string. Drop that string from each thumb.

Katilluik the remaining thumb loops. You have "the two rocks."

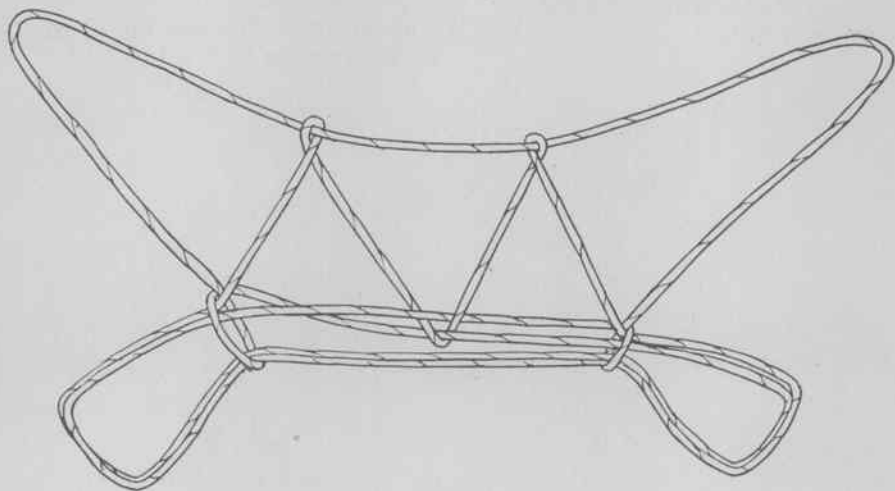


Fig. 87

LXIV. THE CUTTING-UP OF THE WHALE

This series of figures was learned from a Barrow native.

Opening A.

Pass the thumbs down on the proximal side of all the strings and take up with them from the proximal side the radial little finger strings.

With the backs of the middle fingers from the proximal side take up the ulnar thumb strings.

Drop the thumb loops and remove with the thumbs from the proximal side the index and middle finger loops.

Drop the little finger loops, throw the long pendent string over the top of the transverse strings to the distal side, then take it up again with the indices.

With the backs of the little fingers push back the ulnar thumb and ulnar index strings, then hook their palms over the radial index strings.

Insert the indices from the distal side into the thumb loops and with their palms draw out the upper transverse string.

Drop the thumb loops. You have "the whale carcass," its head being the triangle towards the left hand below the upper transverse string.

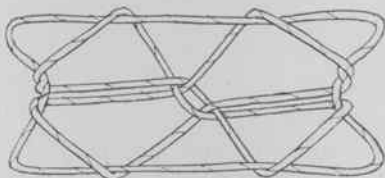


Fig. 88

From the left palmar string two strings run to the middle of the figure. Insert the left thumb in between these from the proximal side, so as to take up with it the palmar string at that place, and drop the left little finger loop. You have "the moon" rising in the right hand top corner while the men were cutting up the carcass.

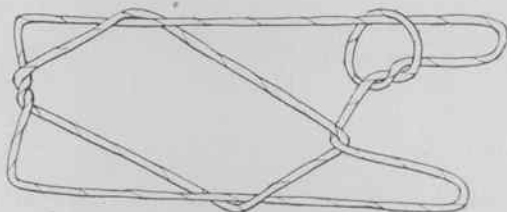


Fig. 89

Slip the right thumb into the figure under the upper transverse loop just to the left of the moon and drop the right index loop. You have a rhombus.

Remove the left thumb loop to the left index, then with the palm of the left thumb, from the proximal side, take up the right bottom string of the rhombus, then the radial left index string. Navaho the thumb and drop the left index loop. Drop the right little finger loop and hold the right thumb loop in the right hand.

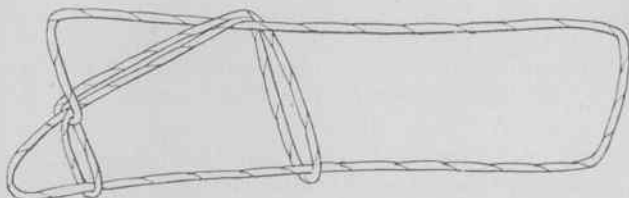


Fig. 90

You have "the dog that became sleepy and went home." If you sway the right hand "the dog" will travel towards the left.

Drop the right hand loop and take hold with that hand of the lower transverse string between the dog's legs, and draw it out. You have "the master" following his dog home.



Fig. 91

Again drop the right hand loop and take hold of the lower transverse string between the left little finger and the man's leg, and draw it out. You have "the rope" that he hung up when he reached home.

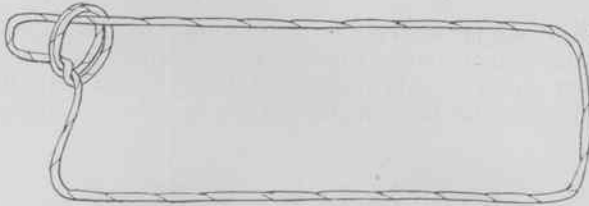


Fig. 92

The Eskimo words are:

aqveaqtoätγoq aqveaqneaqniηane tātqeleotiγe qī'meätγoq ounγaleqami aiγoq mālek'a in'ua akkunätciāniγoq qakilāk'a

"Men, it is said, were cutting up a whale. As they were cutting it up the moon rose on them. Their pet little dog, it is said, growing sleepy, went home. Its master followed it. His little rope, it is said, he hung up."

LXV. THE DANCE-HOUSE

This figure is known to the Mackenzie river Eskimos under the name *qajīγiq*, "the dance-house."

Opening A.

Pass the thumbs down proximal to all the strings and with their backs from the proximal side take up the ulnar little finger strings (the lower transverse string).

Pass the little, ring, and middle fingers into the index and thumb loops from the distal side, and close them over the ulnar strings.

Turning the indices inward push their loops through each other and interchange them on the indices. (If in making Opening A the right palmar string is taken up before the left, the left index loop must be pushed through the right index.)

The indices are still pointing inward. From the proximal upper transverse string there is a string on each side which runs down to the lower transverse string across the backs of the indices.

Push these out with the backs of the indices, so that the indices now point outward.

Withdraw the middle fingers from all the loops, then with their backs on each side push out the side strings that connect the two diagonal strings.

Navaho the thumbs, and you have "the dance-house."

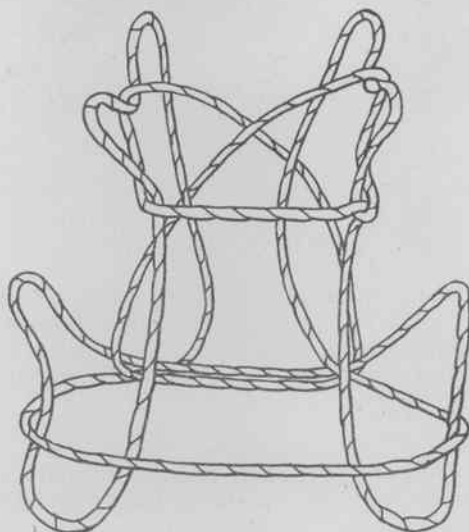


Fig. 93

LXVI. THE TWO WOLVES

The Coronation gulf Eskimos call this figure *amaquk*, "two wolves." I obtained it from a Bathurst inlet native, and did not see it among the more western Copper Eskimos. The movements are all of a very usual character.

Opening A.

Push one index loop through the other and interchange them on the indices.

With the thumbs from the proximal side remove the index and little finger loops.

Pass the little fingers into the thumb loops from the proximal side, move them towards the middle, allow the lower transverse string to slip off, then hook the little fingers down over it.

Pass the indices into the thumb loops from the distal side, push out the two distal radial strings, then with the palms of the indices draw out the upper transverse string, thereby navahoing the indices.

Drop the thumb loops.

Two strings run from the middle of the figure to cross the lower transverse string on each side before proceeding to the palmar string. With the palms of the thumbs from the proximal side take up these strings, each pair with the thumb of the nearer hand, then with the thumbs from the proximal side take up the radial index strings.

Navaho the thumbs and drop the index loops.

You have "the two wolves," the front legs being the perpendicular loops passing round the lower transverse string, one pair on each side, while the tails and hind legs are at the top of the figure.

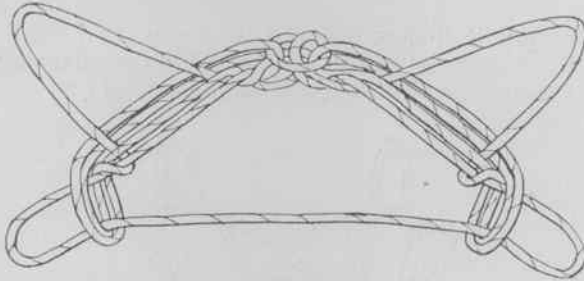


Fig. 94

LXVII. A MOUSE (?)

The Eskimos of Coronation gulf call this figure *wunayayyuk*, a word that seems to be connected with *wunayayq*, "it is bent or sloping." One native, however, thought that it might be the same as *avun²aq* which is the lemming or mouse. The movements closely resemble those in "the duck" (No. L), of which it may be a forgotten version.

Opening A.

Pass the indices into the little finger loops from the distal side and circle them clockwise so that they take up the radial little finger strings as well as their own ulnar strings.

Insert the middle and ring fingers into the index loops from the proximal side, and hook them over the ulnar index and ulnar thumb strings while the palms of the indices draw the radial thumb string (the upper transverse string) through the index loops.

Press the thumbs downwards, with the left thumb remove the right thumb loops (or vice versa, according to which is outside the other), pass the right thumb from the proximal side into both left thumb loops, then with both thumbs from below take up the lower transverse string, thereby navahoing the thumbs.

With the palms of the little fingers on the proximal side of all the strings hook down the radial thumb (the transverse) string. Navaho the little fingers and drop the thumb loops.

There is a string on each side which runs from the radial index string to loop round the ulnar index string and return, forming a kind of "eye." Remove the index loops to the thumbs, pass each index from the distal side into the nearer of these "eyes," and draw out with their palms the radial thumb strings. Drop the thumb loops. You have "the mouse."

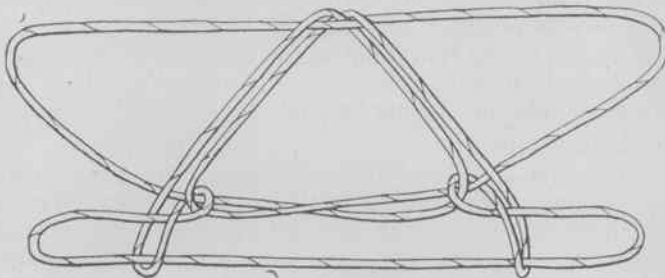


Fig. 95

LXVIII. TWO LEMMINGS AND THEIR BURROWS

This figure was learnt from a native of Bathurst inlet, east Coronation gulf, who called it *aviyätciäk hitaklu*, "two lemmings and their two burrows." There is nothing unusual about the movements.

Opening A.

Pass the thumbs over the radial index strings and from the proximal side take up the ulnar index strings and return.

Pass the indices in under the distal radial thumb string from the distal side and with their palms draw out the proximal radial thumb strings.

Drop the thumb loops, then with the thumbs from the proximal side remove the two index loops and with the indices from the distal side the little finger loops.

Pass the little fingers from below from the proximal side into the thumb loops and on the proximal side of the ulnar index string hook their palms over the radial index string.

With the palms of the indices from the distal side remove the distal radial thumb strings, thereby navahoing the indices.

Drop these distal loops from the thumbs and katilluik the remaining thumb loops.

Transfer the thumb loops to the indices.

Near the middle of the figure on each side is a string running from lower to upper transverse strings on the proximal side of both. With the palm of each nearer thumb from the proximal side take up these strings and katilluik.

Transfer the thumb loops again to the indices.

At the bottom are two strings almost horizontal, but intersecting each other. Take up each from below with the nearer thumb, then the radial index string of that hand from the proximal side.

Navaho the thumbs and drop the index loops.

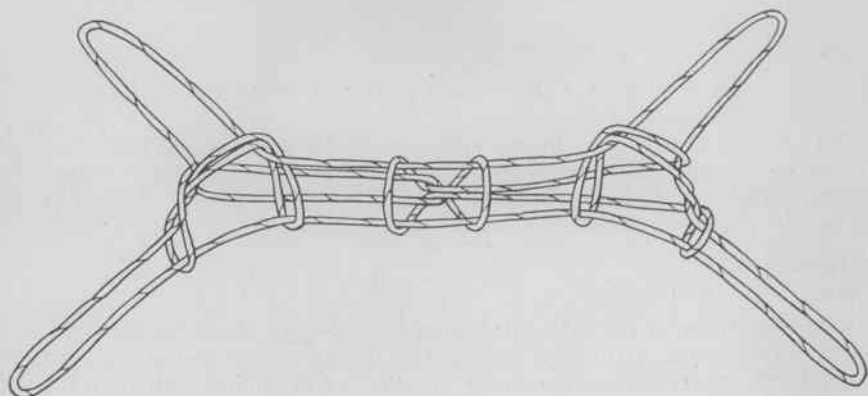


Fig. 96

You have "the two lemmings," one on each side, with the two holes from which they have emerged.

LXIX. A SEAL'S KIDNEYS

The Coronation gulf Eskimos call this figure *nātcim taktua*, "the kidney of a seal," or more simply *taktōyyuk*. Really there are two kidneys. The movements are similar to those of many other figures.

Opening A.

With the thumbs on the distal side of the other strings take up the radial little finger strings.

With the backs of the middle fingers from the distal side push out the ulnar thumb strings.

Katilluik the distal radial thumb loops, then over the middle finger strings take up the ulnar little finger string (the lower transverse string) from the proximal side and navaho the thumbs.

Pass the thumbs over the index strings and on the proximal side of the radial middle finger string take up the ulnar middle finger string with their backs and navaho the thumbs.

Drop the little finger loops and on the proximal side of all the strings remove from the proximal side the thumb loops to the little fingers.

Pass the thumbs from the proximal side into the index loops and draw through with them the radial middle finger string.

Drop the index and middle finger loops. You have "the two kidneys."

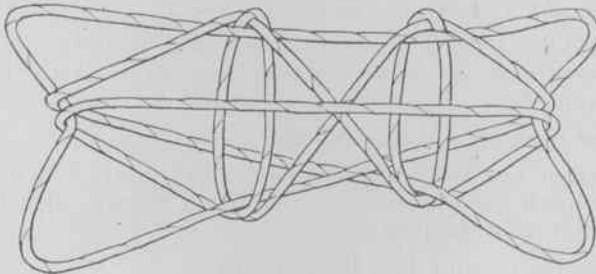


Fig. 97

LXX. THE SCULPIN = *kāneyōyyuk* (Coronation gulf)

This is apparently the figure seen by Stefansson in Dolphin and Union strait, where it was called *kannaheryuk*. His Mackenzie native recognized it as *kannayok* (Anthrop. Papers, Am. Museum of Natural History, Vol. XIV, Pt. 1, 1914, p. 246).

Opening A.

Drop the thumb loops.

With the thumbs from the proximal side lift up the two diagonal strings, then, pressing down with their palms the upper transverse string, raise with their backs the lower transverse string; finally, on the distal side of all the strings draw the radial index strings through their loops, thereby navahoing the thumbs.

With the palms of the little fingers draw down and through the little finger loops the second transverse string (the one below the upper transverse string).

Circle the indices so as to straighten their loops, then with their palms from the distal side draw the radial thumb strings through their loops.

Drop the thumb loops.

On each side there is a string which runs vertically from the lower to the upper transverse string. Take each of these up with the back of the nearer thumb from the proximal side and *katilluik*.

Two diamonds are formed in the middle just under the upper transverse string. Insert the indices into these from the distal side, push out the distal strings of the diamonds, then with the palms of the indices draw through the upper transverse string. Drop the thumb loops.

You have "the sculpin."

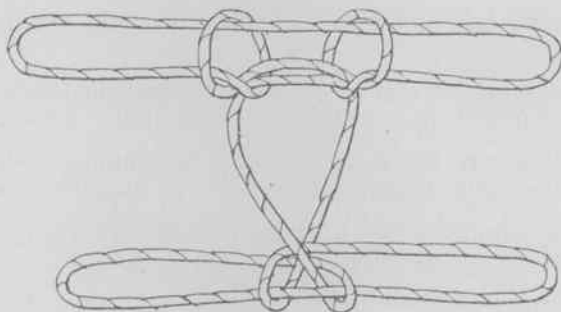


Fig. 98

LXXI. THE LAMP

The Coronation gulf natives call this figure *quλiq*, the stone lamp which they use for light and heat. It is a very simple figure to construct, the opening movements being the same as in the Barrow figure "walrus" (see No. LIX).

Opening A.

Pass the thumbs distal to the radial index strings and from the proximal side (*i.e.* from below) raise the lower transverse string, then, without returning, with the backs of the thumbs from the distal side draw the radial little finger strings through the thumb loops.

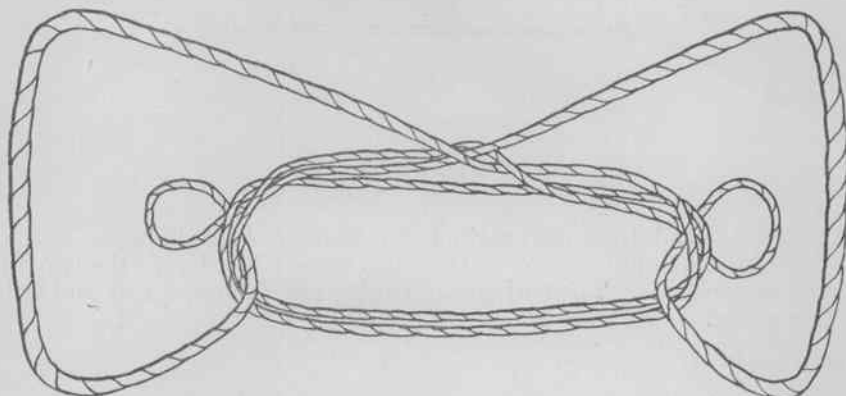


Fig. 99

Drop the index loops and open up the thumb loops with the indices from below. You have "the lamp."

LXXII. TWO BUTTERFLIES

The Copper Eskimos call this figure *hāqālkītak*, "two butterflies."

Opening A.

Pass the thumbs over the radial index strings and from the proximal side take up with them the ulnar index strings.

Drop the index loops, and with the indices from the distal side remove the little finger loops.

Pass the little fingers from below from the proximal side into the thumb loops and loop down with their palms the radial index strings.

Pass the indices from the distal side into the thumb loops and with their palms draw out the upper transverse string. Navaho the thumbs.

Carefully *katilluik*. At the final movement two transverse strings are thrown over to the distal sides of all the strings.

Draw these down behind all the strings with one of the indices, then, without drawing the strings tight, remove the thumb loops to the indices.

The two strings that fell over the back now separate into two pendent loops.

Pass the thumbs down on the proximal side of all the strings and take up with them from below these two pendent loops, each with the thumb that is nearer to it.

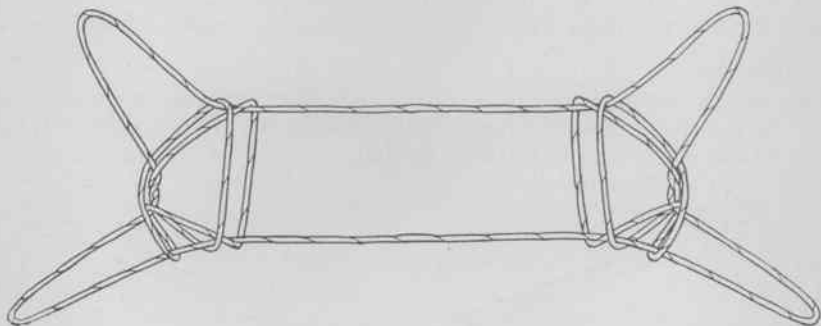


Fig. 100

With each thumb from the proximal side take up the radial index loop of its hand. Navaho the thumbs and drop the index loops. You have "the two butterflies," one on each side. Their wings are closed, and their feet rest on the lower transverse string.

APPENDIX

FIGURES BEGINNING WITH A MODIFICATION OF OPENING A

LXXIII. THE SQUIRREL

The Barrow and Inland natives call this figure *tokcruk*, the Mackenzie natives *tokcik*, and the Coronation gulf natives *ɣikɣik*. All have the same meaning, "squirrel." I have never seen the Coronation gulf natives make the complete figure; they carry out half the movements and obtain a result approximately the same. Another figure, "the angry man" (see No. LXXIV) would be exactly the same but for an introductory movement which occurs, so far as I am aware, in but two other figures (Nos. LXXV and CLI). But "the angry man" is known on both the Siberian and Alaskan coasts, where it is accompanied by chants. It is found in the Mackenzie also, but the chant is almost absent, while in Coronation gulf the figure appears to be altogether unknown. This suggests that "the squirrel" originated, or was at least preserved, among the western Eskimos, and was handed on by them to their eastern kinsmen.

Position 1.

Revolve the right hand once in a clockwise direction.

With the backs of the indices take up the opposite palmar strings as in Opening A.

Pass the thumbs down distal to the radial index strings and with their backs from the proximal side take up the ulnar little finger strings and return.

Drop all but the two loops on each thumb; hold these in the hands, make Opening A again, and repeat the movement.

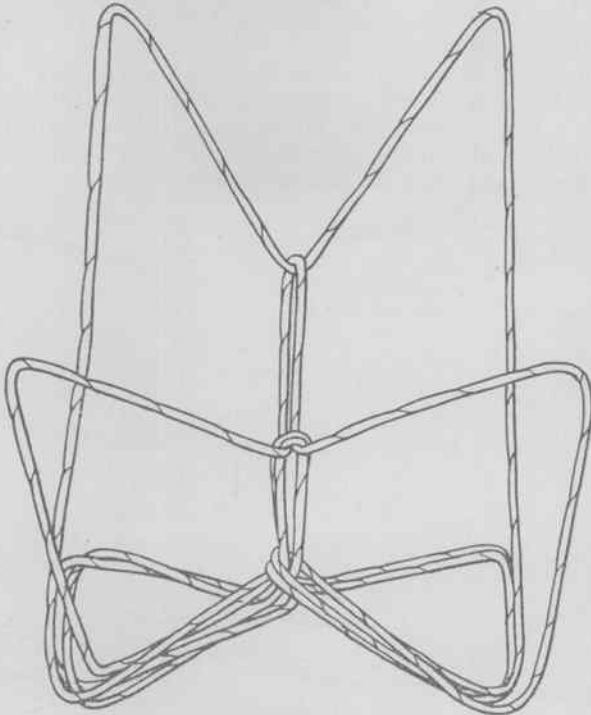


Fig. 101

You have finally four loops on each thumb. Insert the little and ring fingers into the thumb loops from the distal side, and hold the ulnar strings firmly against the palms.

Allow the two distal radial thumb strings to slip off.

Two radial strings are left on each thumb.

With the backs of the indices from the distal side take off each distal radial thumb string.

Raise the thumbs and lower the indices—"the squirrel" pops up out of its hole. Lower the thumbs—it returns inside again. Raise the indices and lower the thumbs still more—it pops up again. Each time that it pops out say *tei tei*, a sound imitating its squeak.

The Copper Eskimos stopped short at the end of the first movement. Their squirrel then popped out in two different places.

LXXIV. SNAPPING OFF THE HEAD

Some Eskimos from Indian point, Siberia, called this figure *qoqoγaqtəq*, which was said to mean "he breaks his back." A Cape Prince of Wales woman called it *manoχλοναχο*, but did not know the meaning of the word. By the Inland (Colville river) natives of northern Alaska it was known by the first words of its chant, *qivituyə*, which means "I am crazy." Mackenzie natives called it *qoγaγeqtoγγuk*, which they thought was the name of a man (see also the preceding figure, No. LXXIII).

Loop over the indices.

Close the remaining three fingers of the left hand over the two index strings, insert the left thumb from the proximal side into the index loop, and with the left thumb and index draw through both the transverse strings.

Thread the right hand loop through the slip-knot so that about one-eighth of an inch projects, then slip the knot tight.

Hold in one hand the two strings that lead from the knot to the right hand and make Opening A with them.

Proceed exactly as in the previous figure, "the squirrel," up to the final stage, when the thumb and index loops are alternately raised and lowered in the same manner. If you strain the thumb loops the knot at the top will break; if you then strain the index loops their knot will break likewise. Finally strain the little finger loops and for a third time the knot snaps.

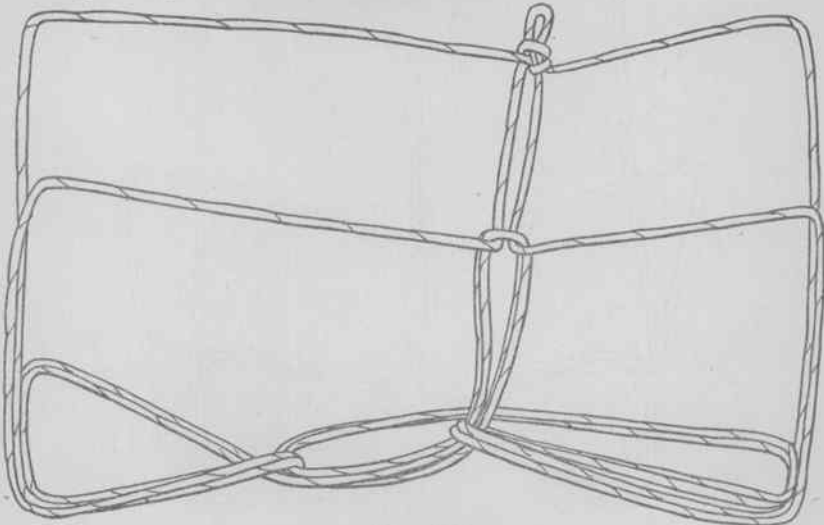


Fig. 102

The Siberian Eskimos say:

qoqoraqtahoq camaha neγukcin

Qoqoraqtaq down there, are you hungry?

mantayuman

Yes, I want some black-skin to eat.

na'ka kumitileγanaqtoq

No, it sticks in your teeth.

naeqoraqtoq

It breaks your head (break the thumb knot).

qoqoraqtoq

It breaks your back (break the index knot).

cipeiγaqtoq aulagaqtoq

Breaks your hip, splits your legs asunder (break the little finger loops).

The Inland natives chanted:

qwit'uha ma'ni

I am crazy here.

qwit'uha ma'ni

I am crazy here.

puγuγiacγak ayuqlyuk

? ?

akimoaγoitkeγal'iyi

? ?

nulukeγaxli'iyi aya iyi

? ?

neqoa pinoxiqroq aya iyi

His head snapped off (break the thumb knot).

qotuk pinoxiqruk

His collar bones snapped (break the index knot).

cwagaγak pinoxiqruk

His hip-joints snapped (break the little finger knot).

The Mackenzie natives say:

qogaγeqtoq neγiluin

Qogaγeqtoq, break your neck (break both thumb and index knots).

cwiyek'in pigoγuk

Break your hips (break the little finger knot).

LXXV. THE CHILDREN

This figure, *ililiyaiyät* or "the children," I found among the Inland and Mackenzie river Eskimos. The latter call it *nukätpiayluit*, "the young people." The initial movement is the same as in the preceding figure, and all the later stages are simply a repetition of "the mountains," which, in its more developed form, "the moon between the mountains," is known all along the coast from Alaska to Coronation gulf (see No. CXXIX).

Proceed as in "the angry man" (No. LXXIV) up to the knotting of the right hand loop in the left. With the two strings coming away to the right make, not Opening A, but Position 1.

Draw the left thumb radial loop through the right hand loop and drop this right hand loop.

Again make Position 1 with the previous left hand loop only, so that across the upper transverse string there falls the previous right hand loop.

Take this pendent loop up with the backs of the indices from the distal side, with the right index the portion on the proximal side of the transverse strings, with the left the distal portion.

Drop the little finger loops.

*Insert the remaining three fingers of each hand into the index loops and hook them down over the radial index and ulnar thumb strings.

With the palms of the indices from the distal side take up the radial thumb strings and drop the thumb loops.

With the thumbs from the proximal side take up the radial middle finger strings, and drop the loops held in the last three fingers.

Repeat this movement from * twice, then drop the strings on the last three fingers and hold the index loops in the hands.

You have a series of loops crossing the upper and lower transverse strings alternately. These are "the children."

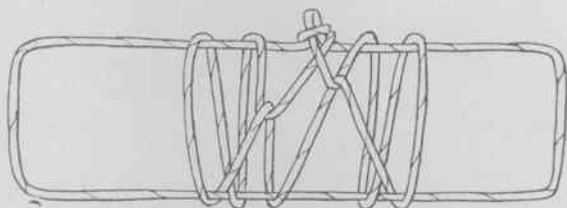


Fig. 103

Sway the hands and they crowd together in the middle. Draw them apart again with the indices. Chant:

ιλιγαιγαιτ αιογνιαγαιγαι
αιοι γοι γοι

Children, it is carrying you off.

The children were playing on an ice-keg. The sea split it in two (strain the hands apart, when the knot breaks, leaving a tangle of knots in the middle). Half of the children were carried off and the other half left behind (the two groups of tangles that are formed).

THE TWO HIPS CYCLE

LXXVI. THE TWO HIPS

This figure was called by the Eskimos of Barrow and of the Colville river *qucik*, which was thought to mean the same as *qotcik*, "the two hips" of a man. The next stage in the figure was called *inuk*, "two men." I have no record of the figure from the Mackenzie region, but a Coronation gulf Eskimo gave the name *qotnnaqtγγuk*, "two hips," to a slightly modified stage preceding the Barrow figure. The continuation, "two men," he called *zukaγγuk*, *i.e.* "the two sticks that support the lamp." Another Copper Eskimo from the same region gave the names "two hips" and "two men," to two other figures obtained in an altogether different manner (see No. XCIII).

Position 1.

Turn the hands outward, then down and upward again so that the thumbs twist round the little finger strings and the little fingers round the thumb strings. The palmar string then passes round the outside of both the thumb and little finger of each hand. With the indices take up the opposite palmar strings, as in Opening A.

With the thumbs from the proximal side remove both the index and little finger loops.

Pass the little fingers from below from the proximal side into the thumb loops, and, moving them towards the middle, allow the two lower transverse strings to slip off, then hook the little fingers down over them and hold them firmly against the palms.

Pass the indices into the thumb loops from the distal side *, and inserting them in between the two proximal radial (the diagonal) thumb strings, hook their palms over the upper transverse string and draw it through.

Drop all the loops on the thumbs except the proximal radial strings.

Katilluik the thumb loops. You have the "two hips."

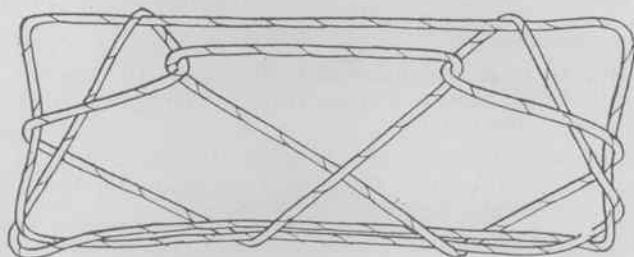


Fig. 104

The Barrow native continued without pausing to make the next figure, "two men," but the Inland native, before continuing, said:

apān qe'miq cuman poāḷ-āqaqpit uyāmiaγdatecavuk iγγ-uk ikγ-uk.

"Father, dog, when did you get the short mitts? Our necklets, let us throw them away and let us wrestle."

"The two men" are then produced by turning the little fingers outward, so that they drop the loops they have been holding and push outward the string which runs on each side across their backs.

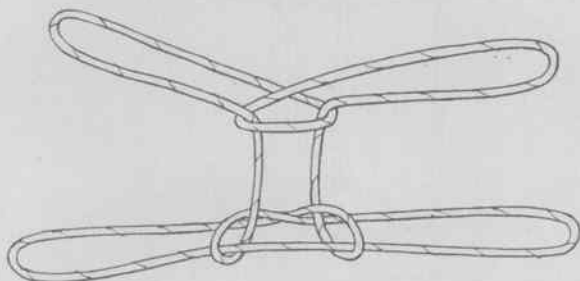


Fig. 105

The Coronation gulf native retained in the last movement of katilluik before producing "the two hips," the loops on the indices. Instead he turned the little fingers outwards and considered the figure he thus obtained as "the two hips." By merely dropping the index loops he obtained "the two men," or, as he called it, "the two sticks that support the lamp."

LXXVII. THE PHLEGM

A man from near Cape Thompson, in northwestern Alaska, called this figure *kuyiq*, which he said meant "tongue." A Cape Prince of Wales woman called it *oxaq*, which is practically the same as the ordinary word for tongue, *oqag*, that is used all along the coast as far as Coronation gulf. A Port Clarence native recognized the figure, or at least its breaking down into *nuvak*, "the phlegm." Some Siberian Eskimos from Indian point made a figure which seemed to be the same, and produced in the same way, but they called it *eveli*, the name of a shaman. They chanted some words to it:

<i>eveli iyuk'in</i>	Eveli, your two eyes.
<i>kanakyutikak</i>	He turns them round.
<i>kanakyuneyiman</i>	When he turned them round
<i>taqlukuk awawakun miluatikak</i>	Afterwards he threw them away over there.

Make "the two hips."

On each side there is a string which runs from the palmar string to loop round the two lower transverse strings (this is the string which is pushed out in making the figure, "two men.").

Pass the indices in below these strings on the distal side of all the strings and, raising them, draw through them with the palms of the indices from the distal side the radial thumb strings.

Carefully release the thumb loops. This leaves a small circle depending from the upper transverse string on each side.

Pass the thumbs directly into these from the proximal side, and, pressing the lower string of each loop down before them, draw through with their backs the two lower transverse strings.

Release the little finger loops and transfer the thumb loops to the little fingers from the proximal side.

Remove the index loops to the thumbs and again with the indices raise the string which runs across the back of each little finger and draw through it from the distal side the radial thumb string, without releasing the thumb loops.

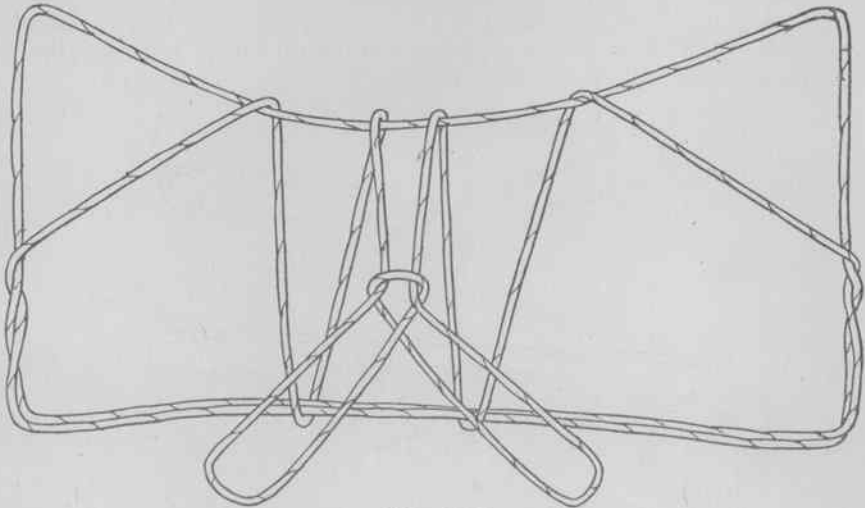


Fig. 106

If you draw the thumbs down you have the tongue lolling out at the base of the two thumb loops. Cough and release the thumbs, and the "phlegm" flies over the tops of the strings.

LXXVIII. THE SEALER

A Cape Prince of Wales Eskimo called the first figure in this series *toynaq*, the meaning of which I could not discover. He accompanied the various stages in its dissolution by certain expressions which resembled those used by the Inland natives of northern Alaska. These, however, called the first figure *taγλuni*, "his snow-shoes," and dissolved it by a totally different method. The Mackenzie Eskimos seized upon one stage in the dissolution as made by the Inland Eskimos, "the seal," and regarded that figure, which they also called a "seal" (*nātcuq*), as the only significant one in the series. The Coronation gulf natives knew the first figure, which they called *tubaγyuk*, "two men sealing," but appeared to be ignorant of the rest. Boas has the first figure from Cumberland sound with the name *gowatcheak*, the meaning of which I do not know.

Make "the two hips."

In the middle just below the upper transverse string there is a string running parallel to it.

Remove the thumb loops to the indices and, passing the thumbs under this string from the proximal side, raise it up, then with each thumb from the proximal side take up the radial index string. Navaho the thumbs, drop the index loops, and transfer the thumb loops to the indices.

A string runs from each palmar string on the proximal side of all the strings to loop round the lower transverse string. Take each up from below from the proximal side with the thumb of the same hand, then with each thumb from the proximal side the radial index string. Navaho the thumbs, drop the index loops, and remove the thumb loops to the indices.

In the middle are two diagonals behind which runs a string parallel to the upper transverse string. Insert the thumbs underneath the diagonals where they intersect, take up this parallel string behind them from below, and draw it through.

With the thumbs from the proximal side then take up the radial index string on each side. Navaho the thumbs and drop the index loops.

You have *toynaq* according to the Cape Prince of Wales woman, "the sealer's two snow-shoes" of the Inland natives, "the two sealers" of the Copper Eskimos, and *gowatcheak* of the Hudson bay natives.

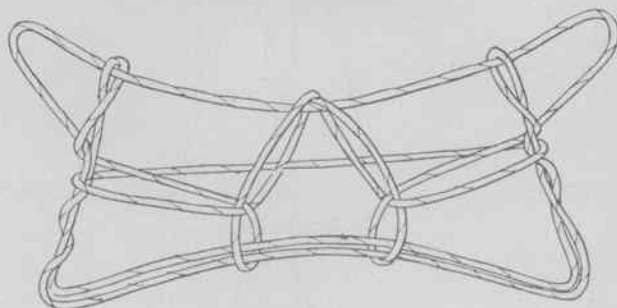


Fig. 107

(a) The Cape Prince of Wales dissolution:

Remove the thumb loops to the indices.

Insert the thumbs under the upper transverse string behind the first loop that passes round it on each side. Drop the index loops and draw the strings taut.

The man has dropped his mitts (*εγαφλυνη kätäk·a*).

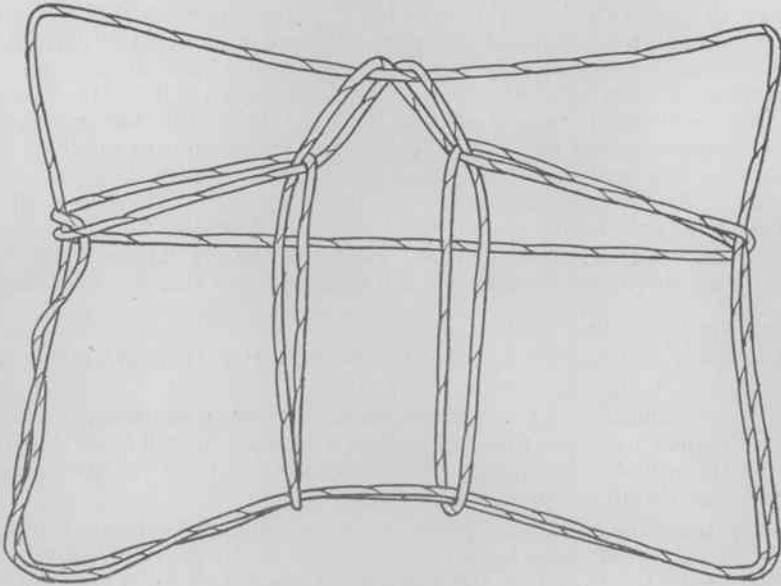


Fig. 108

On the distal side of all the strings there is a transverse string passing from one hand to the other.

With the palms of the indices on the distal side of all the strings raise up this transverse string, then with the palms draw through it the radial thumb strings. Drop the thumb loops.

The man in his haste has dropped his spear (*υναγιν kätäk·a toälιναρχλυνη*).

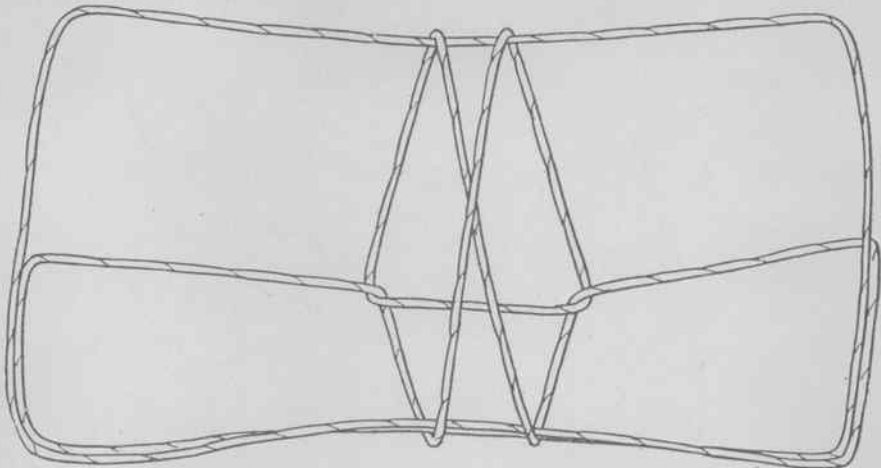


Fig. 109

Drop the little finger loops.

The man stumbles and falls on his left kidney (*putukut·oq taktuαγλαν*).
(The figure seems to give both kidneys.)

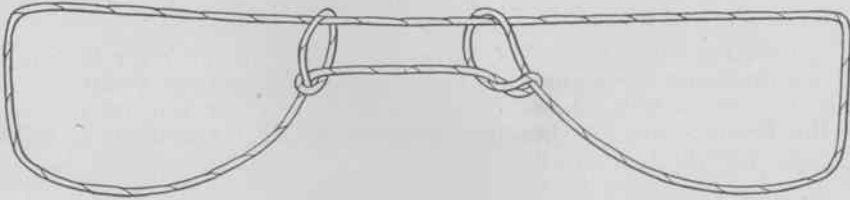


Fig. 110

(b) The Inland dissolution:

The first step is the same as at Cape Prince of Wales, but the Inland Eskimos say:

ταγλυνι ταγλυνι qätvanilu kätäk'a ταγλυνι

"His snow-shoes, his snow-shoes, on this side he dropped them and on that side too."

Transfer the left thumb loop to the right index from the proximal side, the left little finger loop to the left index from the distal side, the right little finger loop to the left thumb from the distal side, and separate the hands. You have "the seal" being dragged along, "the line" being the string running up from the middle of the seal to the left index (*nätceqceeni qamupäläk'a*, "his seal he was dragging along"). The Mackenzie Eskimos recognize this figure alone.

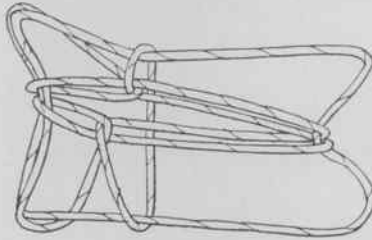


Fig. 111

Release the left hand entirely from its loops.

Insert the left index into the right index loop from the proximal side, and the left thumb into the right thumb loop from the proximal side also, and separate the hands.

You have "the man's harpoon" which he dropped (*uniaqin kätäk'a*).

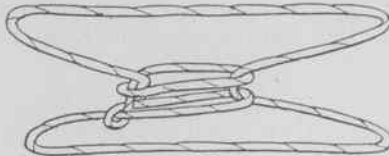


Fig. 112

Of the four horizontal strings which make up the harpoon, two are proximal and the other two distal.

Release the left thumb from its loop and insert it between the proximal and distal horizontal strings, then drop both index loops.

The left thumb is caught in a noose; "the man" has speared it (*qavλυνι ναυλιγα*).

LXXIX. *nānukcuk*

The meaning of this word is uncertain. The Colville river Eskimo who taught me the figure conjectured that it might be the name of a man. Another Eskimo thought that it meant "foot-pads made of polar bear skin" (*nānoq*), which the Eskimos use for standing on when sealing. The figure is merely a modification of "the two hips."

Proceed as in "the two hips" (No. LXXVI) up to the stage marked *. At that point pass the indices from the distal side in between the two distal radial thumb strings, and, hooking their palms over the proximal radial strings, draw them out to the distal side.

Drop all the thumb loops except the medial ones.

Katilluik these remaining thumb loops.

You have *nānukcuk*.

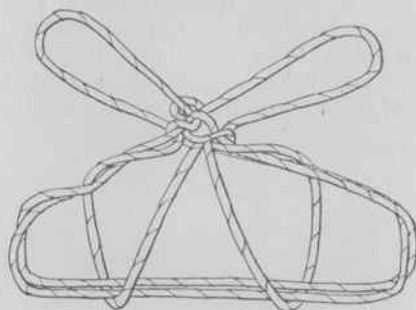


Fig. 113

LXXX. THE WOOD-CARRIER

This figure appeared to be peculiar to Siberia; at least it was not observed among the Eskimos of the American coast. The natives of Indian point call it *q̄q̄c̄ȳaq̄taq̄oma*, which was said to mean "a carrier of wood." The opening is the same as in "the two hips," but the subsequent movements are different, though similar to those found in other figures, e.g. "the kayaker" (see No. CXXXVI).

Position 1.

Turn the palms outward, then down and upward again so that the thumbs twist round the little finger strings and the little fingers round the thumb strings (as in "the two hips").

With the indices take up the opposite palmar strings, as in Opening A.

With the thumbs from the proximal side remove both the index and the little finger loops.

Hold the thumb loops in the hands, and, passing the indices into them from the distal side, hook them over the upper transverse string and draw it through to the distal side.

With the backs of the thumbs from above push back (*i.e.* towards you) the ulnar little finger strings that run diagonally to the middle, then with their palms take up from below the two lower transverse strings.

Drop the little finger loops, then hook them over their old diagonal loop.

Katilluik the thumbs.

You have "the wood-carrier" with his load of wood.

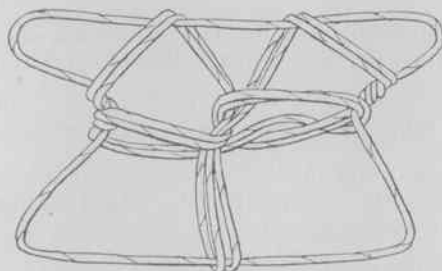


Fig. 114

Chant:

qoqeyaqtaqoma ai ya ha yaha
qoqeyaqtaqoma ai ya ha yaha
qoqvani-i qoqvani-i
niluaqtaqtaχλυγι(t)
dicpaγavaq

The wood-carrier.
 The wood-carrier.
 Over there, over there
 Throwing it down (the wood)
 Up there (?)

At the word *dicpaγavaq* raise up with the palms of the indices from the distal side the four horizontal strings that run along the back of the figure, then with the palms of the indices draw through the radial index string on each side.

Drop the thumb loops. You have the man's boots hanging up.

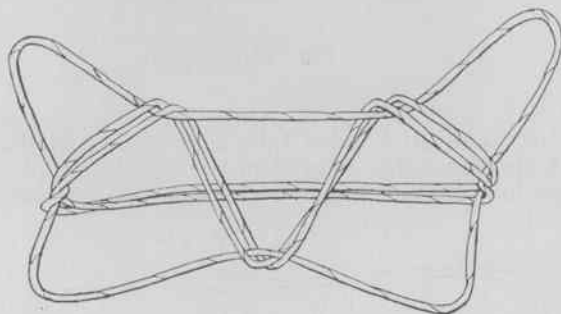


Fig. 115

kamqayani-i kamqayani-i
in'εqtaχλυγικ
dicpaγavaq

His boots, his boots.
 He hangs them up.
 Up there.

Remove the index loops to the thumbs and at the word *dicpaγavaq* again raise with the indices from the distal side the two transverse strings in the middle of the figure, then draw through with them the radial thumb strings. The figure dissolves.

LXXXI. MAN AND WOMAN

This figure is known at Port Clarence, at Barrow, and by the Inland Eskimos of northern Alaska. I have not seen it elsewhere, but it appears in Captain Bernard's collection of Chukchee figures. Everywhere it bears the same meaning. In its opening it resembles "the two hips" (No. LXXVI).

Position 1.

Turn the palms outward, then down and upward again so that the thumbs twist round the little finger strings and the little fingers round the thumb strings (as in "the two hips").

With the indices take up the opposite palmar strings, as in Opening A.

Pass the right thumb and index from the distal side through the left index loop and, taking hold of the radial left little finger string, draw it through and drop it over the left little finger.

Do the same with the right hand.

There are now two ulnar and one radial little finger strings on each hand. Close the little fingers over the radial strings so that their ulnar strings slip off the back.

With each thumb from the proximal side take up the radial index string. Navaho the thumbs and drop the index loops. You have "the man and woman."

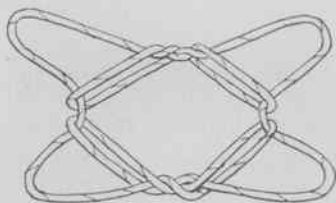


Fig. 116

With the right thumb and index take hold of the radial left thumb string and return with it, dropping that loop from the left thumb and spreading apart the left little finger loops. You have "a woman standing outside a house."

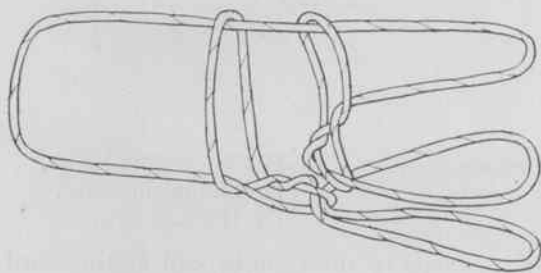


Fig. 17

Repeat this last movement, then, returning to the position of "the man and woman," transfer the left thumb loop to the right index from the proximal side, the left little finger loop to the left index from the distal side, and the right little finger loop to the left thumb from the distal side. Separate the hands. The two are going away in opposite directions.

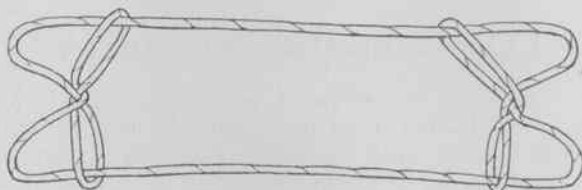


Fig. 118

LXXXII. *umliagtoryuk*

This is a very simple Copper Eskimo figure, which bears the name of *umliagtoryuk*. The meaning of the word was unknown, though one man suggested that *umliaya* was the name of a person.

Position I.

Circle the right hand clockwise so that the transverse strings cross in the middle.

Bring the hands together and with the palm of the right little finger take up the ulnar left little finger string and return.

Close the left hand over its palmar string, holding that loop in the left hand.

You have the figure of a man over near the right hand. With the left thumb carry across the right thumb loop and release the right thumb. "The man" is now over against the left hand. Reverse the movement and he travels backwards and forwards between the two hands. Every time he moves, say:

umliaya nau

Where is Umiliara?

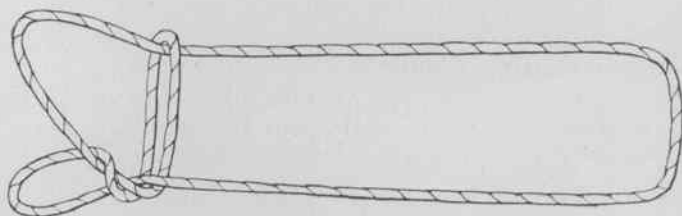


Fig. 119

PART II

FIGURES BEGINNING WITH OPENING B

LXXXIII. THE MAN AND HIS HARPOON

This figure is known at Indian point, Siberia, in the Mackenzie delta, and in Coronation gulf. At Indian point it is called *ayacoki*, a man's name, and a chant describes how he harpoons a walrus, the action being illustrated by a method of dissolution which causes the left index to be caught in a noose. The Mackenzie natives call the figure *ayayuaq*, "the old man," and have a chant describing how he harpoons an ice-keg, illustrated in the same way. The Coronation gulf natives call the figure *utok*, "vulva," and dissolve it by merely dropping the loops. I have not heard it described as a separate figure by the Alaskan Eskimos, though two or three other figures known to them follow the same steps (see Nos. LXXXVI and LXXXVII, and cp. CVII and the following figures).

Opening B.

Insert the last three fingers of each hand into the index loops from the proximal side and hook down with them the radial string.

With the backs of the thumbs from the proximal side draw through the thumb loops the radial index strings.

With the backs of each middle finger take up the string on each side which crosses the palm of the thumb, and on the proximal side of all the strings push the middle finger loops through each other and interchange them on the middle fingers.

Drop the index and thumb loops.

You have the figure variously named *ayacoki*, *ayayuaq* and *utok*.

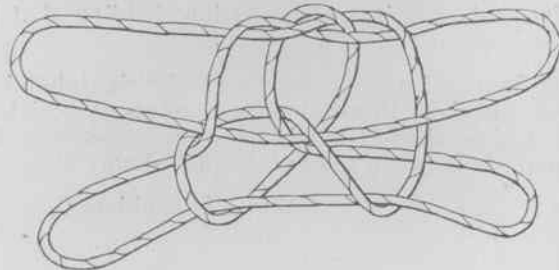


Fig. 120

The Indian point natives chant:

ayacok aivak kan'a
naγυλγο ayacokum
anākaγluminaγa

Agasoki, the walrus down there
Harpoon it, Agasoki.
I have not missed it.

The Mackenzie Eskimos chant:

ayayuaq teikuli'am
qoγonavatn
twaq payna nauliγun

Old man, the young ice is going to crush
you.
The ice-cake over there, stick your spear
into it.

There are two strings which run vertically from the upper transverse string to the middle on the proximal side of the strings, and two others which run from upper to lower transverse strings on the distal side. The Indian point natives took up the former with the right index and the latter with the left index; the Mackenzie natives took up the latter with the palm of the left thumb and grasped the former with the left thumb and index. All the other loops were dropped and the strings drawn taut. The Indian point natives thereby had the left index caught in a noose, *i.e.* speared, the Mackenzie natives the right thumb.

LXXXIV. TWO FROZEN CARIBOU TONGUES

This figure is known to the Eskimos of Indian point, Siberia, under the name of *tāmaiyaqumaiya*, which was said to be the name of a man and mean "one chewing." A Mackenzie native called it *oqak qegeyak*, *i.e.* "two frozen caribou tongues." It is a slight variation of the preceding figure.

Proceed as in the last figure (No. LXXXIII), but instead of interchanging the middle finger loops on the proximal side of all the strings, make this movement on the distal side.

At this stage the Indian point natives chanted:

tāmaiyaqumaiya
tāmaiyaqumaiya-a-a
tamani wqaya

The chewer, the chewer.

Here he dropped it from his mouth.

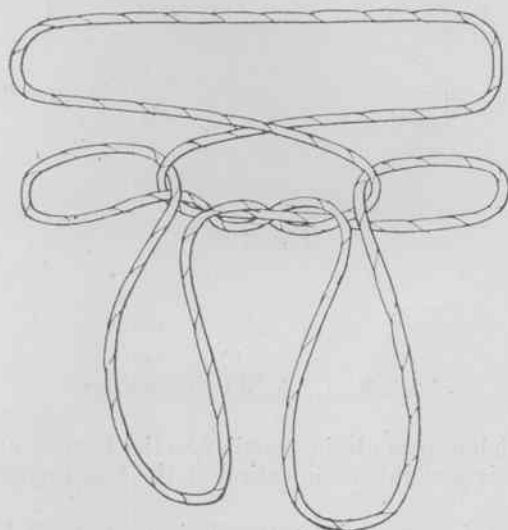


Fig. 121

At the word *wqaya* drop the thumb and index loops; the food drops from his mouth, as typified by the two loops that fall down. These two loops to the Mackenzie natives represent "the two frozen caribou tongues."

LXXXV. A SMALL PLATTER

The Mackenzie natives, among whom alone I saw this figure, call it *ilviätciaq*, i.e. "a small platter." In Cumberland sound Boas found it called *egeavatchea*, which probably has the same meaning. It is a development of the preceding figure.

Make the last figure ("the two caribou tongues"), but, instead of releasing the thumb and index loops, press out and through the middle finger loops with the backs of the middle fingers the radial thumb strings.

Drop the thumb loops.

Remove the index loops to the thumbs and spread apart the middle finger loops with the indices.

You have "the platter," the rectangle with its two long sides formed by double strings.

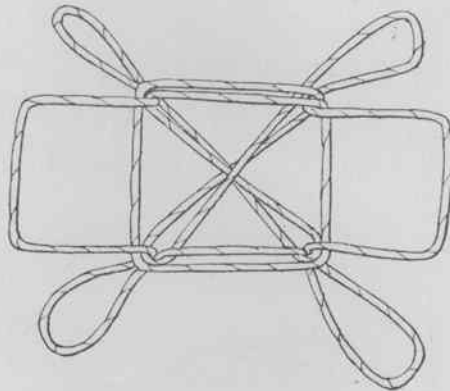


Fig. 122

LXXXVI. A MAN CHEWING

This figure, which appears to be peculiar to the Barrow and Inland Eskimos of northern Alaska, is a slight modification of the two preceding figures.

Make "the two frozen caribou tongues" (No. LXXXIV), but without dropping the thumb and index loops.

Turning the palms downward, push one thumb loop through the other and interchange them on the thumbs.

With each thumb from the proximal side take up the radial index loop of its hand.

Release the indices and insert them from the proximal side into the middle finger loops and see-saw them up and down, saying *taməktuŋa taməktuŋa*, "I am chewing." You have "a man chewing."

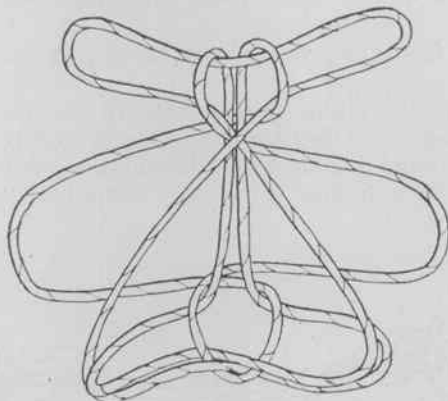


Fig. 123

The Inland Eskimos then add:

cua mən'a taməŋnianəmmi
aklaluk

Lo, as he was chewing a brown bear came
along.

Withdraw the left index from the middle finger loop, insert it from below between the ulnar thumb strings and with its back push out the two radial strings.

Drop all the loops on the right hand except the little finger loop, on the left all except the index and little finger loops, and draw the hands apart. You have "the brown bear."

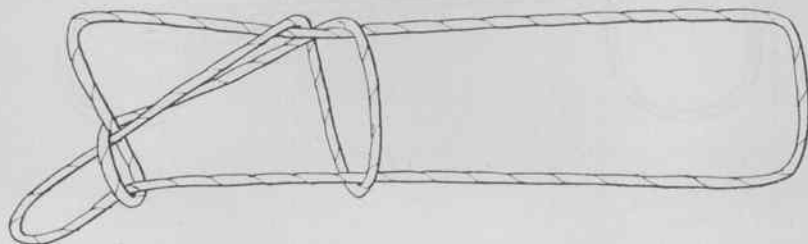


Fig. 124

LXXXVII. THE SEAL NET¹

This figure also seems to be confined to the Barrow and Inland Eskimos, who call it *iŋalaŋ*, i. e. the rectangular net which is set at a seal-hole or across a tide-crack in the ice. The figure is a logical continuation of "the two caribou tongues," after the manner of another figure known to the Barrow and Inland Eskimos, "the butterfly" (see No. CIX).

¹ For a description of this net see J. Murdoch, Ninth Annual Report of the Bureau of Ethnology, Washington, 1892, p. 251.

Make "the two caribou tongues" (No. LXXXIV), but without dropping the thumb and index loops.

In the middle of the figure there are two intersecting diagonal strings. With the back of each middle finger push out the nearer upper string of each diagonal.

With the thumbs from the proximal side take up the radial index strings and navaho the thumbs.

With the backs of the middle fingers take up the ulnar index strings and navaho the middle fingers. Drop the index loops, and point all but the little fingers upward, thereby holding the figure horizontal. You have "the seal net." Carefully release the little fingers from their loops and you have "two seals" (*nātcik*) hanging from it.

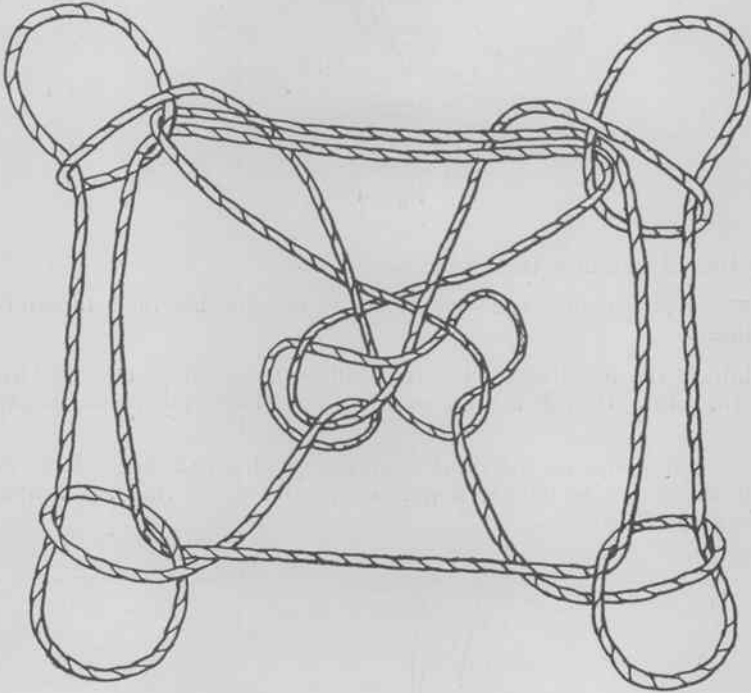


Fig. 125

LXXXVIII. A PAIR OF TROUSERS

This is a succession of figures obtained by movements that are rather unusual. It is known to the Barrow and Inland natives, in the Mackenzie delta and in Coronation gulf. By the Barrow and Inland natives the first figure in the series is called *kamak*, "a pair of long trousers," the second *qaqlik* or *qaxlik*, "a pair of knee-breeks," the third *keacik*, "two scapulae," and the fourth and final one *aitqatik*, "a pair of mittens." The Mackenzie natives call the figures successively *caqpiloayiktualuk*, "a man standing with his toes turned out (?), *ātiyeqtog*, "he has taken off his fur coat," and *mātaqtoaq*, "he has stripped naked." In Coronation gulf the figures were called generally *kamak* or *kamiyyuok*, "trousers," but I failed to record the names for the different parts of the series. Boas has the first figure from the west coast of Hudson bay under the name "boy's pants with stockings."

Opening B.

Pass the three last fingers of each hand into the index loops from the proximal side and hold down with them the radial index string.

With the backs of the little fingers push the ulnar thumb strings out through the index loops, withdrawing at the same time the ring and middle fingers of each hand.

Close the last three fingers over all but the radial thumb strings and with the backs of the little fingers draw this through between the radial and ulnar little finger strings.

With the right thumb and index take hold of the radial left index string and remove that loop to the left thumb.

Draw out the original left thumb loop from under it and place it on the left index. Drop the left thumb loop.

Do the same with the right hand, but place the thumb loops, not on the right index, but on the left thumb. Drop the right thumb loop.

Remove the right little finger loop to the right thumb and the left little finger loop to the right little finger.

Close the left thumb and index so that their loops do not slip off, then turn them downwards so as to straighten their loops, and separate the hands.

You have "the pair of long trousers," or "the man with his toes pointing out."

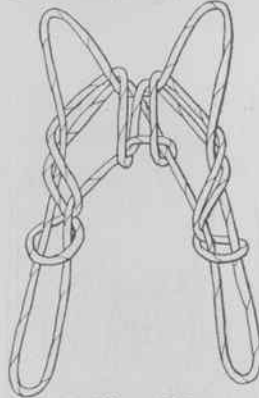


Fig. 126

Release the thumbs and pass them in between each trouser leg just above the lowest strings that loop round them and draw the loops down. You have the man's "brecks."

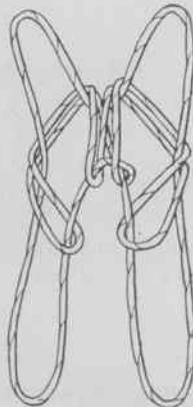


Fig. 127

Repeat the same process; you have "the scapulae."

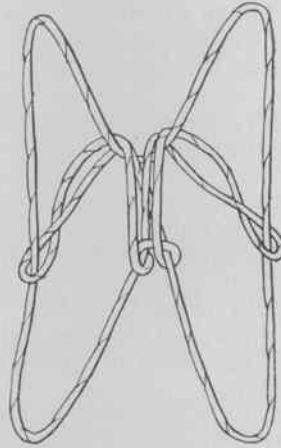


Fig. 128

Repeat it again and you have "the mittens."

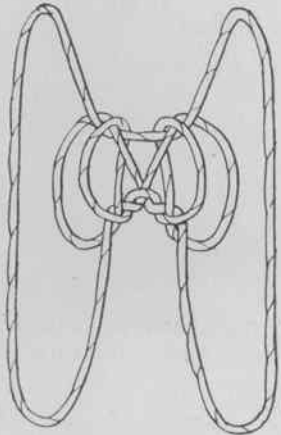


Fig. 129

LXXXIX. THE BOW

This is a series of figures known, as far as I am aware, only to the Point Hope, Barrow, and Inland natives of northern Alaska. The movements can all be paralleled from other figures.

Opening B.

Insert the remaining three fingers of each hand from the proximal side into the index loops and close them down over the radial string.

With the backs of the indices from the distal side raise the ulnar thumb strings, then with their palms draw through the radial thumb strings, thereby navahoing the indices. You have "the bow."

The following conversation is supposed to take place:

picckcin^y man'a qaili

"Your bow here, give it to me."

picckciya man'a qain^yiaηt^ckiya in^yuniotit^cuaγigiya

"My bow, this one, I will not give you; it is the one thing I depend upon for food."

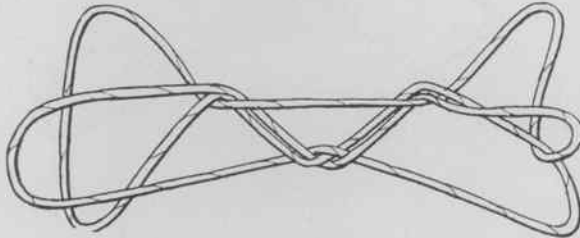


Fig. 130

Drop the little finger loops.

You have "the wind-break."

oqotätin^y ukwa qailit^c

"Your wind-breaks these, give me."

oqotätka ukwa rin^yiaηt^ckitin^y äηuγman iluaqotit^cuaγigt^cka

"These wind-breaks of mine you shall not have; when the weather is stormy they are the only things that are of any use to me."

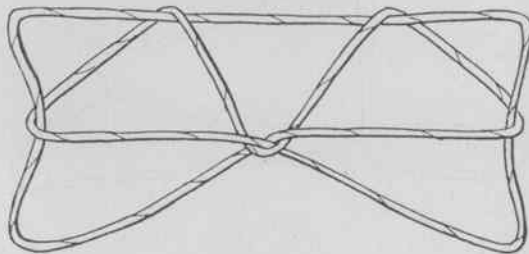


Fig. 131

Remove the thumb loops to the little fingers from the distal side.

On each side there is a string which runs from the palmar string to loop round the lower transverse string. Pass the thumbs in below them from the proximal side, and take up each of these strings. Katilluik the thumbs.

You have the fishing appliances.

egālukciūtūn^v ukwa qaiḷiḷ

"Give me these fishing implements of yours."

egālukciūtātka ukwa pin^viaḡiḷ^vkdin^v kie'ica in^vuniotit-uaḡiḡiḷ^vka

"You shall not have these fishing implements of mine—on them alone do I depend for food."

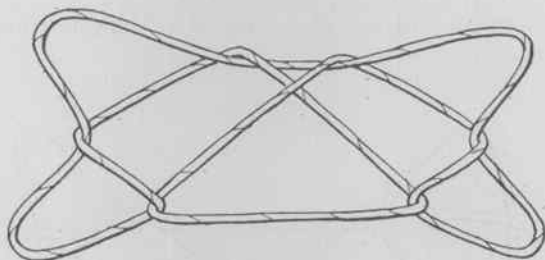


Fig. 132

With the right index from the proximal side remove the left thumb loop.

With the left index from the distal side remove the left little finger loop.

With the left thumb from the distal side remove the right little finger loop.

You have "the snow-shovel."

pikḡotan mānva qaiḷi

"Give me this snow-shovel of yours."

pikḡotaḡa mānva pin^viaḡiḷ^vken^v nulaḡnaḡuma iḷuiḷiḷiciḡiḡima

"You shall not have this snow-shovel of mine—you will make it impossible for me to pitch my camp."

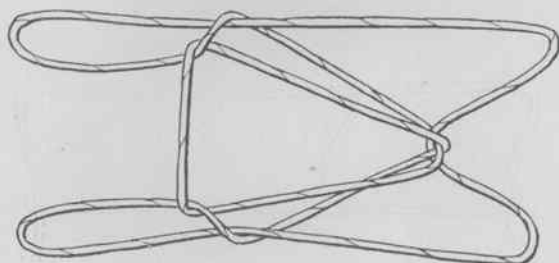


Fig. 133

Remove the thumb loops to the little fingers from the distal side.

The radial left little finger string loops round the bottom string of the shovel, then runs to loop round the lower transverse string.

With the back of the left thumb from the proximal side take it up at this latter portion of its course, then with the palm of the same thumb take up the corresponding string at the upper end of "the shovel."

Insert the right thumb from the proximal side into the left thumb loops and finish the movement of katilluik.

You have "a pair of snow-shoes."

ταγλυκ'ιγιγυμ μακωακ γαιλικ
 "Give me those snow-shoes of yours."

ταγλυκ'α υκωακ ρινιαητ'κικιν' μαυαηοτιμαηα ιλναγοττ'ιαγιγυκ'α
 "You shall not have those snow-shoes of mine—they are the one thing I need when the snow is deep."

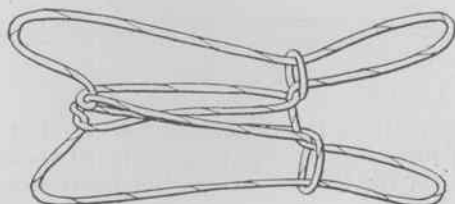


Fig. 134

Remove the thumb loops to the indices.

In the middle there are four strings running parallel horizontally; two are proximal strings, the others distal.

Insert both thumbs under the two proximal strings from the proximal side and complete the movement of katilluik.

You have the fish—"the flounder."

ναταηναηγυμ υνα ροααλαγο
 "That burbot of yours, let me eat it frozen."

ναταηναγα υνα ροααηιαητ'κικιν' κατωμνι ιμααγυκτααητηγιν'ιαγιγα
 "You shall not eat that burbot of mine frozen—I want it to splash in the water under my door."

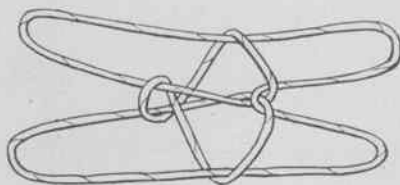


Fig. 135

Remove the thumb loops to the little fingers from the proximal side, and hold the little finger loops in the hands.

You have "the ptarmigan."

ααγγινγυμ una ρικκλαγο

"Let me shoot that ptarmigan of yours."

ααγγιγα una ρικκνιαηι'κιν^ν ωλαγμα λαυττααγιγιν^νιαγιγα

"You shall not shoot that ptarmigan of mine—I shall keep it to coo in the mornings."

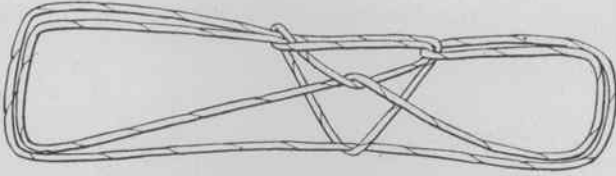


Fig. 136

Insert the right index from the distal side into the left hand loops, drop the right hand loops, and inserting the right hand in between the radial and ulnar left hand strings, pull out the loops. They come away free in each hand.

αινγυμ una αλκκλαγο

"Lambiam anum istum."

αλυγη αλυγη

"Lambi, lambi."

XC. THE TWO THIGHS

The Copper Eskimos, among whom alone this figure was found, called it *mimilyuok*, "the two thighs." It is a continuation of the Barrow and Inland Eskimo figure "the bow" (see No. LXXXIX).

Make "the bow."

Pass the thumbs down on the proximal side of all the strings, pressing their ulnar strings before them.

Put the thumb loops together (as in the first movement of *katilluik*), still holding the palms turned down, then with the back of each thumb from the distal side take up the ulnar little finger string and draw it through.

Drop the little finger loops. You have "the two thighs."

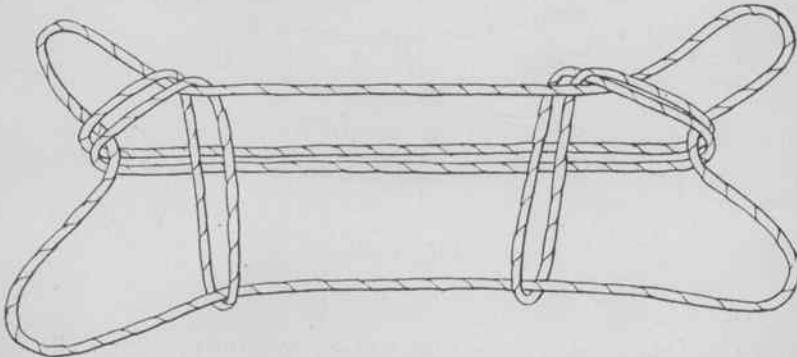


Fig. 137

XCI. THE TURNSTONE

This figure is known to the Eskimos of Cape Prince of Wales, of Barrow, and of the Colville river. It was called "rabbit" (*ukalig*) by a Cape Prince of Wales woman, who went on to produce "the ptarmigan" from it. The Barrow and Inland natives called it "the turnstone" (*tälivvaγuk*). The movements are all very simple and usual.

Opening B.

With the left thumb from the proximal side take up the ulnar left index string.

With the back of the left little finger from below from the proximal side push back the ulnar left thumb string, then on the distal side of all the strings hook it over the radial index string and hold it firmly against the palm.

Pass the palm of the left thumb down, pressing its ulnar string before it, then point it inwards so that it takes up this loop.

Drop the right thumb loop, insert the other three fingers of the right hand into the right index loop from the proximal side, and turn the knuckles inward. Drop the left little finger loop.

You have "the turnstone."

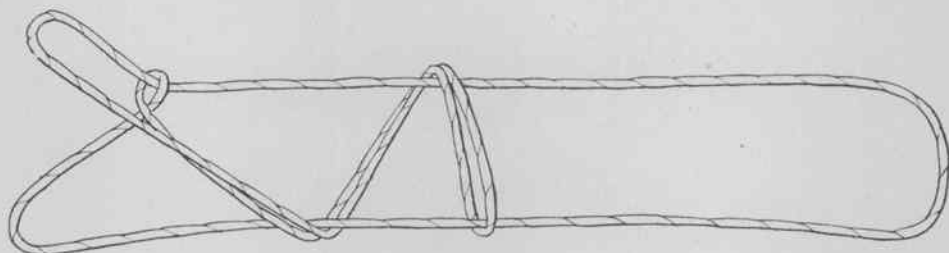


Fig. 138

The Cape Prince of Wales woman, who called this figure "rabbit," then proceeded to drop the right hand loop and pulled out the lower transverse string from between the two pairs of strings that loop round it. Thus she obtained "the ptarmigan" (*aqayγiq*).

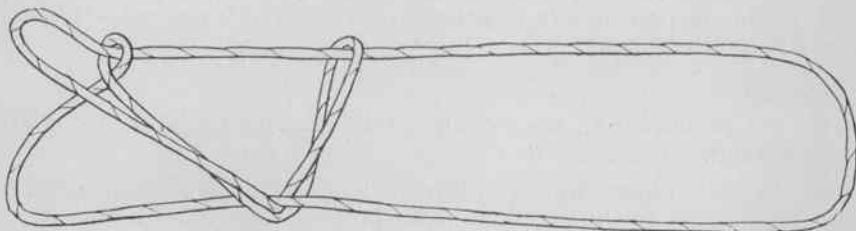


Fig. 139

XCII. THE HOUSE = $\epsilon\gamma\lambda\mu$ (Inland Eskimos of Northern Alaska)

All the movements are very usual in Eskimo figures.

Opening B.

Pass the thumbs down proximal to the radial index strings and from the proximal side take up the ulnar index strings. Drop the index loops.

Pass the little fingers from below from the proximal side into the thumb loops, move them towards the middle, allow the lower transverse string to slip off, then hook the little fingers down over it.

Pass the indices into the thumb loops from the distal side, and with their palms from the distal side take up and draw through the upper transverse string.

Drop the thumb loops.

With each thumb from the proximal side take up the string which runs from the upper transverse string to the palmar string of that hand.

Katilluik the thumbs.

In the middle are two diagonal strings which intersect each other. Pass the index fingers in between these on each side, and raising the upper string, draw through with the palms of the indices the upper transverse string, taking it up in the middle of its course. Drop the thumb loops.

You have "the house."

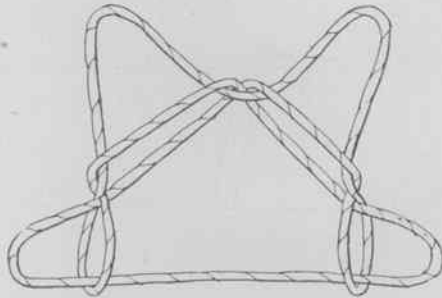


Fig. 140

XCIII. Two HIPS

This Copper Eskimo figure is entirely different from another figure which was given the same name, *qotuynaqtoryuk*, by another Copper Eskimo (see No. LXXVI). The movements are identical up to the final stage with those of the previous figure "the house."

Opening B.

With the thumbs from the proximal side take up the ulnar index strings and drop the index loops.

Pass the little fingers from the proximal side into the thumb loops, allow the transverse string to slip off, then hook the little fingers down over it.

Pass the indices into the thumb loops from the distal side and with their palms draw out the upper transverse string.

Drop the thumb loops. From the proximal side take up the upper string of each diamond with each nearer thumb and katilluik the thumbs.

Transfer the thumb loops to the indices.

On each side a string runs vertically from the lower to the upper transverse strings. Take these up with the backs of the thumbs, and katilluik the thumbs, but without dropping the index loops.

You have "the two hips."

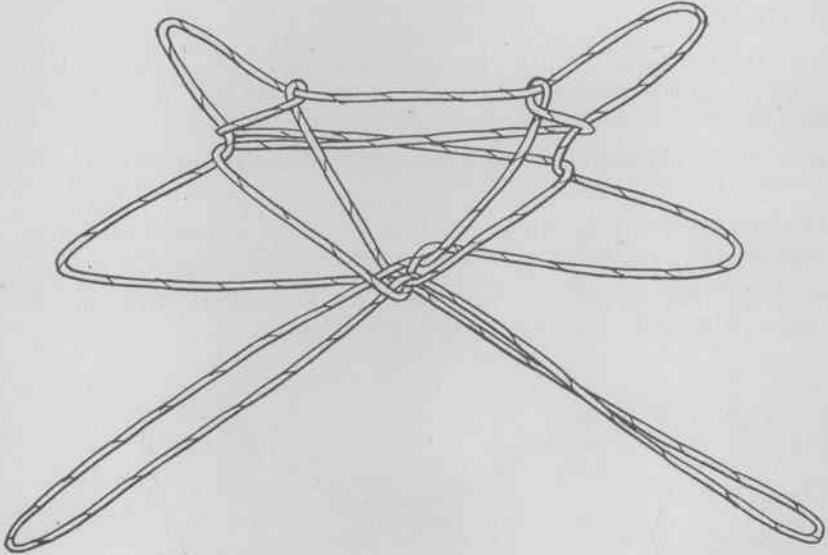


Fig. 141

Drop the index loops and invert the figure. You have "a man" (*inuyyuk*).

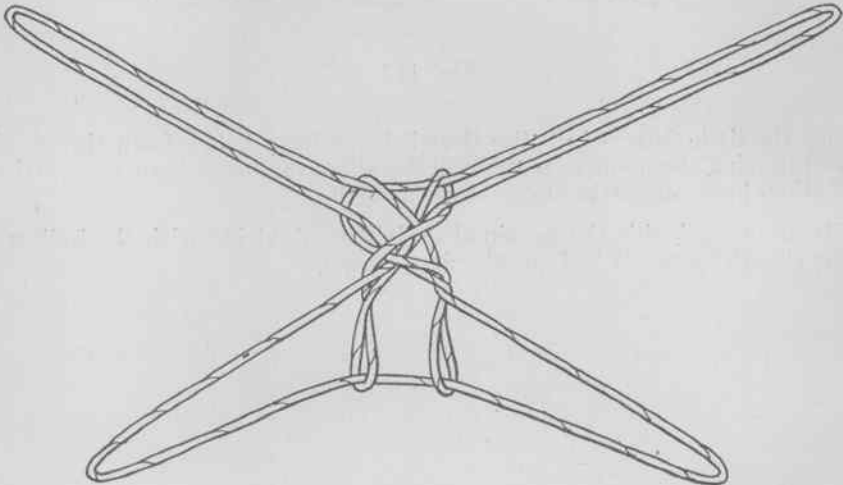


Fig. 142

XCIV. *qoḡaq*

This figure, which I found among the Copper Eskimos only, appears in Cumberland sound, according to Boas, under the name of "the hill with two ponds at its foot." The Copper Eskimos called it *qoḡaq*, but I was unable to obtain any meaning for the word. The method of making the figure is very unusual, though each single step has its parallel in other figures known to the Eskimos of the north coast.

Opening B.

With the palms of the little fingers below the other strings push down the ulnar thumb strings, then with their backs push back the radial thumb strings and hook down with their palms the radial index strings.

Keeping the index loops pointing outward push one through the other and interchange them on the indices.

With the thumbs from the proximal side, on the proximal side of the radial index strings, take up the ulnar index strings.

Drop the index loops and with the thumbs similarly take up the radial little finger strings and drop the little finger loops.

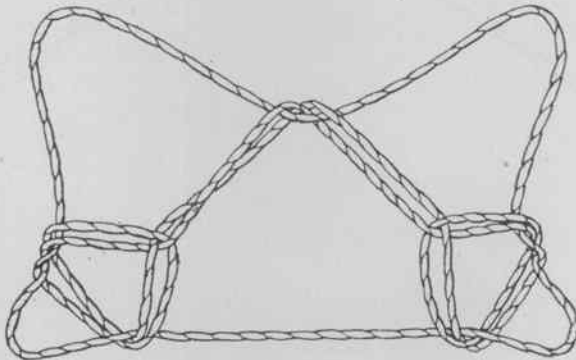


Fig. 143

Pass the little fingers into the thumb loops from below from the proximal side, and moving them towards the middle, allow the lower transverse string to slip off, then hook the little fingers down over it.

Lift up on each side the proximal radial thumb string with the indices and drop the thumb loops. You have the figure *qoḡaq*.

PART III

FIGURES BEGINNING WITH OPENING C

XCV. THE DOG OR FOX

This figure is called *qi'miq*, "dog," by the Barrow and Inland Eskimos of Northern Alaska, *teriγān'iaq*, "fox," by those of the Mackenzie delta and of Coronation gulf. It is the introductory stage to a variety of different figures known all along the coast.

Opening C.

Bring the hands together, the left palm turned downwards, the right upwards.

With the palm of the right index from the distal side take up the left thumb-index string (*i.e.* the string which passes over the backs of the left thumb and index).

At the same time drop the left thumb loop and with its palm, also from the distal side, take up the corresponding string on the right hand.

Draw the hands apart and take up with the left thumb the radial left index string from the proximal side; navaho the thumb and drop the index loop.

Drop the right thumb loop.

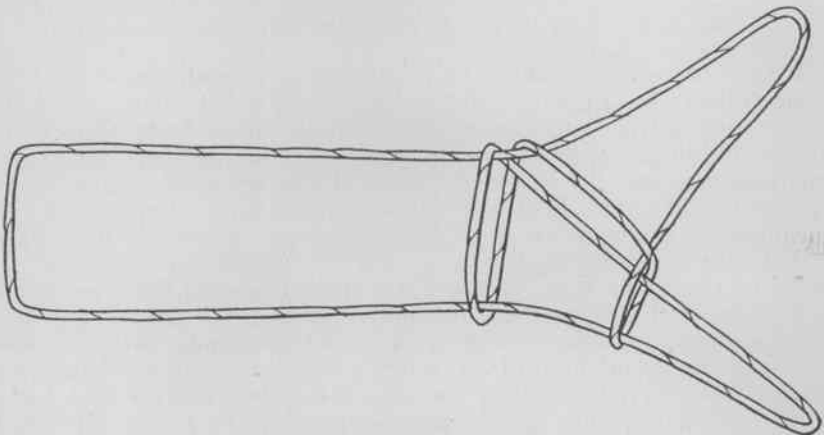


Fig. 144

At this stage the Mackenzie natives chant:

<i>teriγān'ialuno nuyaqcaliŋi</i>	The fox
<i>kaiyuγiaqtokiŋi</i>	Pounding
<i>tāciγām cenani</i>	Beside the lake.
<i>tāciγām cenani</i>	Beside the lake.
<i>āεγγλι ayāεγγλι</i>	
<i>teriγān'ialuk mān'ikciuyayuk-</i>	The fox likes to look for eggs.
<i>tualuk ayait</i>	

The other Eskimos have no song with it.

XCVI. A BLEEDING HEEL

This figure, which is known apparently only by the Inland Eskimos of Northern Alaska, who call it *auqtuaqtɔq*, "it bleeds" (*i.e.* a man's heel bleeds), is merely a modification of the preceding figure "dog" or "fox."

Proceed as in "the dog," but while drawing the hands apart, take up again with the left thumb from the proximal side the radial left index string. Navaho the thumb and drop the left index loop.

Drop the left little finger loop and, holding the left thumb loop in the left hand, circle it twice counter-clockwise.

You have "the bleeding heel."

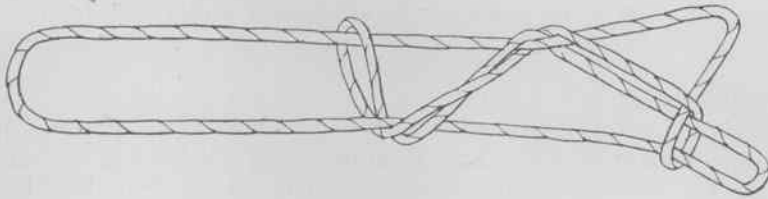


Fig. 145

Chant:

auqtuaqtɔq auqtuaqtɔq
kimiaɔyupcunut:ɔq

It is bleeding, it is bleeding
The heel . . . ?

XCVII. THE BIRD FRIGHTENED BY AN ANIMAL

There are three figures, identical in all their movements save the final one, that seem to have been greatly confused along the north coast. A figure produced by removing the left index loop with the *left* little finger through the *left* thumb loop is called by the Copper Eskimos "the snowy owl" (*ukpik*) and its continuation "the fox" (*teriyān'iaq*). One Mackenzie native called it by the same name, but two others called it "the old squaw duck" (*mälɛyaluk*), though the continuation was also "the fox." No name was given by the Barrow and Inland Eskimos of Northern Alaska for the bird figure, but "the fox" portion was called by them "the dog" (*q'miq*). On the other hand the same Mackenzie native who called this figure "the owl" gave the name of "old squaw duck" to another figure produced by removing the left index loop with the *left* little finger through the *right* thumb loop, a figure which the Copper Eskimos called *tātilγāt* or "brown crane"; while the two Mackenzie natives who had given the name "old squaw duck" to the first figure gave the name "owl" to still a third figure which is produced by removing the left index loop with the *right* little finger through the *left* thumb loop, a figure which the Copper Eskimos call "Hutchins's goose" (*υλγoθγυλ'ik*).¹ These variations can be observed better by arranging them in a table: L. L. F. means left little finger, R. L. F. means right little finger, L.T. means left thumb, and R. T. means right thumb.

	Barrow	Mackenzie	Copper
L. L. F. through L. T.	Dog	Owl and Fox (one native) Duck and fox (two natives)	Owl and fox
L. L. F. through R. T.	?	Duck (one native)	Brown crane
R. L. F. through L. T.	?	Owl (two natives)	Goose.

¹ Mr. V. Stefansson saw a figure in Dolphin and Union strait which was called *uluurulik*, which was probably this one. His Mackenzie native simply called it *aiyaraq*, *i.e.* the general name for the game of "cut's cradles." The same native recognized as "owl," *ukpik*, the figure which was so named by the Copper Eskimos (Anthropological Papers of the American Museum of Natural History, Vol. XIV, Part I, p. 246).

As if this were not sufficiently complicated there is a fourth figure, somewhat similar in its movements, which some Barrow natives called "the owl" and its continuation "the lemming" (*evin'ag*), whilst other Barrow natives, and also some Colville river Eskimos, called it "the ptarmigan and the rabbit"; I believe the Mackenzie natives know it also under this latter name. Until further information is forthcoming from other places it is quite impossible to decide which are the genuine original figures, and which are merely variations.

The first figure, "the owl and the fox," of the Copper Eskimos, will be described first.

A. THE OWL AND THE FOX (Copper)

Make "the fox" (No. XCV), but without dropping the left little finger loop.

Over near the left hand is a triangle or trapezium. Pass the left index into this from the distal side, hook its palm over the lower transverse string and draw it through to the distal side of all the strings.

Drop the *left* little finger loop, and, passing it through the *left* thumb loop, remove with it the left index loop from the distal side and return.

You have "the snowy owl."

Drop the left little finger loop and you have "the fox" which frightened it away.

The Barrow and Inland natives, who, as was said above, call "the fox" a "dog," chant when they reach the owl stage:

<i>taktukitcikiteunga ho'q</i>	Taktukitcikiteunga (dog's name) hoq.
<i>taktukitcikiteunga ho'q</i>	Taktukitcikiteunga hoq.
<i>tikit'eq q'mici pitoiyaqtokciyut</i>	He has arrived, go and fasten up your dogs.

Then dropping the left little finger loop, they cried *ho'q, ho'q, ho'q*,¹ and vibrated the left hand, when "the dog" travelled to the left.

Some Inland Eskimos from the Endicott mountains sang a different chant, which ran as follows:

<i>taktukitcikiteunga taktukitcikiteunga</i>	Taktukitcikiteunga
<i>taktukigioq qaqma tiki'iyut'eq</i>	Taktukigioq outside is coming again.
<i>q'mivuk diqtuk terihiye</i>	Our two dogs their rumps
<i>ha'q ha'q ha'q</i>	Haq, haq, haq.

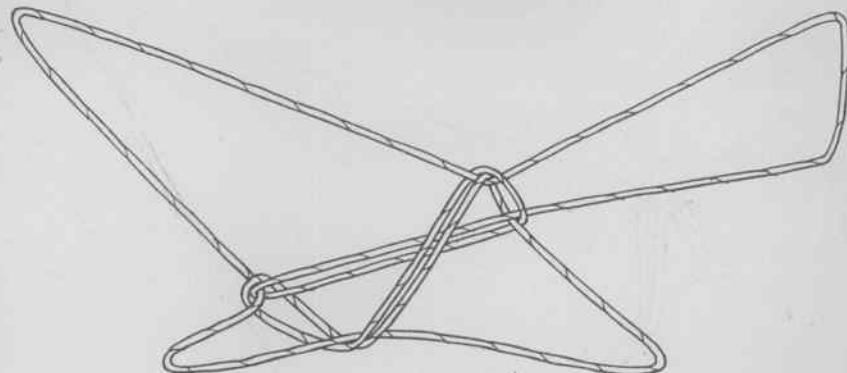


Fig. 146

¹ This word *ho'q* is no longer used in northern Alaska, where it has been replaced by the French word "marche" (pronounced there "mush"). It is still used among the Copper Eskimos, however, to drive a dog out of the house, or to make it pull harder in its trace.

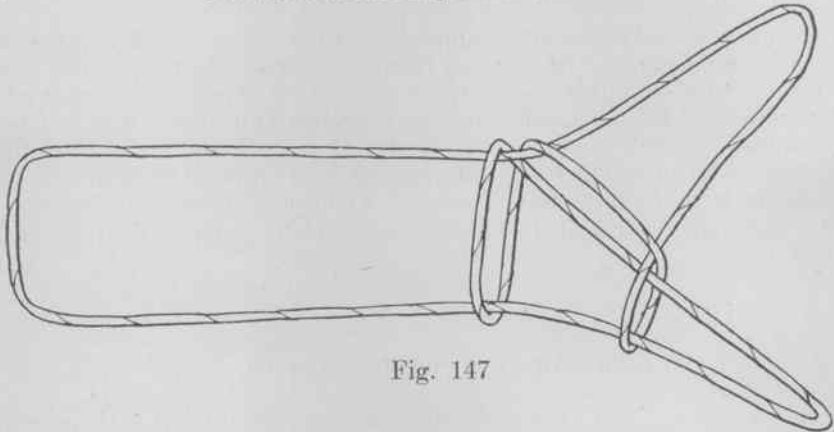


Fig. 147

B. THE SECOND FIGURE—THE CRANE

All the movements in this figure are the same as in the preceding, save that in the final stage you pass the left little finger through the right thumb loop and remove with it from the distal side the left index string and return. The Copper Eskimos have no chant, but the Mackenzie native who called it an "old squaw duck" chanted:

*mādegaluk kanaha
 ku-γmi kaha
 caγanackiaqtōq aiyaha
 imān'a kanaha
 ic'umouλuni
 aγnamiγi
 euαγαγaniγi
 qimαγαγaniγi
 inualuciyaha
 itαγαγapku
 toqapci euqaiγait
 teriγān'iaqλuni aylaqtōq*

Old squaw duck down there,
 On the river, on its surface,
 Floats along,
 Thus (?) down there,
 Thinking,
 Its mother
 Scolding it all the time,
 Leaving it behind all the time,
 While it was still little.
 When I remembered it
 slow (?)
 It became a fox and ran away.

At the last words he dropped the left little finger loop and produced "the fox running away."

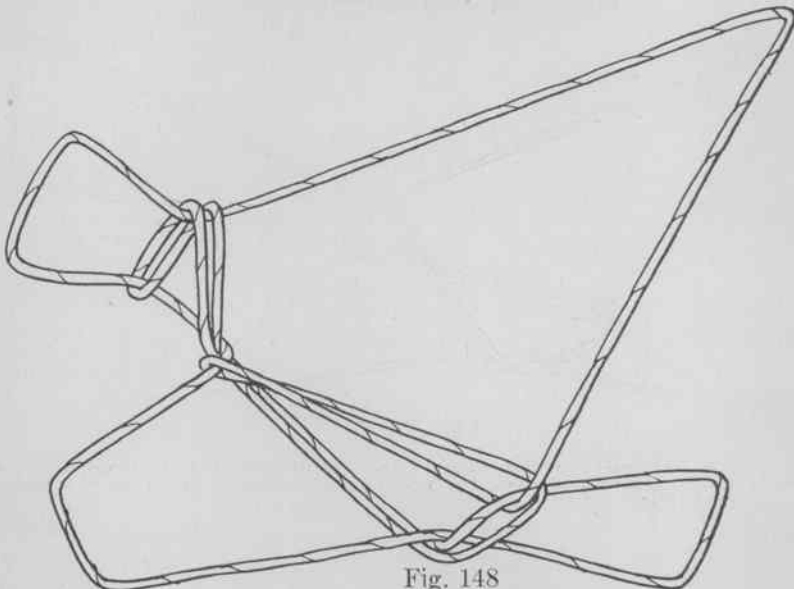


Fig. 148

C. THE THIRD FIGURE—THE GOOSE

Proceed as in the two preceding figures, but drop the *right* little finger loop and pass that finger through the left thumb loop to remove with it the left index string.

You have "the goose," the figure which two Mackenzie natives called "a snowy owl." Drop the left little finger loop and it flies away to the right.

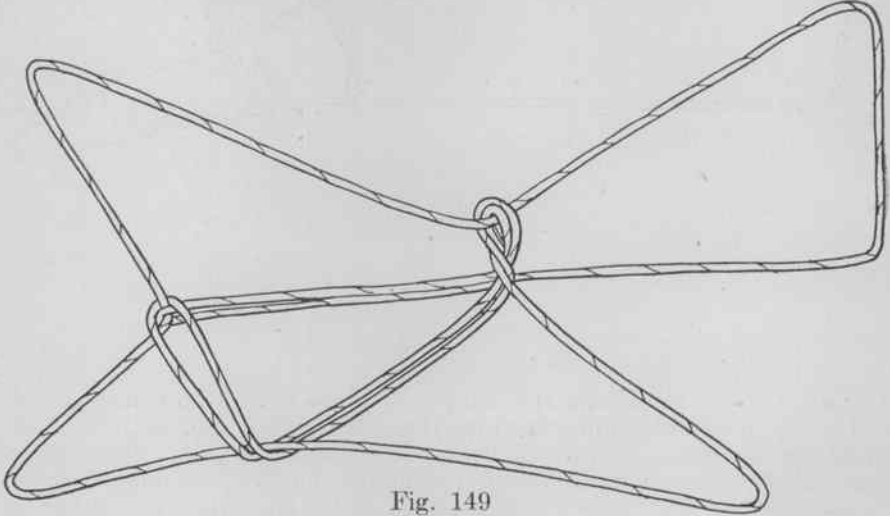


Fig. 149

D. THE FOURTH FIGURE—THE PTARMIGAN AND THE RABBIT

Opening C.

Bring the right hand, palm upward, over the back of the left hand so that the fingers of both point in the same direction, then slide the right index under the string that passes behind the left thumb and index, and at the same time take up with the left thumb similarly the corresponding string of the right hand. Separate the hands, drawing these loops through.

With the thumbs from the proximal side take up the radial index strings, navaho the thumbs, and drop the index loops.

Near the left hand you have a trapezium or triangle. Pass the left index into this from the distal side and with its palm hook up the lower transverse string (as in the preceding figures). Drop the left little finger loop, pass that finger from the proximal side under the upper transverse string just to the left of the string that loops round it and returns on itself, remove with it the left index loop from the distal side, and return.

You have "the ptarmigan," with its tail to the right and its head near the left thumb. Drop the left little finger loop and you have "the rabbit" running off to the right, after frightening away "the bird."

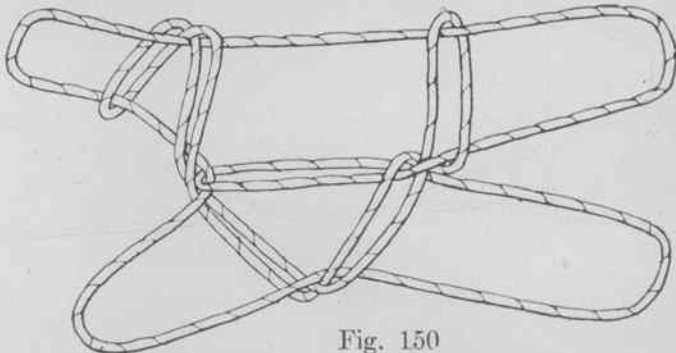


Fig. 150

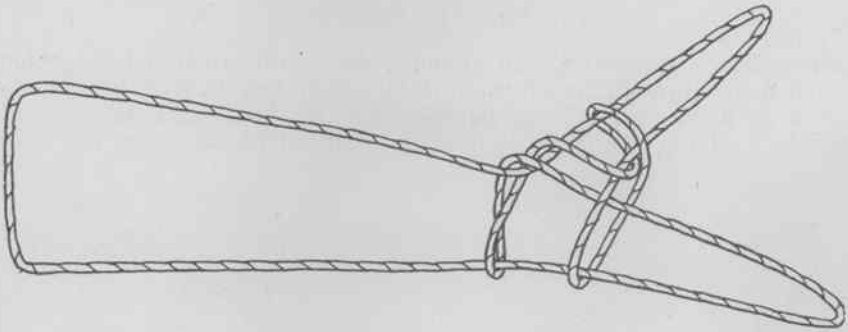


Fig. 151

XCVIII. A Dog

This figure, seen among the Copper Eskimos only, who call it *qumeyyuk*, "a dog" is altogether different from the other string representations of this animal that are known in various places along the north coast. The early movements are not of an unusual type, but the later ones are extremely complicated. It resembles the next figure, "the musk-ox calf," more than any other that is known to me. It is noticeable that both these figures are confined to the Copper Eskimos, and that still another complicated figure with the same opening (No. C) has the same limited distribution.

Make "the dog" or "fox" (No. XCV), but without dropping the right thumb loop in its last movement.

Pass the right index from the distal side into the triangle below the upper transverse string, hook its palm round the lower transverse string and draw it through.

Drop the right little finger loop and transfer the right index loop to that little finger from the distal side. Transfer the thumb loops to the indices.

You have now this figure:

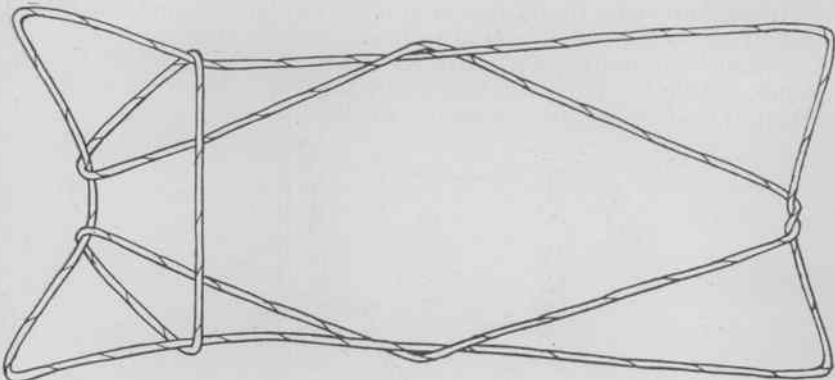


Fig. 152

Two strings run from the left palmar string, the one to loop round the upper, the other round the lower transverse string. A vertical string running from upper to lower transverse string crosses them.

Pass the left thumb in under the string running to the lower transverse string to the left of the vertical string, and pass it out above the string running to the upper transverse string to the right of the vertical string.

You now have three loops on that thumb. Pass the right thumb into the left thumb loops from the proximal side, then with each thumb from the proximal side take up the radial index string, navaho the thumbs, drop the index loops, and transfer the thumb loops to the indices.

Two loops pass round the lower transverse string. Pass the right thumb in between these from the proximal side and take up with them from below the two strings that intersect just below the upper transverse string. Draw these two strings out to the proximal side of all the strings, insert the left thumb from the proximal side into the right thumb loops, then with each thumb take up from the proximal side the radial index strings of its hand.

Navaho the thumbs and drop the index loops. You have "the dog."

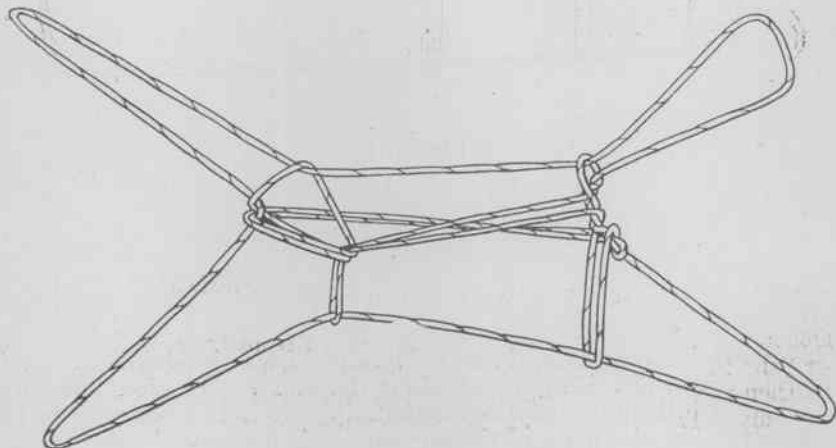


Fig. 153

XCIX. THE MUSK-OX CALF

This figure, *umiymayluqaq*, closely resembles the preceding in the method by which it is produced. It also was seen among the Copper Eskimos only.

Proceed as in the previous figure up to the intermediate stage illustrated by fig. 152.

Pass the left thumb into the figure under the string which runs from the left palmar string to the lower transverse string to the left of the vertical string running from one transverse string to the other, draw that string out, insert the right thumb into the left thumb loop from the proximal side, then with each thumb from the proximal side take up the radial index string of its hand.

Navaho the thumbs and drop the index loops.

Remove the right thumb loop to the right index.

Pass the right thumb in between the two loops that pass round the lower transverse string near the right hand, and draw out, with the right thumb below them, the two strings just above them which run, one from the lower transverse string, the other from the right palmar string, to loop round the upper transverse string.

With the right thumb from the proximal side take up the radial right index loop. Navaho the thumb, and drop the index loop. Drop the little finger loop of the left hand, and hold the left thumb loop in the left hand.

You have "the musk-ox calf."

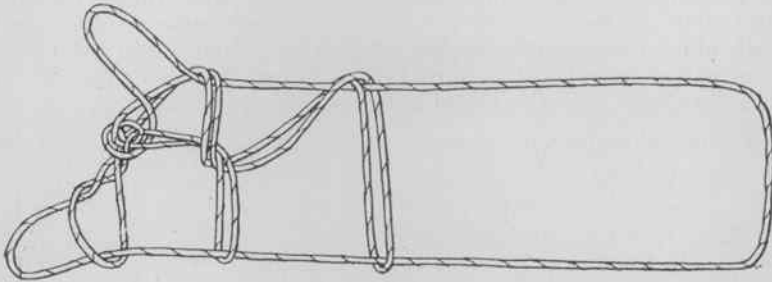


Fig. 154

C. THE FOX WITH AND WITHOUT ITS EARS

This is a rather complicated figure developed from the simple figure of "the dog" or "the fox" which is known all along the coast. "The fox," first without its ears, then with them (*teriñän'iaq ciutluk*), appears to be known to the Copper Eskimos only. The character of the movements is not remarkable.

Make "the fox" (No. XCV), but without dropping the left little finger loop.

Pass the right index into the right little finger loop from the distal side, raise with it the radial little finger and the ulnar thumb strings, then with its palm from the distal side take up the radial thumb string.

Pass the right thumb loop down on the proximal side of all the strings, pressing its ulnar string before it, and take up with it from below the right ulnar little finger string.

Drop that little finger loop and remove the right thumb loop to the little finger from the proximal side.

A triangle or quadrilateral is now formed in the middle.

With the right thumb from the proximal side take up the string which runs from the lower transverse string to the upper transverse string (the lower left side of the quadrilateral), then the string running from the right palm to the upper transverse string (the upper right side of the quadrilateral).

With the right thumb from the proximal side take up the radial right index string, navaho the two proximal thumb strings and drop the index loop.

If now you take hold of the left palmar string between the two loops that pass round it, and drop the left thumb and little finger loops, you will have "the fox" running away to the right, with its tail, but without its ears.

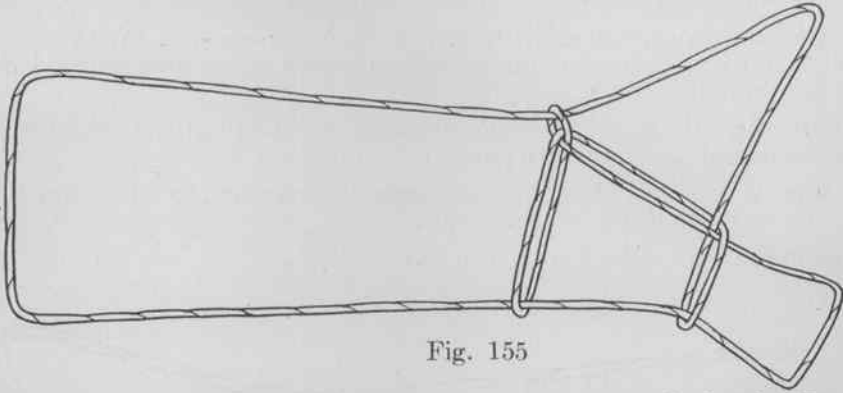


Fig. 155

A loop crosses the lower transverse string near the right hand. Turn the hands downwards, then outward so that their palms face outward. Dropping the right hand loops, reinsert the right thumb in the old little finger loop, and the little finger in the old right thumb loop. Then repeat all the movements from the opening stage ("the dog" or "the fox") to "the fox without its ears."

Now recircle the left hand inward and rechange the loops on the right thumb and little finger. Take hold of the left palmar string between the two loops that pass round it, and drop the left thumb and little finger loops. You have "the fox with its ears."

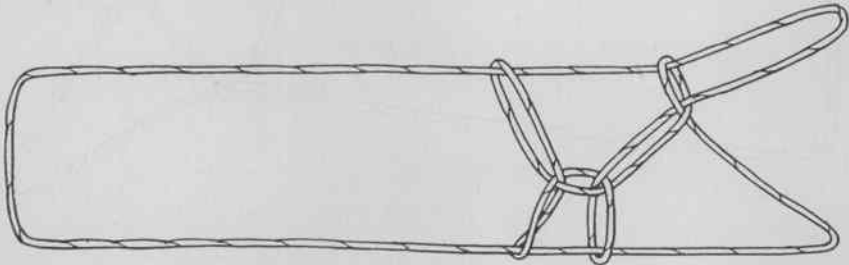


Fig. 156

THE SHAG CYCLE

The Eskimos of Indian point produce a succession of figures which are called "shag," "beaver," "squirrel," and "man." The Inland Eskimos of northern Alaska produce the "squirrel," but do not continue to the "shag"; moreover, they call the "squirrel" an "ermine." The same figure is known in the Mackenzie delta, in Coronation gulf and on the west coast of Hudson bay by the same name, "ermine." The Coronation gulf people, indeed, have elaborated another and rather complicated method of producing it. Klutschak figures it from King William island, and calls it *kakbik* ("wolverine"). Both the Inland Eskimos of northern Alaska and the Mackenzie natives have another figure which they call "the black brant." It follows the movements of "the shag" up to a certain stage, then, omitting the next movement, passes immediately to the final one. The Mackenzie natives even accompany it with a song, as the Indian point natives do their "shag."

"The shag" and three other figures all reach by the same methods to a common point, after which they deviate. To avoid repetition this part of the description may be given here:

STAGE A

Opening C.

Bring the hands together, the palms turned downward. With the palms of the thumbs take up the opposite thumb index string and return, drawing them through one another.

With the left thumb from the proximal side take up the left ulnar little finger string and navaho the thumb.

Drop the loop from the left little finger and transfer the left thumb loop to that little finger from the proximal side.

Drop the right index loop. You have stage A.

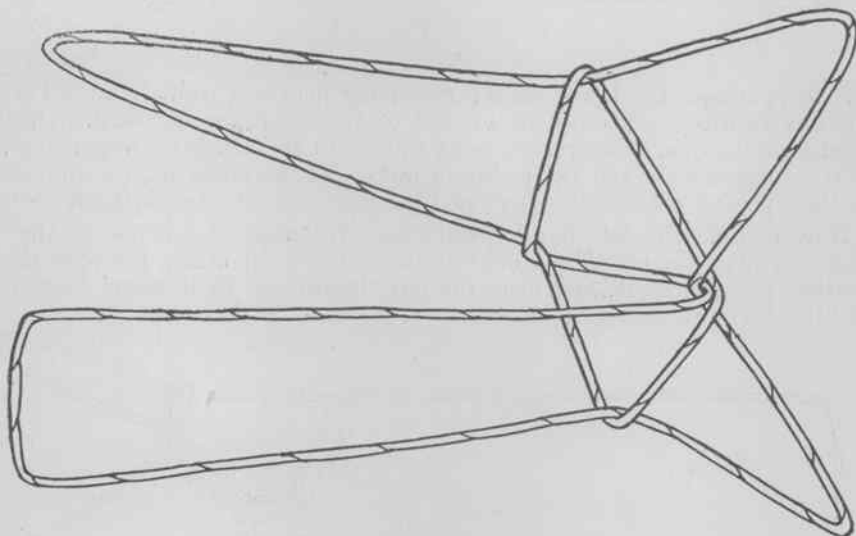


Fig. 157

CI. THE SHAG

Stage A.

With the palm of the left thumb from the proximal side take up the vertical string that runs from the upper transverse string to the middle, then, passing the thumb down beneath the left ulnar little finger string, take it up, drop the left little finger loop, and transfer the left thumb loop to that little finger from the proximal side.

From the ulnar left little finger string there are two strings running side by side to the middle of the figure. Pass the left thumb in under them from the proximal side, then take up with that thumb, also from the proximal side, the radial left index string. Navaho the thumb and drop the index loop.

Insert the left index from the distal side into the left thumb loop and hook its palm round the radial string to the right of the first loop that passes round it. Draw it through and drop the thumb loop.

Spread apart the radial and ulnar left index strings. You have "the shag."

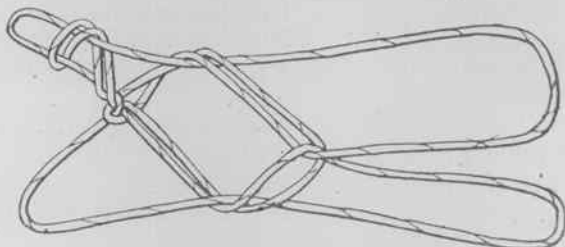


Fig. 158

Drop the right thumb loop and take up with that thumb the upper transverse string between the head and body of "the shag" (*i.e.* between the two loops that pass round it). Drop the left little finger loop and hold the left index loop in the left hand.

You have "the beaver."

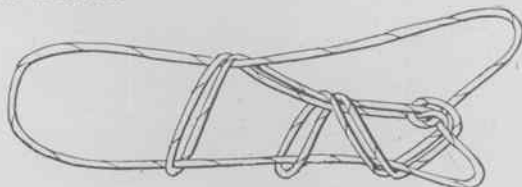


Fig. 159

Drop the left hand loop and draw out the lower transverse string, taking hold of it just to the right of "the beaver's tail," *i.e.* the last loop on the left that passes round it. You have "the squirrel." (This is "the ermine" of the Barrow, Inland, Mackenzie, Coronation gulf and Hudson bay Eskimos, produced by omitting the final movement in "the shag" above.)

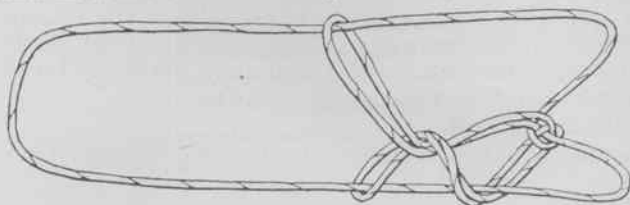


Fig. 160

Drop the right little finger loop and draw out the lower transverse string from between the two loops that pass round it. You have "the man."

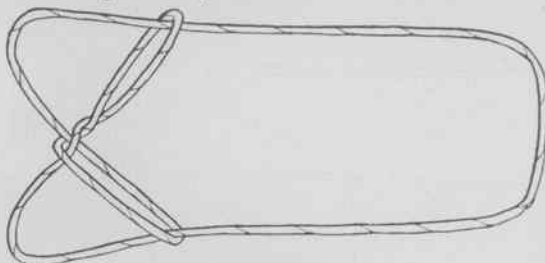


Fig. 161

The Indian point chant for this figure is:

νεληραq mamaqτιλγα
νεληραq mamaqτιλγα
αμιqλuyum kaluaγamakana
 (Make "the beaver.")
nakinckamakin teiqiq
αηqαλuni παηαλκτq
 (Make "the squirrel.")
iywhcam amieγaqtα
 (Make "the man.")

The shag was feeding its young. (?)
 The shag was feeding its young. (?)
 A beaver came up out of the ground to
 me.
 Whence that squirrel?
 Coming up it ran away.
 This man intercepted it.

CII. THE BRANT AND THE BLACK BEAR

For this figure omit the step in "the shag" which is enclosed between the marks * and *.

You have "the brant."

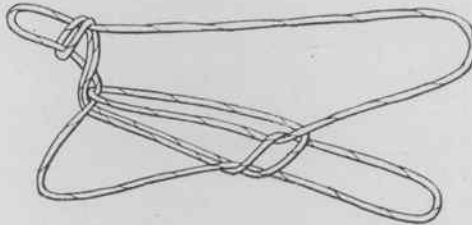


Fig. 162

The Inland Eskimos have no song with it, but the Mackenzie natives sing:

niklinγayuk neγeoqγologpatin
neγeoqγologpatin
evikcoγam cenani
mic:oyam cenani
kamæk'a tācamæni nāluwak'in
kamæk'a tācamæni nāluwak'in
teriγān'iaγuk teriγān'iaγuk
nikeγaqtqτq nikeγaqtqτq

O brant, they are waiting for you.
 They are waiting for you.
 On the edge of the long grass,
 On the edge of the swamp,
 You don't know my boots are there,
 You don't know my boots are there.
 O fox, fox,
 ? ? ?

(Another Mackenzie native said for the last word *uqεγaqtqτq*, "it eats the blubber.")

At the word *teriγān'iaγuk*, "the fox" is produced by dropping the left little finger loop. The Inland Eskimos call it, not "fox," but "brown bear."

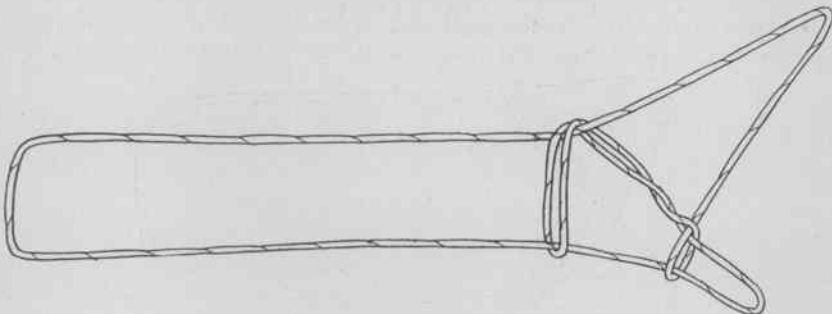


Fig. 163

CIII. THE ERMINE

The Copper Eskimos have an alternative method of producing this figure, besides the one given in CI.

Pass one end of the loop over the foot (or another person's finger).

Holding the other end in the right hand, lay the left index across the transverse strings, then drop the right hand loop over the transverse strings below it so that a section of it hangs on each side of each transverse string.

Pass the right hand under the transverse strings and with the thumb and index take up on both sides of the left transverse string the string that passes over it, draw it out below to the right, and, slipping the right thumb and index from below into the new double loop thus formed, draw through with them similarly the same string before and after it crosses the right transverse string.

Again slip the right thumb and index into this new double loop, and with the palm of the index draw through the right transverse string.

Drop the distal loop on the left index.

You have "the ermine," as by the previous method.

CIV. THE WALRUS POKE

The Indian point Eskimos called this figure "a bag of walrus intestine hung up to dry." I failed to find the figure along the north coast until we reached Coronation gulf, where it is called *nkpaktoryuk*, i.e. "a dog watching over a seal-hole."

Stage A.

A vertical string runs from the lower transverse string to loop round another string in the middle of the figure.

Pass the thumb to the right of this vertical string on the proximal side of all the strings, and take it up with its palm; then with the same thumb from the proximal side take up the radial left index string. Navaho the thumb and drop the index loop.

You have "the walrus poke," or, according to the Copper Eskimos, "the dog waiting to pounce on a seal."

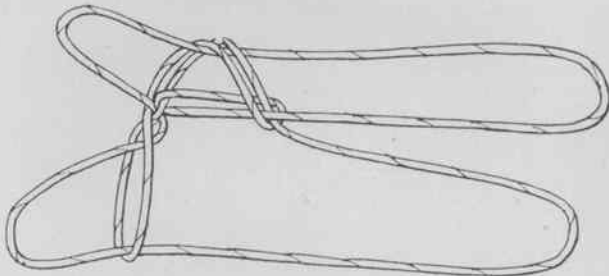


Fig. 164

Drop the left little finger loop and hold the left thumb loop in the hand. You have "the dog" running away, after making its capture.¹

The Indian point Eskimos sing this chant:

ciē'a halitaq puwuka halitaq

His walrus-bag was hanging up, hanging up.

a-a qtmim mitqayota

Ah! a dog has carried it off in its mouth.

At the word *qtmim* make the figure of "the dog."

¹ The figure of 'the dog' is the same as Fig. 144.

CV. *cipcalocin*—A MAN'S NAME (Port Clarence, Alaska)

Stage A.

Two strings now run from the left palmar string, one to cross the upper, the other to cross the lower transverse string.

With the back of the left thumb take up first the latter, then the former, from the proximal side.

Drop the right index loop (if still retained), transfer the right thumb loop to the right index from the proximal side, and insert the right thumb from the proximal side into both the left thumb loops.

With each thumb from the proximal side take up the radial index string of its hand. Navaho the thumbs and drop the index loops.

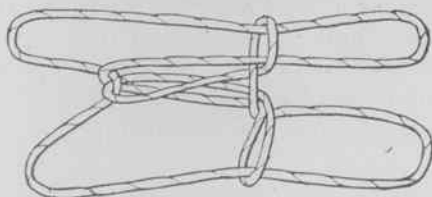


Fig. 165

CVI. THE MOUTH

This figure I found only among the Copper Eskimos. The first movements are the same as those of the shag cycle. The natives call it *qānuq*, which means "the mouth."

Stage A.

Pass the left thumb from the proximal side into the left index loop, push to the right the string running from the left palm to the upper transverse string, then with the palm of the thumb take up the right ulnar little finger string and return.

Drop the right little finger loop and transfer the left thumb loop to the right little finger from the proximal side.

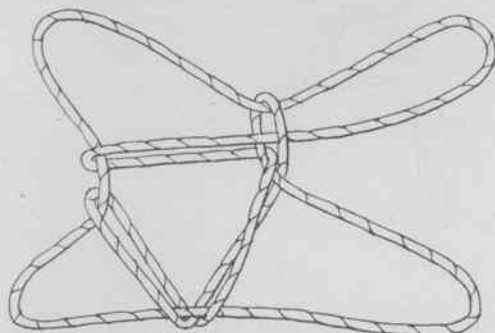


Fig. 166

You have "the mouth," with its opening on the left palmar string between the two strings that loop round it, the cavity of "the mouth" being the double-stringed trapezium, while the perpendicular loop round the upper transverse string is "the glottis."

CVII. TWO SEAL HOLES

This figure, which is called by the Inland Eskimos of northern Alaska, *aylak* "two seal-holes," is the same as Dr. Gordon's "two kidneys," from St. Michael's island. I have not seen it among other Eskimos. Most of the movements are identical with the opening movements of the figure in the shag cycle.

Opening C.

Bring the hands together, turning the palms downward, and with the palms of the thumbs remove the opposite thumb-index strings, pushing them through each other.

With the back of each thumb take up the radial little finger string of each hand below the loop that passes round it.

Drop all save the thumb loops and hold the thumb loops in the hands.

You have the "two seal-holes."

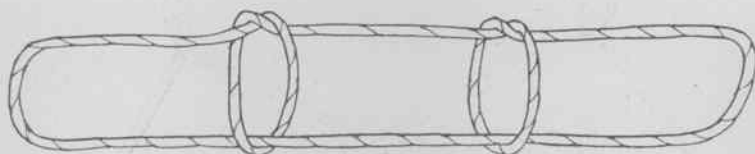


Fig. 167

CVIII. A WOMAN'S KNIFE

This figure seemed to be peculiar to the Inland Eskimos of the Colville river, by whom it was called *uluqaq*, "a woman's knife."

Proceed as in the last figure, "two seal-holes," but at the last drop only the little finger loops.

Remove the thumb loops to the little fingers from the proximal side.

In the middle there is a string running horizontally from one side to the other. Take this up with the thumbs from the proximal side, then the radial index string; navaho the thumbs.

From the distal side press down with the palms of the middle fingers the ulnar index and the radial thumb strings.

Release the thumbs and indices, then insert the thumbs from the distal side into the middle finger loops.

Raise the thumbs up, pressing down the ulnar strings with the middle fingers.

You have "the woman's knife," the blade uppermost and the handle at the bottom.

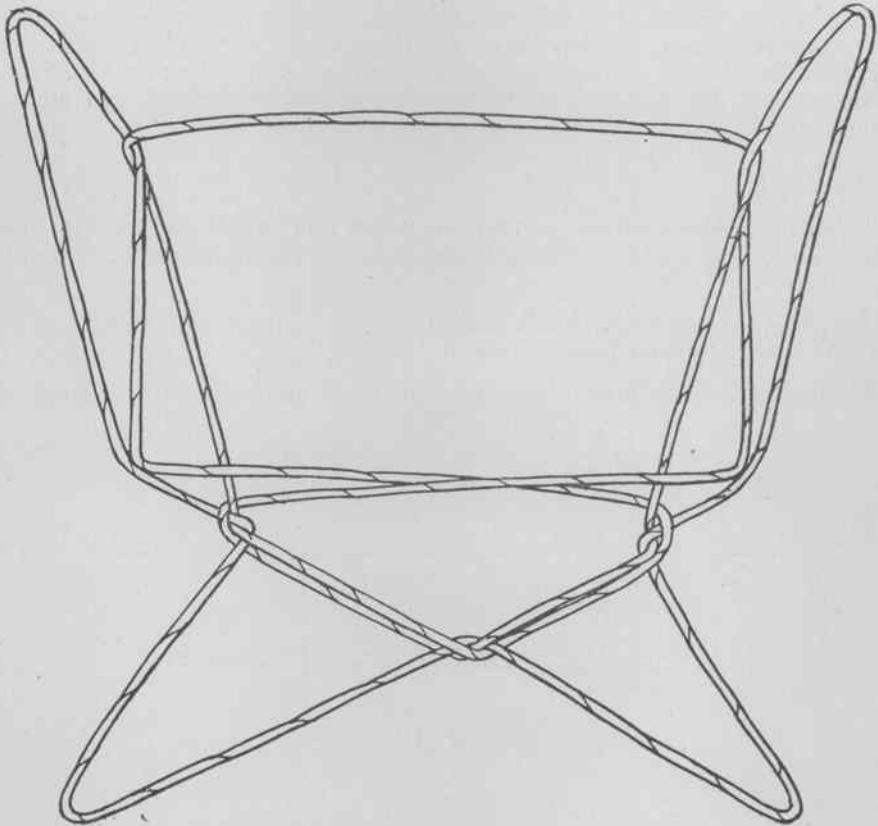


Fig. 168

CIX. THE BUTTERFLY

This figure is also confined to the Inland Eskimos of northern Alaska, though probably known to the Barrow natives as well. It is called *taqalukicaq*, "the butterfly," and is altogether different from the "two butterflies" of the Copper Eskimos (see No. LXXII). In its first stages it follows the method of "the two seal-holes" (No. CVII) and kindred figures; in the later ones it greatly resembles the procedure in "the seal-net" (see No. LXXXVII).

Proceed as in "two seal-holes," but without dropping any of the loops in the final stage.

Across the palm of each thumb there runs a string between the radial and ulnar thumb strings. Push each out to the distal side with the back of the middle finger of its hand, then on the distal side of all the strings push the middle finger loops through each other and interchange them on those fingers, keeping them pointed inward.

In the middle of the figure there are two intersecting diagonals. With the backs of the middle fingers push out on each side the upper half of each of these diagonals.

With the indices from the proximal side take up the radial middle finger strings, navaho the indices and drop the middle finger loops.

Insert the ring fingers from the proximal side into the little finger loops and with these two fingers from the proximal side take off the thumb loops. Spread apart the index loops.

You have "the butterfly" with its wings outspread, one on each side below the upper transverse string, its antennae being the two looping strings round the middle of the upper transverse string in the middle of its course, and the body the large oval beneath them.

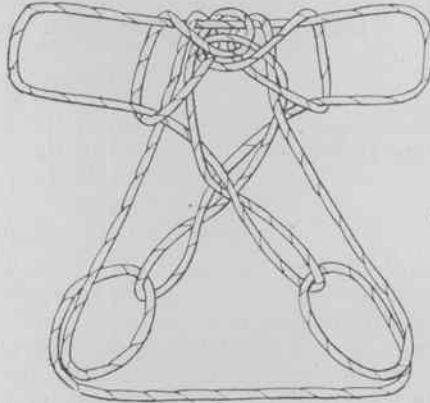


Fig. 169

CX. THE CHILD

This figure, *ιλιγαq*, "a child," comes from the Barrow and Inland natives of northern Alaska. Being extremely simple it is usually the first that children learn to make. The figure itself appears several times in the dissolutions of other figures, where it always has the conventional meaning of "man" or "child." (Cp. Nos. LX, LXIV, LXXX.)

Pass one end of the loop behind the left thumb and index, and separate with the right index the radial and ulnar strings about six inches from the left hand.

With the back of the left little finger from below push out the radial left thumb string, then hook its palm over the ulnar index string.

(This is Opening C with one hand only.)

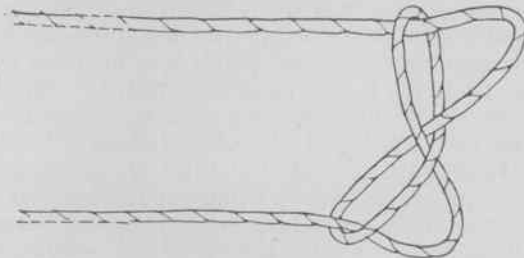


Fig. 170

With the left thumb and index draw the radial right index string through the left thumb-index loop. You have "the child."

CXI. THE CHILD

As first shown to me by an Inland Eskimo from the Endicott mountains, this figure was the same as the preceding, but produced in a slightly different manner. Later another Eskimo from the same region added a further movement, which produced a different figure. I have never seen it in any other region.

Opening C.

Bring the hands together, the left palm turned downwards, the right upwards.

With the palm of the right index from the distal side take up the string that passes over the backs of the left thumb and index and draw it through the right thumb-index loop. Separate the hands, releasing the left index from its loop and the right thumb.

Chant:

qequm ic'uani aqoriŋye he he

On the end of the log he sits.

qequm ic'uani aqoriŋye he he

On the end of the log he sits.

aulale aulale

Let him go, let him go.

titatita taruŋa

(?) over there.

kaiyufiätqutnun aulale

To Kaiyufiat's people let him go.

At the word *kaiyufiät* the first native dropped the left little finger loop, when you had the same figure of the child as in the preceding case, No. CX. But the other native passed the left index into the left thumb loop from the distal side, hooked its palm round the lower transverse string and drew it up through. Then, dropping both the thumb and little finger loops of the left hand, and holding the index loop in the whole hand, he obtained figure 171.

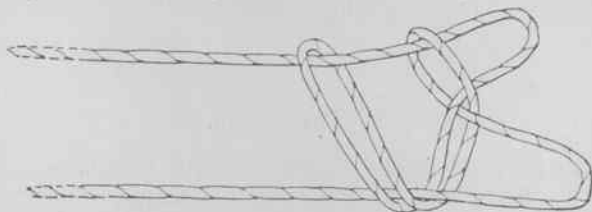


Fig. 171

THE CHILDREN CYCLE

There are three figures, each known in a different region, which nevertheless must be considered as closely connected with one another. The initial movements in two cases follow the methods employed in other very common figures; in the third there is a rather unusual opening. All three after this continue in exactly the same way, producing by a series of intricate movements a succession of children, one behind the other. At Cape Prince of Wales "the children" are followed by "a dog dragging a sled," and a song accompanies the figure; among the Barrow and Inland natives it is a polar bear which is chasing the children, but there is no song; in the Mackenzie delta and in Coronation gulf "the children" are called "men dancing," and they are followed by their drum; the Mackenzie natives sing a chant with it, but the Coronation gulf Eskimos have no chant. Boas has a figure from the west coast of Hudson bay called "Eskimos and drum," and in the Chuckchee collection of Captain Bernard there is one called "a dance." Both of these show "the children," although the figures as a whole are different, and the opening movements must therefore be dissimilar. Undoubtedly, the later movements that produce "the children" have been known over a very wide area, but have been grafted on to different introductions in different regions.

CXII. THE CAPE PRINCE OF WALES INTRODUCTION

Make Stage A in the shag cycle (fig. 157).

A string, after looping round the lower transverse string, runs up to the middle to loop round a similar string coming from the upper transverse string.

With the palm of the left thumb from the right side of the former of these two strings take it up on the thumb, then with the back of the same thumb from the left side take up the latter of the two strings just where it leaves the upper transverse string.

With the left thumb from the proximal side now take up the radial index string; navaho the thumb and drop the index loop.

(If now you were to release the left little finger loop you would have "the dog" followed by "the sled.")

Insert the left index from the distal side into the right index loop, the left ring finger into the right little finger loop, and the left middle finger in between the ulnar left index and the radial left little finger strings. Draw the strings taut, and drop the index and little finger loops of the right hand over the back of the left hand, so that they hang down loose.

This is the end of the introductory stage.

CXIII. THE BARROW AND INLAND INTRODUCTION

This is the same as "the dog" as made in No. XCV ("the fox" of the Mackenzie and Coronation gulf natives), before the left little finger loop has been dropped (see the description of that figure). Continuing (just as in the Cape Prince of Wales opening), insert the left index into the right index loop, the left ring finger into the left little finger loop, and the left middle finger in between these other two. Drop all the loops on the right hand.

CXIV. THE MACKENZIE AND CORONATION GULF INTRODUCTION

Loop the string behind the thumb, middle finger, and little finger of the left hand.

Pass the right hand into the rest of the pendent string from below, and with the right index and middle fingers take up respectively the palmar index and ring finger strings of the left hand and draw them out through the right hand loop.

Insert the index, middle and ring fingers of the left hand into the right hand loops as in the Cape Prince of Wales and Barrow introductions and drop the right hand loops.

Subsequent movements in all three figures

Insert the right thumb and index into the loop that hangs down from the left ring finger, give it a half-turn clockwise, and drop it over the left index so that its pendent strings fall beyond the corresponding loop pendent on the left index. In the same manner insert the right thumb and index into this latter pendent loop, give it a half-turn clockwise and drop it over the left ring finger.

There is now on each left index and ring finger a long pendent loop, and also a string which passes across the back of each of these fingers. With the right index and middle finger take up these latter strings, one with each finger, and separate the hands, drawing all the strings taut.

Release the left index, middle and ring fingers. You have the figure of a "child."

Pass the index, middle and ring fingers of the left hand into the right hand loops as before and repeat all the movements. You obtain another "child." Repeat this as often as desired.

Finally drop all the loops on the left hand except the thumb loops (and in the Mackenzie version the little finger loop as well). You have the complete figure, "children followed by a sled and dog" as in fig. 172, or "a polar bear chasing the children" as in fig. 173, or "a series of dancers, the last one carrying the drum," as in fig. 174.

(If you drop the right hand loops, and reinsert the index and middle fingers of that hand under the upper and lower transverse strings respectively behind the first "child" and draw the strings taut, you can make each "child" disappear in turn.)

The Cape Prince of Wales natives regard "the children" as "a number of girls playing inside a house." They are going round and round the room, each with her hands on the preceding "girl's" shoulders. The last one is dragging a sled ("the sled" seems to be the loop on the left, and "the dog" the loops between this last loop on the left and "the girl").

Someone calls from outside:

itqoyanei aḡnan:iaḡici

? your little girls

cauḡiyanei qamai

are beating the drum inside

itqoye't ilāt ānax̄ni

? let one of them come out.¹

Each time the song is repeated one girl drops out (by the method described above). The last "girl," as she makes her exit, drags "the dog" and "the sled" behind her.

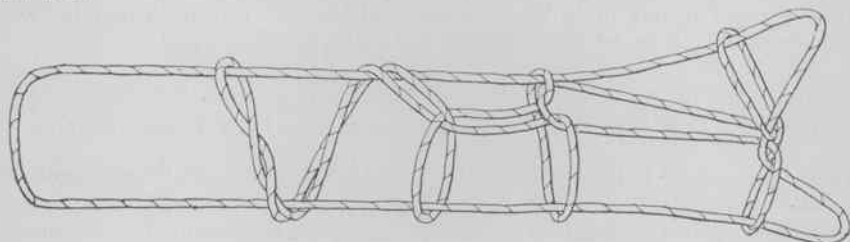


Fig. 172

The Barrow and Inland natives have no chant for their figure. They regard it as "a number of children fleeing from a polar bear." As each "child" disappears to the right he is supposed to reach a place of safety, but the last "child" is caught by "the bear," for it is attached to it by two strings between the upper and lower transverse strings.

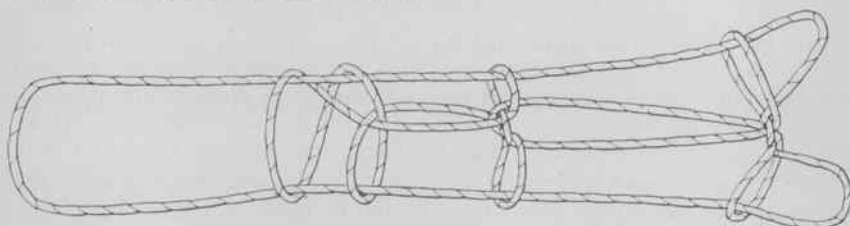


Fig. 173

¹ The chant would rather indicate that the girls are dancing to the accompaniment of a drum, as in the Mackenzie and Coronation gulf figure.

The Mackenzie and Coronation gulf method produces a number of dancers, the last holding a drum. As each disappears to the right the operator (if a Mackenzie native) says:

inuk aqpaqaqtəq

A man jumps out.

But as the last figure disappears he says:

qilautiliyatuk aḡaḡuqaqaluk

Carrying his drum the old man jumps out in his turn.

aqpaqaqtəq

The Copper Eskimos regard the figure as a number of people in a dance-house, and consequently call it *qalimätuaqtut*, "they are dancing in the dance-house."

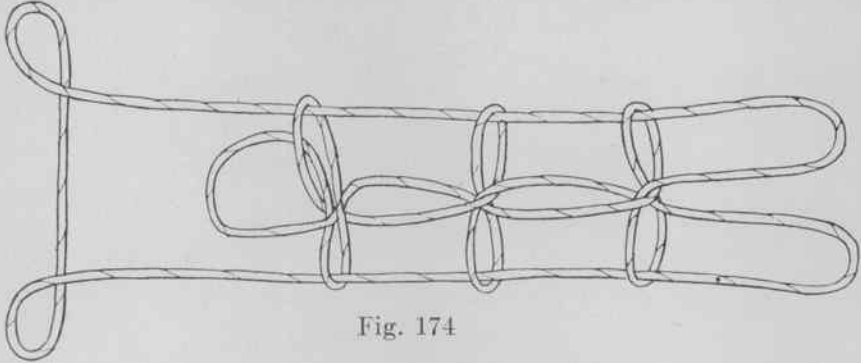


Fig. 174

CXV. A SHAMAN'S FAMILIAR SPIRITS¹

This figure is known all along the coast from Barrow to Coronation gulf. The Barrow natives sing a chant with it, but I do not know whether any exists in the Mackenzie delta. In both these regions it is called *tupilek*. Dr. Anderson, however, saw a Mackenzie figure representing "a shaman being bound" which was almost certainly the same as this figure; he obtained the name *qoqaḡitəq* for it, the meaning of which I do not know, unless, perhaps, "he snaps the ropes." The Copper Eskimos have no chant, and call the figure *ṭḡḡḡaḡḡuk*, meaning "a shaman who has invoked his guardian spirit," whereas *tupilek* seems to mean "the guardian spirits" themselves. The opening is peculiar; I have not found it in any other figure.

Opening C.

Bring the hands together, the palms turned downward; with the palm of the right index take up the left thumb-index string, and at the same time with the palm of the left thumb take up the corresponding right thumb-index string. Separate the hands, drawing these two strings out and turning the palms upward.

Drop the little finger loops.

Hook the palms of the little fingers over the radial index strings, then, pushing out with their backs from below both radial and ulnar thumb strings, hook them over the ulnar index strings and hold these firmly against the palms.

Katilluk the thumbs.

You have "the two familiar spirits," one on each side.

Chant the song given below, at the same time threading one thumb loop through the other again and again till you have a sheaf of twisted strings in the middle, representing "the binding of the shaman." At the last words of the song, drop the little finger loops. The whole figure resolves, leaving the disentangled string in each hand—"the shaman" has extricated himself with the help of his "familiar spirits."

¹ Cf. the illustration in Boas, *Bulletin of the American Museum of Natural History*, Vol. XV, Part I, 1907, p. 511.

The chant at Barrow runs:

tupilekci [qilicεγρciun
tupilekci [qilicεγρciun
aklunaluigoluciluni
qilicεγρciun qilicεγρciun

Tie up your spirits.
 Tie up your spirits.
 Use up your old rope for it.
 Use up your old trousers' belt for it.
 Tie me up, tie me up.

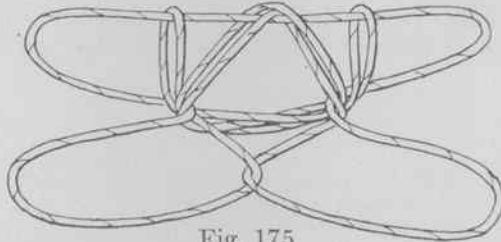


Fig. 175



Fig. 176

CXVI. Two MICE

This figure, *aviyätciäk*, "two small mice," seems to be restricted to the Mackenzie river region.

Opening C.

Turn the palms downward and, dropping the thumb-index string on each hand over the upper transverse string, lift up that string through the loop with the back of each thumb from the proximal side.

Transfer the thumb loops to the indices.

Pass the thumbs under the lower transverse string from the proximal side, insert each into the loop that passes round the upper transverse string on the same side, draw down with the back of each thumb its ulnar string, and turn the thumbs upward again on the proximal side of all the strings, each bearing this loop.

Invert the loop on each thumb to straighten it.

With each thumb from the proximal side take up the radial index string. Navaho the thumbs and drop the index loops.

You have "the two mice," one on each side.

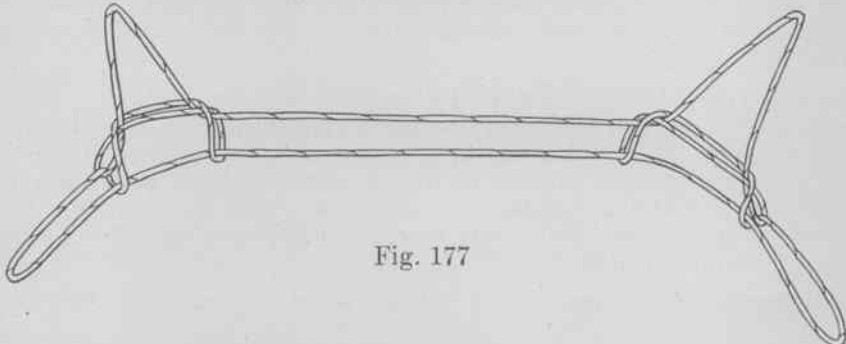


Fig. 177

PART IV

MISCELLANEOUS OPENINGS

SECTION 1. THE BROWN BEAR'S PACK CYCLE

There are a number of figures which all reach a common stage in their evolution, then branch off. The "brown bear packing something on its back" is one of the most familiar of these figures, and may conveniently give its name to the whole series. Two of the figures are found all the way from Barrow to Hudson bay, one is confined to the Mackenzie delta and Coronation gulf, while four are purely local, one being found among the Eskimos of Indian point, Siberia, and the other three in Coronation gulf. In addition to these there are three figures which vary the opening a little; one comes from Indian point, one from the Inland Eskimos of northern Alaska, and the third from the Mackenzie river.

The intermediate stage through which the figures of "the brown bear's pack" cycle pass is reached in the following manner:

Loop about four inches of the string over the backs of the thumbs, holding the ulnar strings in the palms of the hands.

With the palms of the indices from the distal side take up the string running between the two thumbs and turn the indices outward.

With the palms of the thumbs from below take up the opposite thumb-index strings and return, dropping all but the thumb and index loops.

The ulnar index strings cross one another.

Pass the little fingers below all the strings and push out with their backs the proximal ulnar thumb string, then hook their palms over the upper of the intersecting strings (the ulnar index string on one side and the distal ulnar thumb string on the other).

Turn the thumbs downward so that a loop drops off from each, leaving an upper transverse string over which a loop passes; then turn the thumbs upward again.

With each thumb from the proximal side take up the radial index string of its hand, navaho the thumbs, drop the index loops and transfer the thumb loops to the indices.

This is the intermediate stage.

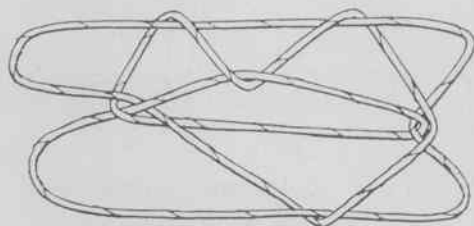


Fig. 178

CXVII. THE BROWN BEAR'S PACK

The Barrow Eskimos call this figure *kicucqag*, the Inland natives *kituxaq*, both words meaning "a blubber poke." Its continuation produces "the brown bear carrying it away." The Mackenzie natives call it *amaluyuk* "a brown bear carrying a pack." The Copper Eskimos call it by the same name, *amaluyuk*, but they too fail to specify what the pack is. In Boas' collection from Cumberland sound the figure is called *ameyookjew*, "one carrying a pack."

Make the intermediate stage so that you arrive at fig. 178.

A string now passes from the left palmar string to loop round the lower transverse string. Pass the left thumb into the figure below this string and take it up with the back of the thumb.

Insert the right thumb into the left thumb loop from the proximal side, then with each thumb from the proximal side take up the radial index string of its hand. Navaho the thumbs and drop the index loop. You have "the blubber poke."

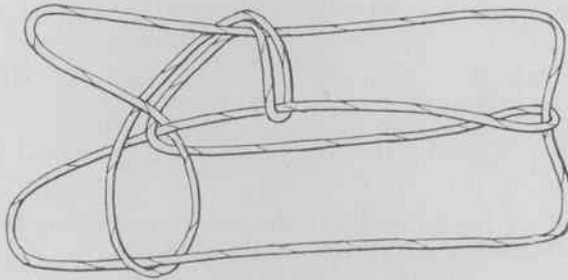


Fig. 179

Two strings run from the poke to pass round the left palmar string. Pass the left index into the figure below these two strings from the distal side, raise them up with the palm of the index, then from the distal side take up with its palm the radial thumb string and draw it through to the distal side.

Drop the left little finger loop and hold the left index loop in the left hand.

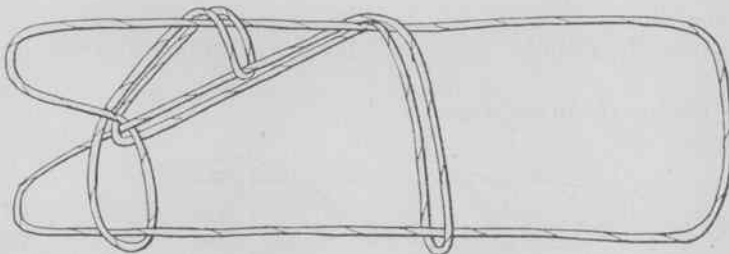


Fig. 179a

You have "the brown bear" going away to the right, carrying its pack on its back.¹

¹ Boas has the same figure from Cumberland sound with the name *nixenga quattsta*, which seems to mean 'frozen meat suspended.'

The Inland Eskimos say:

kicqeqaq kicqeqaq akkam amaqciyatun amaqtihianiluha oqilganuha amaqtoxlugo aulautiya

"Poke, poke, the brown bear is carrying you off Putting it on its back it carried it away."

The Mackenzie natives say:

amaliyyuk ilätennoq aqwāl'aktut amaij'un qimaylugo upkut

"Pack-bearer, your relatives, it is said, are hunting whales. Leave your pack and follow them."

At the word *qimaylugo* pass the right index into the figure from the distal side underneath "the bear's pack" and draw out with its palm the upper transverse string. Drop the right thumb loop.

You have "the brown bear" going off without its "pack."

CXVIII. DRIPPING WATER

The Inland Eskimos called this figure *kuceyniyaqtoaq*, meaning "it dripped." The Mackenzie natives called it *mikiyätciaq*, which seems to be a name only. In Coronation gulf it is called *nivyaqtuaqtogyuk*, "something suspended."

Proceed up to the intermediate stage represented in fig. 178. Pass the left thumb into the figure from the proximal side under the string which runs from the lower transverse string to the left palmar string, take up this string with its back, then in the same manner the string which runs parallel to it from the right palmar string up to a looping string just below the upper transverse string.

Insert the right thumb into the left thumb loops from the proximal side, then with each thumb from the proximal side take up the radial index string of its hand. Navaho the thumbs and drop the index loops.

You have the place from which the water drips, the triangle in the left hand top corner.

At this point the Inland natives say:

kuceyniyaqtoaq täyoomun kuceyniyaqtoaq kuciaqatugo

"It drips down, to the sea it drips down. Drip fast."

At the last word drop the left index loop. "The drop" falls.

The Mackenzie natives say:

mikiyätciaq qaw'ik ukijna amaqciq ukijna qaiyiq oyaqan iyusaqun.

"Mikigatciaq, a wolverine down there, a wolf down there is coming. Drop some stones." At the last word again drop the left index loop. "The stone" falls.

The Copper Eskimos merely drop the index loop without any remark.

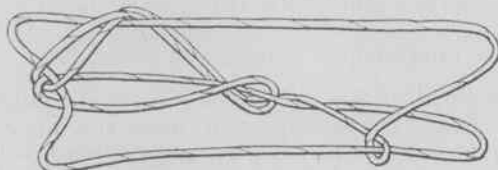


Fig. 180

CXIX. THE LYNX

This figure, *piqtoqciyaq* or "the lynx," was seen among the Mackenzie Eskimos only. The Chukchee have a figure which seems to be the same; Bogoras says that they call it "the wild reindeer."

Proceed up to the intermediate stage given in fig. 178.

With the back of the left thumb from the proximal side take up the string that runs from the lower transverse string to the left palmar string.

With the back of the right thumb similarly take up the string which runs from the upper transverse string near the right hand to loop round another string just below the upper transverse string.

With each thumb from the proximal side take up the radial index string of its hand. Navaho the thumbs and drop the index loops.

Pass the left index into the figure below the two strings that run from the left palmar string to the middle, raise these two strings, then with the palm of the index from the distal side draw out the upper transverse string.

Drop the left thumb and left little finger loops and hold the left index loop in the left hand.

You have "the lynx."

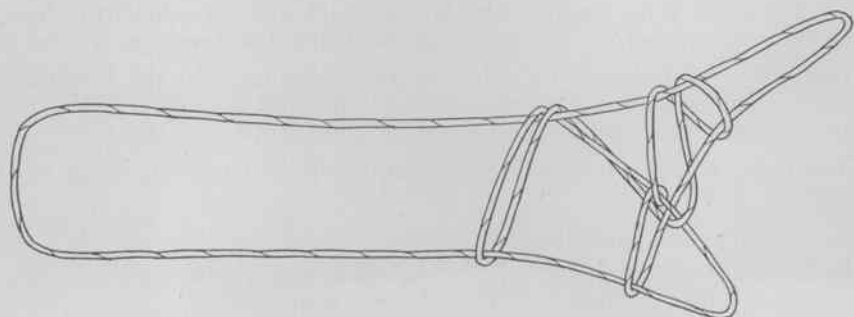


Fig. 181

CXX. A CLIFF

The Copper Eskimos, among whom alone this figure was seen, called it *umnaqtayyuk*, but did not seem to know what the word meant. One man suggested that it meant "a man climbing a cliff" (*umnaq*).

Proceed up to the intermediate stage given in fig. 178.

There is a string which passes under the ulnar right index string, then over the radial right little finger string and again under the ulnar right index string. Take it up where it crosses the radial little finger string with the back of the right thumb, insert the left thumb from the proximal side into the right thumb loop, then with each thumb from the proximal side take up the radial index string of its hand. Navaho the thumbs and drop the index loops.

You have "the cliff."

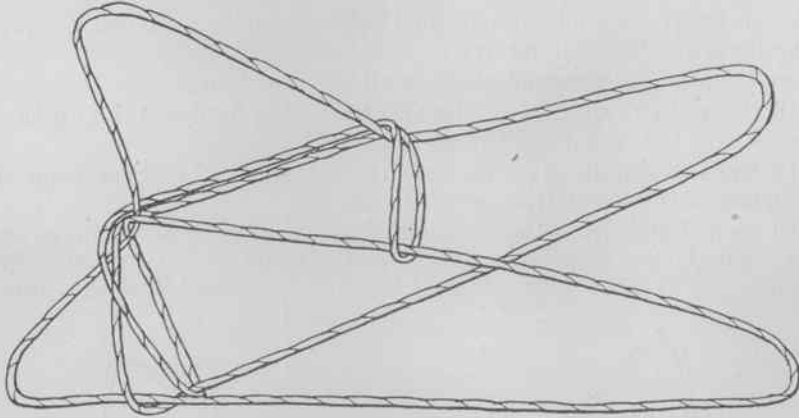


Fig. 182

CXXI. A SMALL BIRD (Pectoral sandpiper ?)

This figure, like the last, was seen only among the Copper Eskimos, who called it *tu'toq*, a small bird which was not certainly identified.

The procedure is the same as in the preceding figure, save that with the right thumb you take up not only the string which passes over the radial right little finger string, but also the string which runs from the left palmar string to loop round another just below the upper transverse string.

Continue as in the other figure. At the close you have "the sandpiper," its head being on the right where the radial right little finger string makes an angle with another string. Below the head is the bird's puffed-out breast.

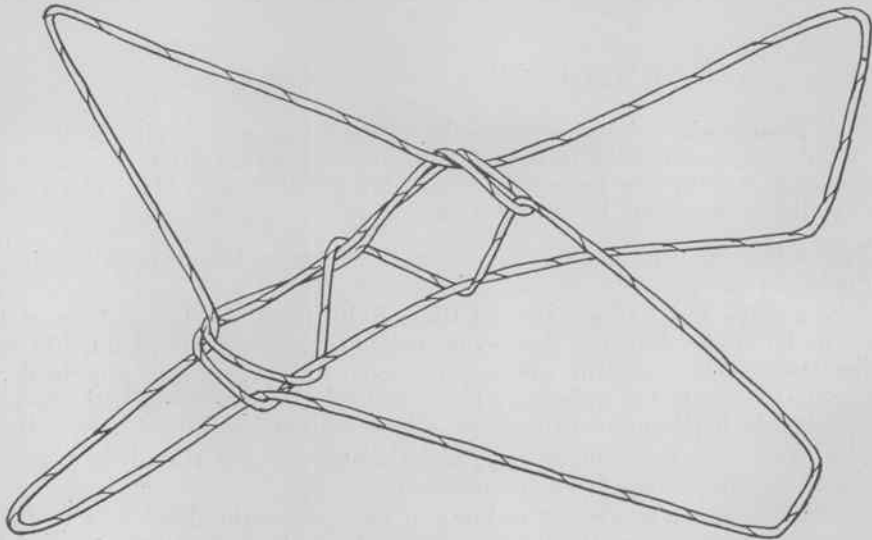


Fig. 183

Drop the left little finger loop and it flies away.

CXXII. A MAN FALLING

Another figure seen only among the Copper Eskimos, who call it *ioqagtaqtaryuk*, "the man who kept falling over."

Proceed up to the common stage in all the last figures.

With the right thumb, as in the two preceding figures, take up the string that passes over the radial right little finger string.

With the left thumb take up similarly the string that runs from the left palmar string to the lower transverse string.

With each thumb from the proximal side take up the radial index string of its hand from the proximal side. Navaho the thumbs and carefully drop the index loops. "The man" falls (typified by the two index loops that drop).

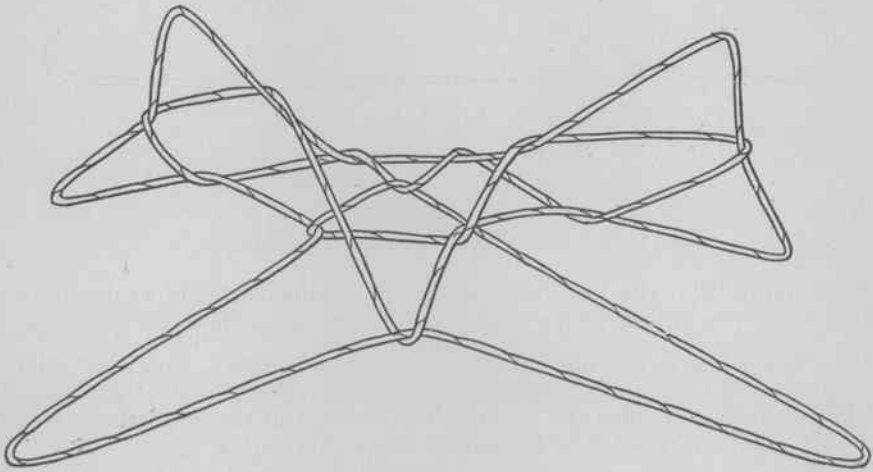


Fig. 184

CXXIII. A DOG WITH LARGE EARS

This figure, which is peculiar to the Copper Eskimos, begins in the same way as all the preceding figures, then continues somewhat after the manner of certain other well-known figures (see Nos. XXVII, CXXXVII). The Eskimo name for it is *qum'iq ciutlik*, "a dog with ears."

Proceed up to the common stage in "the brown bear's pack" series, as exemplified in fig. 178.

Two strings run horizontally to the middle from the left palmar string. Insert the left index into the figure just below these from the distal side, and, pushing them back, pass the index down over the strings that run from the same palmar string to the upper and lower transverse strings, and with the palm of the index draw through to the distal side the ulnar left little finger string.

Drop the right little finger loop, and through the left thumb loop remove with it the left index loop from the distal side.

Under the upper transverse string you now have "the dog's ears." Below "the ears" is a triangle with double sides. Pass the left index into the left thumb loop from the distal side, then into the triangle from the proximal side, circle it once counter-clockwise and drop the left little finger loop.

Transfer the left index loops to the left little finger from the distal side.

The ulnar left thumb string passes through one loop, then through a second, and continues to the middle. Drop the left little finger loop and take up with it this ulnar thumb string after it passes through the first loop.

You have "the dog with its ears." Drop the left thumb loop and it runs away to the right.

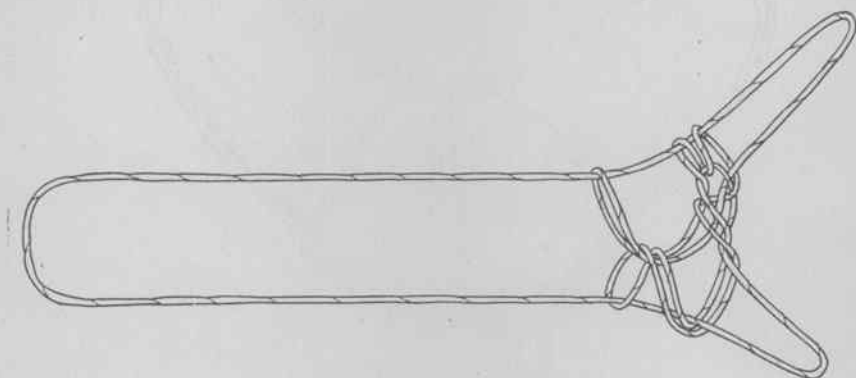


Fig. 185

CXXIV. THE WALRUS

This is an Indian point figure, the initial steps of the opening following those of "the brown bear's pack" series. Afterwards it develops in a manner of its own, though the different steps are familiar in other Eskimo figures.

Lay a short length of the string over the thumbs.

With the palms of the indices from above take up the transverse string that passes from one thumb to the other and turn the indices outward.

Bring the hands together and with the palm of the right thumb from below take up the left thumb-index string. Do the same with the left thumb, then draw the hands apart.

(Hitherto the movements are the same as in "the brown bear's pack.")

Insert the last three fingers of each hand into the index loops from below from the proximal side and close them down over the radial index strings.

Turning the indices inward, with their palms below the distal ulnar thumb strings draw the proximal ulnar thumb strings through the index loops, pointing the indices again outward.

Turn the palms of the hands upward and with the backs of the little fingers push out through the little finger loops the two radial thumb strings (the two upper transverse strings).

With the thumbs from the proximal side take up the radial index strings; navaho the thumbs and drop the index loops.

Transfer the right thumb loop to the right index from the proximal side.

Transfer the left thumb loop to the right thumb from the proximal side.

Transfer the left little finger loop to the left thumb from the proximal side.

Transfer the right little finger loop to the left index from the proximal side.

Invert the right index loop on that finger, turning it counter-clockwise; then invert the right thumb loop, turning it clockwise.

With the right thumb from the proximal side remove the right index loop, and hold both the thumb loops in the right hand.

Now spread apart the proximal and distal radial right hand strings.

You have "the walrus," its two tusks being the loops on the ulnar right hand strings, its body stretching behind to the left hand. It is lying on top of the ice.

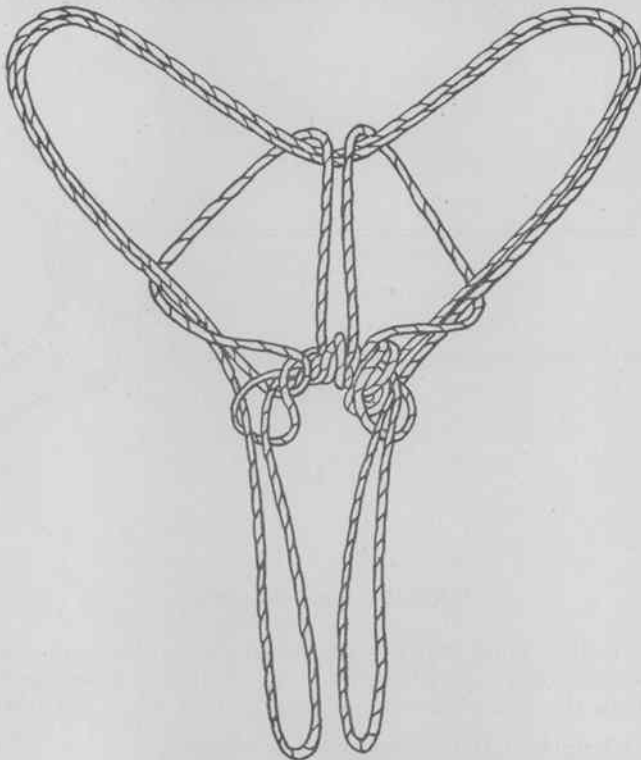


Fig. 186

Pass the left middle finger in between the two loops the strings of which run from the left palmar string to the middle. Drop the left thumb and index loops.

Two loops fly over the strings near the right hand. It is "the walrus diving into the water."

Two strings, one from the radial the other from the distal left middle finger loops, run together near the right hand. Take these two up with the left hand, dropping its former loops, spread wide apart the right index and thumb loops, turning the right palm downward and sway the left wrist. You have the water seething up after "the walrus" has dived.

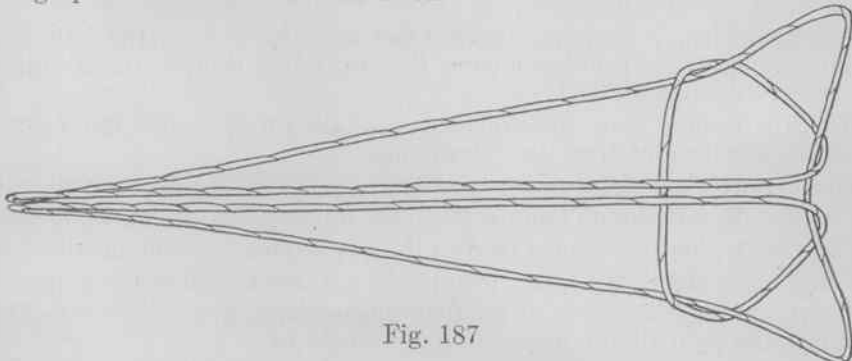


Fig. 187

CXXV. A PTARMIGAN'S NEST

This is an Inland northern Alaskan figure which, beginning like the figures of "the brown bear's pack" series, continues like two other Inland Eskimo figures, "the butterfly" and "the seal-net" (see Nos. CIX and LXXXVII). The natives call this figure *uγλu*, which means "a bird's nest."

Hold a short length of the string on the thumbs. With the palms of the indices from the distal side take up the string that passes from one thumb to the other, turning the indices outward.

With the palm of each thumb take up the opposite thumb index string and separate the hands.

Insert the remaining three fingers of each hand from below from the proximal side into the index loops and hook them over the radial index string.

With the back of each thumb draw the radial index string on each side out through the thumb loops, thereby navahoing the thumbs.

With the backs of the middle fingers push out the two strings which run on each side across the palms of the thumbs between their radial and ulnar strings.

On the distal side of all the other strings remove with the palm of the right middle finger from the proximal side the two loops on the left middle finger, these fingers being pointed inward, then similarly with the left middle finger the right middle finger loops.

The ulnar index strings pass across the backs of the middle fingers just before they intersect each other. Push them out, one with the back of each middle finger.

Drop the thumb loops and take up with the thumbs from the proximal side the radial index strings.

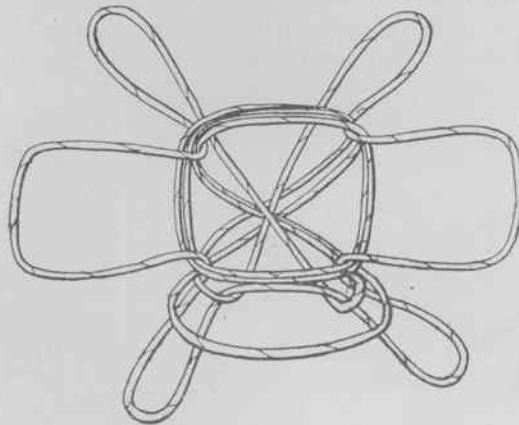


Fig. 188

You have "the ptarmigan's nest"—the square the sides of which are formed by double strings. The loop which makes a semi-circle with the near side of the square as its diameter is the noose which strangled it. (Grease this string so that it will stand up vertically above the nest.)

CXXVI. PRECIPITOUS MOUNTAINS

The name for this figure is *εγυτ cukaλ'εγυτ*, "a range of mountains." It was learned from some Mackenzie natives. Dr. Gordon describes a figure called "stairs" which resembles the Mackenzie figure in many ways, but I cannot reconstruct his figure from his description.

Hold a short length of the string on the thumbs.

With the palms of the indices from the distal side take up the string that passes from one thumb to the other, pointing the indices outward.

With the back of each thumb from the proximal side take up the opposite thumb-index string and separate the hands.

Push out the proximal ulnar thumb string on each side with the backs of the little fingers from below, then hook their palms over the upper of the two intersecting strings (the ulnar index string on one side and the distal ulnar thumb string on the other).

(Hitherto the steps are the same as in "the brown bear's pack.")

Drop the thumb loops and draw the strings taut.

With the left thumb from the proximal side raise up the lower transverse string and insert it from below into the loop that passes round the left palmar string. At the same time raise both the little finger strings of the right hand with the right thumb from below and pass it into the right index loop from the proximal side.

Circle each thumb clockwise so that it takes up one string.

Insert the indices from the distal side into the thumb loops and take up with them the radial thumb strings. Push the ulnar thumb strings down so that they draw through from the proximal side the radial index strings, then, dropping the index loops, remove the thumb loops to the indices.

A string loops round the lower transverse string on each side. With the palm of each thumb push back the proximal string of each loop just above the lower transverse string and draw out the ulnar strings with their backs.

With the thumbs from the proximal side take up the radial index strings, navaho the thumbs, drop the index loops and transfer the thumb loops to the indices.

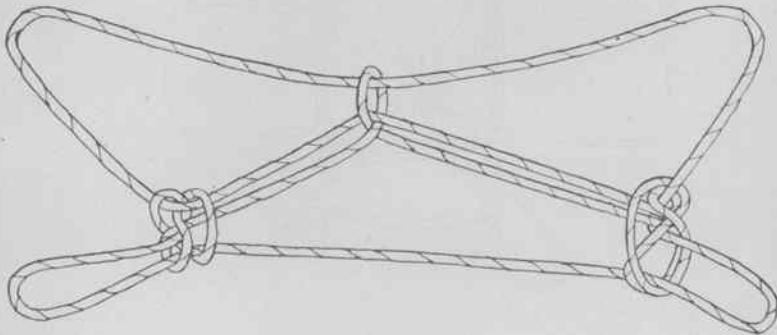


Fig. 189

Insert the thumbs from the proximal side into the figure just above the lower transverse string on each side of the half-hitch, and dropping the little finger loops, sharply draw the strings taut.

You have "the mountains."

SECTION 2. MISCELLANEOUS FIGURES

The Eskimos of Indian point have a cycle of four figures illustrating the fate that overtook a man who was always sleeping. In the first figure his head is lop-sided, in the second his right arm is paralysed, in the third his left leg is tingling, and in the fourth and last his intestines protrude. The only other place where the first of these figures was seen was in the Mackenzie delta, where a slight difference is made in the opening movements. There it is called *uyppaq niyälük*. An old Eskimo from the Kobuk river knew the second figure by the name of "the arm of a man standing upright," the third as "the leg of a man standing on his head," and the fourth as "the man's intestines hung up to dry." Two Eskimos from the Colville river, who had more connection with the Barrow Eskimos than with any other Eskimo tribe, called all the last three figures *uyppaq*, a word whose meaning they did not know, though another native conjectured that it meant "mirage." An Island Eskimo from the Endicott mountains, farther to the east, called the second figure *uyppaq quymun*, which he said meant "the groin is upright," the third *uyppaq unmun*, "the groin downward," and the last *iyäloa xälunjavait*, "his intestines are hung up to dry." The word *niyälük* in the Mackenzie Eskimo name means "carrying a snare."

The movements whereby all four figures are produced are practically identical. Taken together they form a remarkable combination as far as Eskimo methods go. They have their parallel in but one other figure that I have recorded, the Copper Eskimo figure of "the loon" (No. CXXVIII). None of the figures of "the sleeper" are known to the Copper Eskimos, but the loon may be connected genetically with it. It is worth noting that the second figure of the series is the "one storm-cloud" of the Navaho Indians (Mrs. Jaynes, fig. 538).

CXXVII. THE SLEEPER

Wind the string twice round the left index, insert the right index into the two loops from the proximal side and, holding the rest of the string in the palms, separate the two hands.

Circle the indices once counter-clockwise (*i.e.* upward, then inward, downward and outward again) so that it takes up at the same time the ulnar ring (or middle) finger string.

Drop the hand loops. You are left with three loops on each index.

With the backs of the thumbs hold up the proximal ulnar index string while the little fingers from below hook down the proximal radial index string on one side and the middle ulnar index string on the other (*i.e.* the upper of the two crossing strings).

Drop the thumb loops and with the thumbs from the proximal side take up on one side the proximal radial index string, on the other the distal ulnar index string (*i.e.* the strings running down from the indices to cross the lower transverse string), above the transverse ulnar index string.

Push out the proximal ulnar index string with the backs of the middle fingers, then hook them over the two distal radial index strings.

With the palm of each thumb draw through the ulnar index string that runs over the back of the middle finger on each side, allowing the old thumb loops to slip off.

Drop the distal index loops (*i.e.* the transverse string), then the middle finger loops, and turn the palms outward, having the ring and middle fingers of each hand in the little finger loops.

You have "the man asleep."

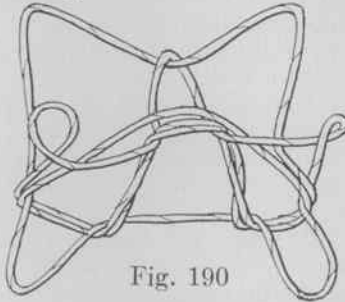


Fig. 190

Drop the little finger and the thumb loops, so that you have left two loops on each index.

Repeat all the movements as when there were three loops.

You have "the man's right arm."

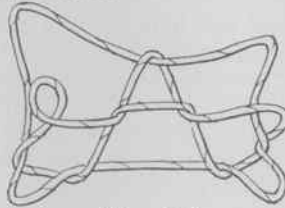


Fig. 191

Again drop all but the index loops and repeat all the movements, but this time, instead of dropping the middle finger loops drop the thumb loops and, holding the little fingers inward against the palms, point the middle fingers and the indices upward.

You have "his leg."

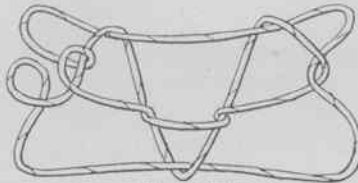


Fig. 192

For the third time drop all but the index loops and repeat the movements, this time dropping the little finger loops.

You have "the man's intestines."

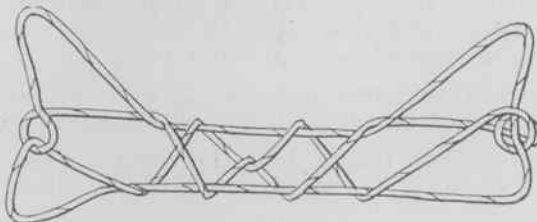


Fig. 193

The Indian point natives chant this song with the figures:

puγixluq ka'vnaqtuwuhəq

Pugixluq sleeps a great deal.

puγixluq ko'tunaqtuwuhəq

Pugixluq snores a lot.

puγixluγum nācəoa

Pugixluq's head is very flat-sided.

omilynaqiaq

Amimimimi (end of first figure)

amimimimi

His right arm is paralysed (second figure)

taxliηηla-a

His left leg is paralysed (third figure).

iawamiηla-a

His intestines protrude (last figure).

kiluyəhe

An Inland Eskimo from the Endicott mountains said with the last three figures:

əηa ηi ηηpəqə qηηmun

The groin (?) turned upward.

əηa ηi ηηpəqə uηηmun

The groin is inverted.

əηa ηi ηāloa xāluηavait

He hangs his intestines up to dry.

The Kobuk river and the Inland Eskimos all began with the same opening, viz., with the string wound once only round the left index. The Mackenzie natives when making the first figure begin in a slightly different manner from the Indian point natives. Their method is as follows:

Wind a short length of the string twice round the left thumb and index. Pass the right index into the left index loops from the proximal side, holding the pendent strings in the hands.

Draw the hands apart.

Pass the thumbs downward on the proximal side of all the strings, take up with them from below the lower transverse string, and drop the hand loops.

Circle the indices clockwise so that they pass through the thumb loops, then drop the thumb loops.

Proceed in the same way as the Indian point natives, only leave the strings slack after each movement. At the end you have "the noose," the long semi-circular string which stands up in front of all the strings. (If you draw the strings tight the noose disappears and you have the first figure of the Indian point series.)

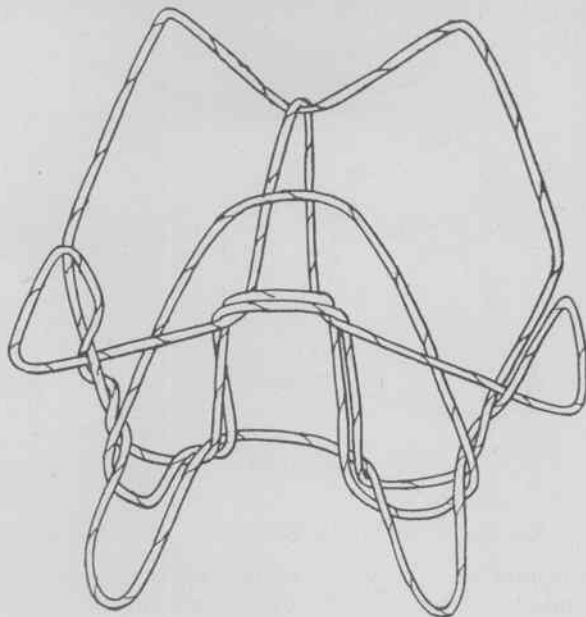


Fig. 194

CXXVIII. THE LOON (*Gavia pacifica*)

This Copper Eskimo figure greatly resembles in its movements the cycle of "the sleeper," (No. CXXVII), with which probably it was originally connected. The movements are rather intricate and great care must be taken at each stage. The Eskimo name for the figure is *māλεγε*.

Opening A.

With the palms of the indices from above from the distal side take up the upper transverse string, pointing the indices outward.

Drop the thumb and little finger loops.

With the backs of the thumbs (from above) take up on one side the proximal radial index string, and on the other side its continuation as the distal ulnar index string (the lower of the two intersecting diagonals).

With the palms of the middle fingers from below hook down the other diagonal, then push out with their backs the proximal ulnar index string, holding down the diagonal with the little and ring fingers inserted into the middle finger loops from the proximal side.

With the palms of the middle fingers draw down the distal radial index string.

Drop the ring and little finger loops and remove the middle finger loop to the little and ring fingers.

With the backs of the middle fingers push back the proximal ulnar index strings just before they pass round the lower transverse string (it is one and the same string).

Pointing the middle fingers inward, with the right middle finger from the proximal side remove the left middle finger loop, then insert the left middle finger into both right middle finger loops.

With the palms of the middle fingers draw through their loops the upper transverse string (with one finger on each side of the loop that passes round it).

Drop the thumb loops, then take up with the thumbs from the proximal side the proximal radial index string on one side and its continuation as the distal ulnar index string on the other.

Katilluik the thumbs (the ulnar middle finger loop taking the place in this movement of the radial index string).

You have "the loon."

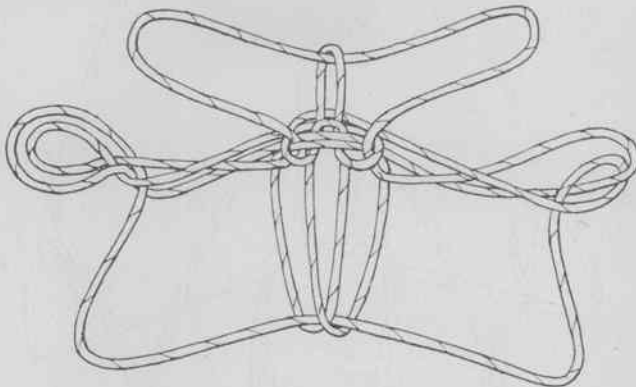


Fig. 195

CXXIX. THE MOON BETWEEN THE MOUNTAINS

An Eskimo from Cape Prince of Wales called this figure "the sun rising between the mountains" (*εγικεαγυκτιγυν mācuk nuίγσγ*), while another native from the same place called it *εγυτ τεγενδιγυτ*, i.e. "the mountains with the sun." By the Barrow and Inland (Colville river) natives, however, it is called "the

moon" (*tätqeq naxγauγākun nuīγq*, i.e. "the moon rises between two mountain peaks"), while farther east, in the Mackenzie delta and in Coronation gulf, it is called "the sun between the mountains." The movements closely resemble those of the Inland Eskimo figure "the children" (see No. LXXV).

Wind the string twice round the left index and insert the right index from the proximal side into both the left index loops.

Hold in the palms the pendent strings so that they intersect.

Transfer the palmar loops to the thumbs from the distal side.

You have now two loops on each index and a loop on each thumb.

*Pass the last three fingers of each hand into the index loops from below from the proximal side and hook them down over the two radial index and ulnar thumb strings, while with the palms of the indices from the distal side you draw through the radial thumb strings, pointing the indices out again.

Drop the thumb loops, and allow the upper transverse string to slip down while over it the thumbs take up from below the radial middle finger strings that loop round the radial index strings in the middle of the figure.

Drop the loop on the last three fingers and reinserting those fingers into the index loops repeat the movements from *.

Repeat them a second time, taking care not to draw the strings too taut. Finally you have "the moon," or "the sun," (a small circle) between "the mountain peaks" (the triangles formed on each side by the strings running from the upper transverse string to the two bottom ones).

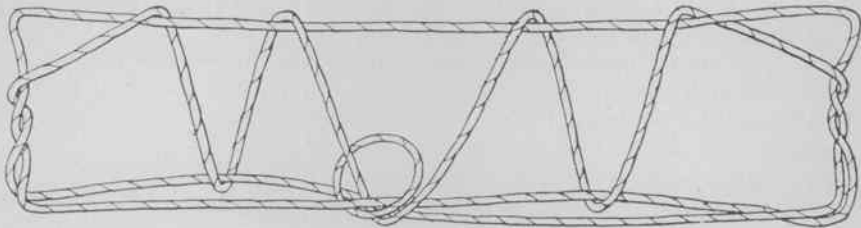


Fig. 196

CXXX. THE MOUNTAINS

This is the same figure as the preceding, but without "the moon." It is made in exactly the same way, only the string is wound only once round the index at the beginning. The same name *εγt*, "mountains," is given to it all along the coast from Barrow to Coronation gulf.

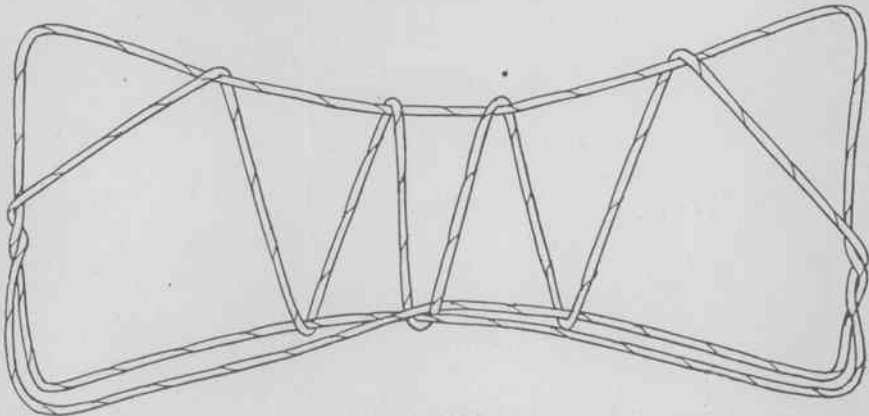


Fig. 197

CXXXI. TWO RATS ON A LOG

This figure was learned from some Indian point Eskimos who called it "two rats on a log." A Cape Prince of Wales woman called it "two dogs" (*qum-iaγuk*). I have not seen it elsewhere. In its opening it resembles "the sleeper" (No. CXXVII), while the later stages are common in many Eskimo figures.

Wind the string once round the left index, holding the remainder of the string in the palms of the hands.

Insert the right index into the left index loop from the proximal side and separate the hands.

Circle the indices counter-clockwise (*i.e.* upward, inward, downward and outward) so that they take up at the same time the radial ring or middle finger strings, then drop all but the index loops.

Pass the thumbs over the proximal radial index strings and take up from the proximal side the proximal ulnar index strings.

With the backs of the little fingers from below push out the proximal radial and distal ulnar index strings, then hook them down over the distal radial string (the transverse string).

Point the indices inward and with the left index from the proximal side remove the distal right index loop; then insert the right index into both the left index loops from the proximal side.

With the backs of the indices draw through the radial thumb strings, thereby dropping the two distal index loops.

Drop the thumb loops, navaho the indices, and invert the index loops so as to make them straight.

You have "the two rats." Say:

āpēiγauγaqak unaqcm qaiγani pikaqcitāλγd

"Two rats a stick on top of it they jump up."

At the last words insert the thumbs into the figure from the proximal side just above the lower transverse string in the middle and drop the little finger loops. You have "the two rats on the log."

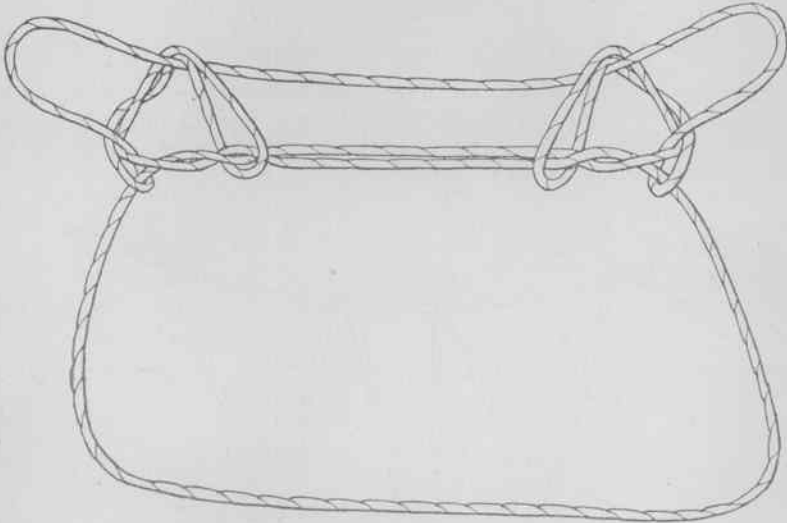


Fig. 198

The Cape Prince of Wales woman said *goa* just before this last movement, when the dogs appeared on top of a hill.

CXXXII. TWO STICKS

This figure, which was found among the Copper Eskimos only, is called by them *naumaqutk*, i.e. "two sticks" set in the wall of a snow hut to prevent bags, etc., from falling to the ground. The movements are very simple and usual.

Make a small loop over the left index. Insert the right index into it from the proximal side and separate the hands, holding the strings that leave the indices in the palms. On separating the hands you have (as in "the moon between the mountains" and similar figures) a loop on each index and a loop held by the last three fingers of each hand, with two diagonals crossing in the middle.

With the thumbs from the proximal side take up the ulnar index strings and drop the index loops. Then with the thumbs from the proximal side remove the little finger loops.

Pass the little fingers from below into the thumb loops from the proximal side, move them towards the middle, allow the transverse string to slip off, then hook the palms of the little fingers down over it.

With the palms of the indices from the distal side draw out the proximal radial thumb string and drop the thumb loops.

A string runs from each palmar string to cross the radial index string. With the thumbs from the proximal side take up these strings and *katilluik* the thumbs. You have "the two sticks."

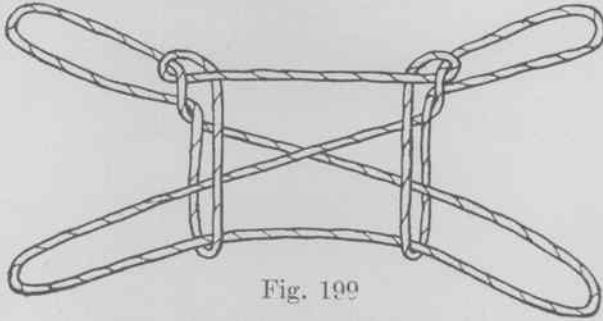


Fig. 199

CXXXIII. A SMALL SEAL-SKIN POKE

The Barrow and Inland Eskimos of northern Alaska call this figure *avätatciag*, the Mackenzie and Coronation gulf natives *avätutciag*. Both words mean the same, "a small poke of sealskin." Boas obtained the figure with the same name from the west coast of Hudson bay. Except for the peculiar opening, which differs from that of any other figure recorded, the movements are all of a very usual type.

Make a small circle in the strings so that it hangs down (fig. 200). Insert the thumbs under the strings at "X" and "X" from the proximal side and the middle fingers into the circle from the distal side, holding the remainder of the string in the palms of the hands.



Fig. 200

Drop the left thumb loop and, passing that thumb over the string just dropped, take up with it from the proximal side the radial middle finger string of its hand.

A string now runs up from each bottom corner to cross the transverse string, forming a triangle. Pass the indices in below these from the distal side and take up each with the palm of the corresponding index.

Turning the indices outward remove to the left index from the distal side the right index loop, then insert the right index from the proximal side into both the left index loops.

Point the indices inward, and with their backs draw the radial thumb strings through the index loops.

Drop the thumb and middle finger loops, transfer the index loops to the thumbs from the distal side and spread apart its radial and ulnar strings. You have "the poke."¹

The Inland Eskimos chant:

avätatciaŋa kanaŋa ka he-e-e
avätatciaŋa kanaŋa ka he-e-e
kanayi kana-a
aŋälätkaŋa kanaŋa
tipiŋa kana-i

The poke down there,
 The poke down there,
 Down there, down there
 The sea is tossing it about down there.
 It is bringing it in to shore down there.

The other Eskimos know no chant for the figure.

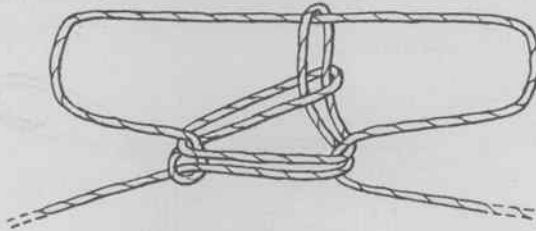


Fig. 201

CXXXIV. THE OLD WOMAN AND HER PACK

The Inland Eskimos call this figure *aqoviyoq*, which means "an old woman." The Mackenzie natives call it *nänmaktuagtoq*, *i.e.* "she is carrying a pack." I have not seen it elsewhere. There is nothing very noticeable about the movements.

Wind the string three or four times around the left thumb and index, stretching them as far apart as possible, and allowing the rest of the string to hang down.

Remove the loops from the left index and thumb to the two thumbs.

Take up with the palms of the indices the side of the pendent string opposite to it and turn the indices outward. The ulnar index strings now intersect each other.

Insert the remaining three fingers of each hand into the index loops from the proximal side and close them over the radial index strings (the transverse string).

Two strings run vertically from the thumbs to pass round the lower transverse strings. Take each up with the palm of the opposite middle finger, draw it through the index loop on each side, then transfer each to the index of that hand from the distal side.

With the thumbs from the proximal side take up the radial little (or ring) finger and the ulnar index finger strings on each side.

¹ According to Boas the large open space below the poke represents the water, and the string running down from the lower right hand corner of the poke is the whale line.

Drop the index loops, withdraw the ring fingers from their loops and insert them both into the two loops that the thumbs have just taken up; then with the palms of the indices from the distal side draw through the radial thumb strings (all of them) and drop the thumb loops.

You have "the old woman with the pack on her back" (the sheaf of horizontal strings bound by two half-hitches), her two legs being the two loops that pass round the lower transverse string.

The Inland Eskimos at this stage say:

aqoviyog aqoviyog na-mi nātmāluqātaicātin tātki'ya

"Old lady, old lady, where is the bundle you are carrying?"

"There it is" (dropping the index loops).

The Mackenzie natives say:

aqoviyog nātmāluqātaicātin qai'xid wa

"Old lady, your pack give me." "Here it is" (dropping the index loops).

At the last words "the pack," according to the Inland Eskimos, is thrown out of the window by "the old woman."

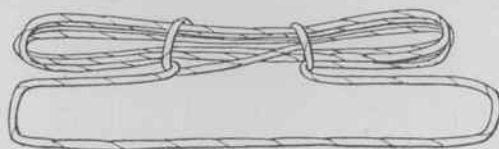


Fig. 202

CXXXV. A FISH

The Colville river Eskimo from whom I learnt this figure called it *iyālune*, which he said was a species of fish. An Inland native from the Endicott mountains knew a figure with the same name, and with a chant the same as that of the Colville river Eskimo's, but said that the latter's figure was incorrect, though he himself had forgotten how to make the true figure. The opening is simple, and found in several other figures.

Position 1.

With the back of each thumb from the distal side take up the ulnar little finger string of the opposite hand and drop the little finger loops.

Insert the little fingers into the thumb loops from the proximal side, move them towards the middle, allow the lower transverse string to fall off, then hook the little fingers over it and hold it firmly against the palms.

Pass the indices into the thumb loops from the distal side and with their palms draw through the upper transverse string.

Drop the thumb loops, then the right little finger loop and hold the right thumb loop in the right hand. You have "the fish."

Chant:

iyālune cāma'ya tautu'ya cāma'ya

Fish down there, let me see down there.

iyālune cāma'ya tautu'ya cāma'ya

Fish down there, let me see down there.

a yaya hai ya ha

a yaya hai ya ha

cua pin'a nauyaki'iaq pin'a

What's that up there, a seagull up there.

pāpe'yoik'pāyālu

It may want to take my tail.

pāpe'yoik'pāyālu

It may take my tail.

tamnali tmi'yoa'ya tuluk'am

And this my poor old body let the raven take it.

pī'γil'iyū

There is no escape

aulauvit'cōq

? ? ?

kāvaut'cōq

? ? ?

putukūt'cōq

At the word *pāpegoikpañālu* drop the right hand loop and draw out with it the lower transverse string, taking hold of it between "the tail" and "body." "The sea-gull" has carried off "the tail" and "the body" alone is left. At the word *πιγλιιυη* again draw out the lower transverse string to the left of the loop passing round it. "The raven" has eaten "the body."

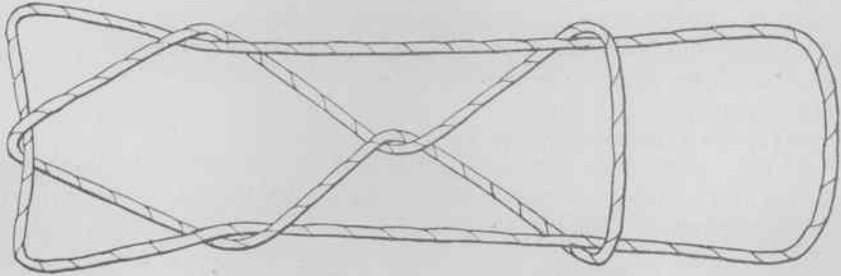


Fig. 203

CXXXVI. THE KAYAKER

The Eskimos of Indian point make a figure of a man in a kayak who is supposed to be paddling over the sea and to see the mountains of the shore rise up in the distance. They then produce from the first figure a second figure of the mountains, which is the same as that given by Dr. Gordon from Cape Prince of Wales as "the clothes line." The Barrow and Inland natives also know this second figure, which they call *uwit-cut*, explained by one native as the name of a range of mountain peaks, by another as "the sudden opening of closed eyes." The method in all cases is exactly the same, though the opening movements that give rise to "the kayaker" at Indian point are naturally a little different. These latter greatly resemble "the kayak" as described from King island by Dr. Gordon, which the Barrow natives produce in a slightly different manner (see No. XLVIII). Bogoras has the first figure from the Chukchee with the name "man in canoe."

Position 1.

With the backs of the thumbs from the distal side take up the opposite little finger strings and drop the little finger loops.

Hold the thumb loops in the palms of the hands.

Pass the indices into the thumb loops from the distal side and draw through with their palms the upper transverse string.

A string now runs from one ulnar little finger to the middle of the figure, then continues to the other little finger. With the thumbs above this string, one on each side, press it down and take up with the palms of the thumbs the lower transverse string.

Dropping the loops on the little fingers, hook their palms over the loops that have just been dropped by the thumbs.

Katilluik the thumbs.

Turning the palms downward lay the figure on the knees, then take it up again, inserting the indices from above into the more distant corner loops and the little fingers from below into the nearer.

You have "the man paddling in his kayak."

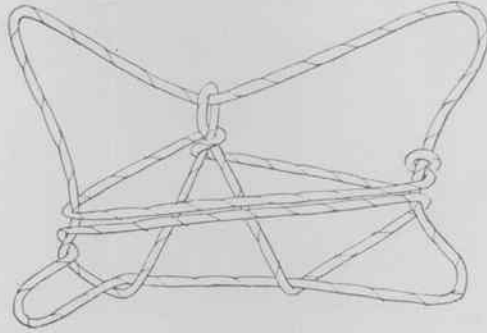


Fig. 204

In the middle of the figure there are two parallel transverse strings. With the thumbs from the proximal side take up these strings, then the radial index strings; navaho the thumbs, drop the index loops and transfer the thumb loops to the indices.

(The Barrow and Inland natives, as well as the Cape Prince of Wales Eskimo from whom Dr. Gordon obtained the figure, reach this stage thus:

Position 1.

With the backs of the thumbs from the distal side take up the opposite ulnar little finger strings and drop the little finger loops.

Hold the thumb loops in the palms of the hands and, inserting the little fingers into the thumb loops from the proximal side, move them towards the middle, allow the lower transverse string to slip off, then hook their palms down over it.

Pass the indices into the thumb loops from the distal side and with their palms draw through the distal radial strings (the diagonal strings). Drop the thumb loops.

This brings you to the same stage as by the Indian point method.)

With the palms of the thumbs from the proximal side take up the strings which run from the lower transverse string to the middle of the upper transverse string (the two sides of the triangle).

With the thumbs from the proximal side take up the radial index strings, navaho the thumbs, drop the index loops and transfer the thumb loops to the indices.

A loop passes round the lower transverse string on each side. Pass the thumbs into these from the inner side, take up with their backs the distal string of each, then from the proximal side the radial index string of each hand. Navaho the thumbs, drop the index loops and transfer the thumb loops to the indices.

Insert the thumbs from the proximal side into the middle of the figure just above the lower transverse string, then, with a sharp hiss, drop the little finger loops and draw the strings taut.

You have "the range of mountains."

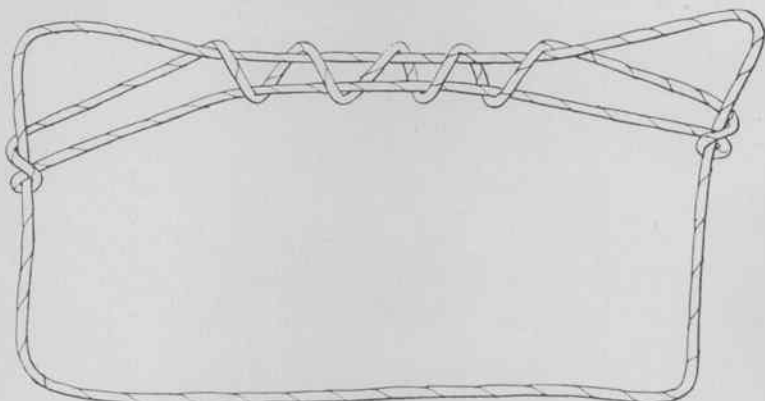


Fig. 205

As soon as the figure of "the kayaker" is made, the Indian point Eskimos begin their chant, and continue it throughout the process of making "the mountains."

qayaγumtaq orinγami
qayaqtolominaqciya canγotana

I was paddling in the summer.
As I paddled contrary winds arose
against me.

qänikluγotana
nerciqduγotana
tecpakut tecpakut
naiγaγoiγayut

Snow fell on me and the rain beat down
on me.
High up out there I saw the mountains.

The song concludes with the appearance of "the mountains." If the strings are heaped together and indistinct that is because "the mountains" were wrapped in fog; conversely if they are separate and distinct the weather had cleared and "the mountains" showed up plainly.

THE POLAR BEAR CYCLE

The next four figures all open in the same way, which is a modification of the opening in the preceding figures. The movements in all four are very much alike, in the last two almost identical. The final movements in the first figure and in these two last figures recall similar movements in "the dog with its ears" (No. CXXIII).

COMMON OPENING

Position 1.

With the back of the right thumb take up the left ulnar little finger string from the distal side.

With the palm of the left thumb take up the right ulnar little finger string from the proximal side.

Drop the little finger loops.

Pass the little fingers from the proximal side into the thumb loops, and, pressing down the ulnar strings, allow the lower transverse string to slip off, then hook the little fingers down over it.

Pass the indices into the thumb loops from the distal side and with their palms draw through the upper transverse string.

Drop the thumb loops.

You have "two diamonds," producing a cross in the middle.

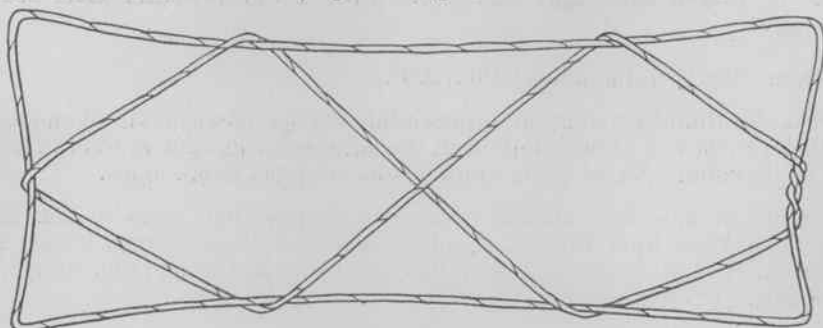


Fig. 206

CXXXVII. THE POLAR BEAR

This figure is called *nānōq*, "polar bear," all along the coast from Barrow to Coronation gulf. Boas has the same figure, with the same name, from the west coast of Hudson bay and from Cumberland sound, Baffin island; and Kroeber found the same name for it among the Eskimos of Smith sound.

Make "the two diamonds" (fig. 206).

Take up with each thumb from the proximal side the top outer string of the nearer diamond and *katilluik*.

Two intersecting strings now run from the right palmar string, one to the left hand, the other to cross the lower transverse string.

Pass the right index down on the distal side of all the strings and with its palm raise up these two strings, then, passing the index through the right thumb loop, from the distal side take up with its palm the lower transverse string between the two strings that loop round it. Draw this string out to the distal side of all the strings and pass the index with it back again through the thumb loop from the distal side.

Drop the left little finger loop and remove with it from the distal side the right index loop.

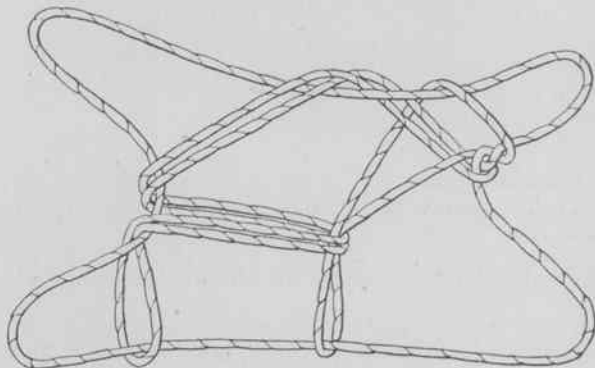


Fig. 207

Turn the hands inward, then outward, holding the palms turned out.

You have "the polar bear," its feet resting on the lower transverse string.

CXXXVIII. A MAN HANGING BY THE NECK

This figure is known to the Eskimos of Indian point by the name *kumitaroq*, and to the Inland natives as *kumit-eq*. Both words have the same meaning, "he hangs."

Make "the two diamonds" (fig. 206).

Pass the thumbs under the intersecting strings between the diamonds and raise them, then with each thumb from the proximal side take up the radial index string of its hand. Navaho the thumbs and drop the index loops.

There are now two medial transverse strings that cross in the middle. Insert the indices from the distal side in between these strings on each side, raise them, then with the palms of the indices draw through the upper transverse string. Drop the thumb loops.

Two strings run from the left, one from the palmar string, the other from the lower transverse string, to cross, both of them, the upper transverse string, continuing then to the right palmar string.

(This is the point, Fig. 208, where the third figure of the series, "the swan," branches off.)

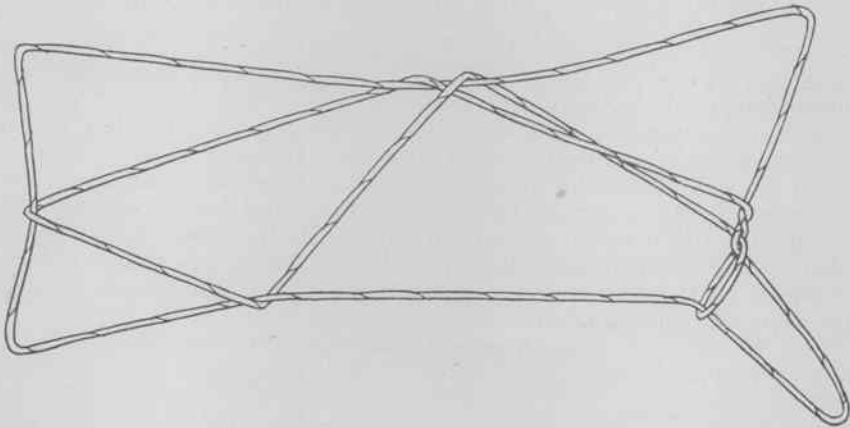


Fig. 208

Pass the left thumb under the radial index string from the proximal side, and with its back take up both the strings that run up to the upper index string, then point it outwards.

Inserting the right thumb into the left thumb loop complete the movement of *katilluik*.

Three strings now run parallel to the upper transverse string on the distal side of all the strings.

Pass the left index down on the distal side in between these horizontal strings and the rest of the figure, and take up with its palm the ulnar left little finger string and draw it out through.

Drop the right little finger loop, pass it from the proximal side in between the radial and ulnar left thumb strings, and with its palm from the distal side take off the left index loop and return. At this stage the Indian point natives say:

kumitaroqyujog kumitaroq
caḡanyoaqpaḡ naqaya
naḡomaciḡo
tawa'ten yalama pāneḡiwama
anama kiḡuḡaḡin kumitaḡna

Kumitaroq, he says, Kumitaroq,
 Why did you eat your brother's food?

? ? I was very hungry.
 My mother went behind him and hanged
 him.

Drop the left little finger loop; "the man" is hanging.

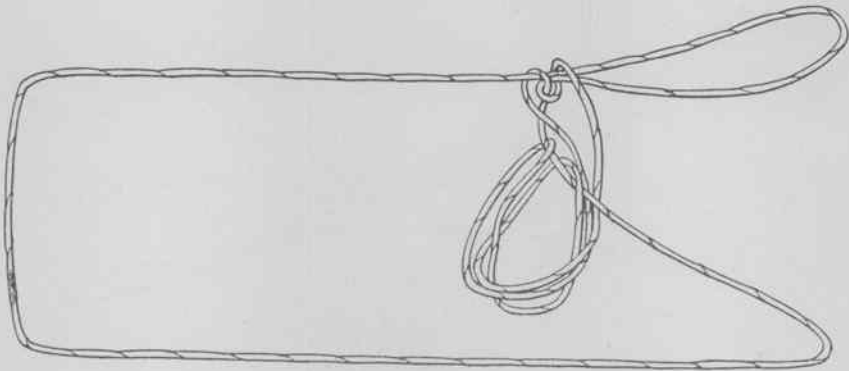


Fig. 209

CXXXIX. THE SWAN

This figure is known from Barrow to Coronation gulf under the same name *quḡḡuk* or *quḡḡuk*, "the whistling swan," but only among the Mackenzie natives could I discover a chant with it. The Hudson bay and Cumberland sound Eskimos know it also as swan, as I learnt from Boas' collection.

Proceed as in "a man hanging" up to the stage illustrated by fig. 208.

At this point pass the right thumb under the radial right index string from the proximal side and with its back take up the two strings that run from the right palmar string to loop round the upper transverse string.

Inserting the left thumb into the right thumb loops, complete the movement of katilluik.

A portion of the lower transverse string is intercepted between two loops. Raise the two distal horizontal strings on the back of the figure with the right index from below on the distal side, then pass the right index into the right thumb loop from the distal side, take up with its palm the lower transverse string at this place and draw it out to the distal side of all the strings.

Drop the little finger loop of the left hand, and remove with it through the right thumb loop the right index loop from the distal side.

You have the long-necked "swan."

The Mackenzie chant is:

cumun māliγuγaluŋa
itqilmun māliγuγaluŋa
iqawluŋa qimakpuŋa
quq quq quq

Whither are you following me?
 To the Itqilik (river) you follow me.
 Being afraid I am going to fly away.
 quq quq quq (the bird's note).

At *quq* drop the little finger loops. You have "the empty lake," according to the Mackenzie natives, from which the bird flew (the circle in the middle of the transverse strings.)

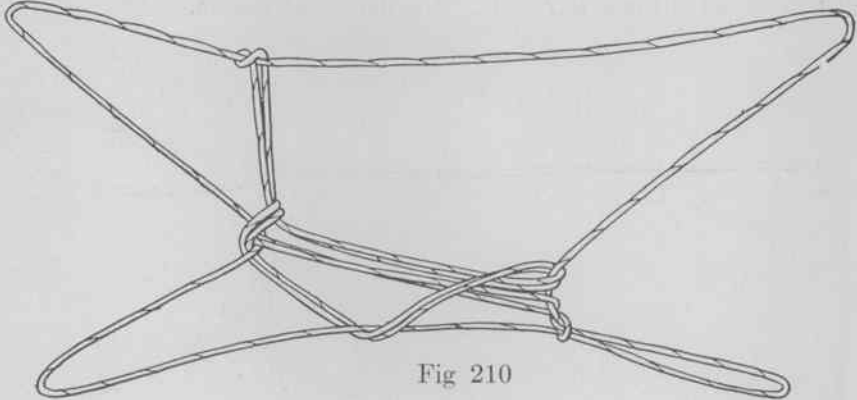


Fig 210

CXL. *akuluγγuk*

This figure is merely a variation of the preceding which seems to be confined to the Copper Eskimos. It is called *akuluγγuk*, which is said to be a man's name. I fancy there is some story connected with it, but was unable to discover what it was.

The movements are exactly the same as in "the swan" save that, in the first movement where "the swan" branches off from "the man hanging," the movements with the right hand are made with the left hand on the left side (as in "the man hanging"). The final movements in both "the swan" and in *akuluγγuk* are the same. You obtain this figure.

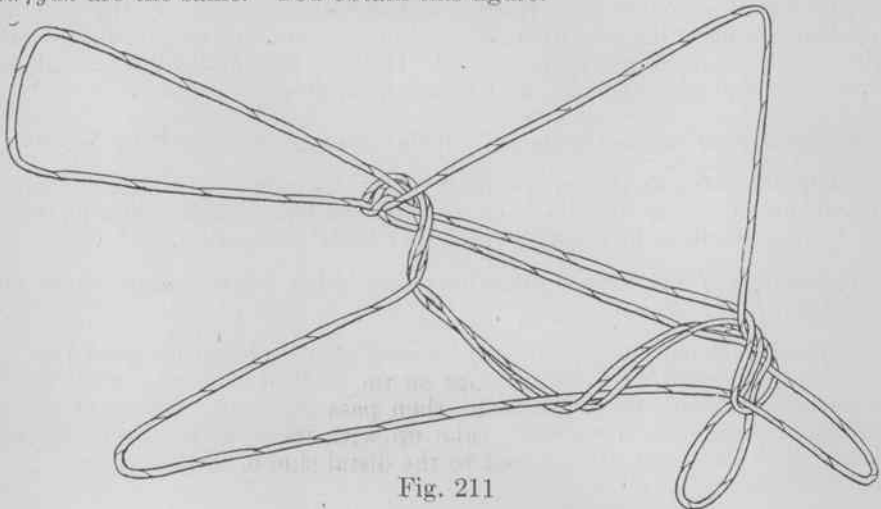


Fig. 211

CXLI. A MAN THROWING A DUCK-NOOSE

This figure, which comes from Indian point, is very similar to the two preceding. The nooses or snares which it represents are whale-bone nooses fastened to the end of a long seal-skin line. The ducks come to peck at it and get their feet caught in the nooses, when the hunter drags them in. The movements and the final figure bear some resemblance to No. IX, and it is not improbable the two had a common origin. The Chukehee have a figure called "mice" which seems to be somewhat similar.

Position 1.

With the palm of the left thumb, then with the palm of the right, take up the opposite little finger strings and drop the little finger loops.

Proceed exactly as in the last figures until you reach a figure almost identical with the common stage in those figures, "the two diamonds."

Pass the left thumb into the figure under the intersecting diagonals in the middle, raise those strings, insert the right thumb into the left thumb loops and complete the movement of *katilluik*.

Insert the right index into the middle of the figure just below the upper transverse string, and the right middle finger just above the lower transverse string, drop the thumb and little finger loops on the right hand and draw the strings taut.

Hook down the ulnar right index string from the proximal side with the right middle finger and navaho the middle finger.

Reverse the right index in its loop and transfer the right middle finger loop to the right little finger. Similarly on the left hand transfer the thumb loop to the index.

Two strings run together from the palmar right hand string to the left hand. Pass the right thumb under the upper transverse string from the proximal side and twist its back round these two strings.

Insert the left thumb into the right thumb loops from the proximal side, then with each thumb from the proximal side take up the radial index string of its hand and navaho the thumbs.

Drop the right index loop but retain the left and chant:

qoloqolok'a qoloqolok'a

niγaya xanexe niγaya xanexe

muxloataxluhe

tuckunavuk

Qoloqolokka (the man's name)

His duck-snares, his duck-snares

He threw them

Out over the water.

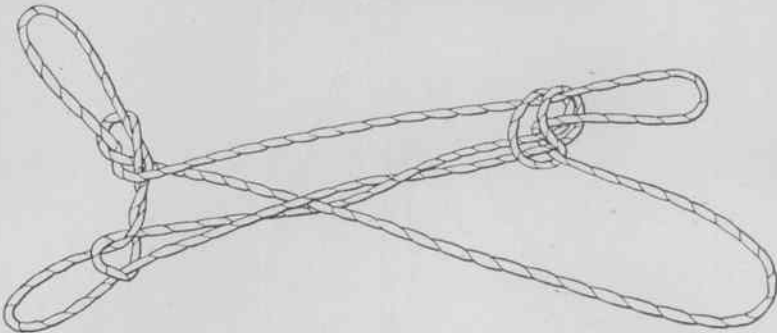


Fig. 212

At the word *muxloataxluhe* drop the left thumb loop; you have the man standing on the left and his snares over near the right thumb.

CXLII. THE DUCK-SPEAR

This figure, which was learnt from an Eskimo on the Colville river and is known also to the Eskimos of Coronation gulf, is almost identical with the first figure in Miss Haddon's book "Cat's Cradles in Many Lands," where it is recorded from the Indians of British Columbia and from the Zuni Indians to the south. The Eskimo figure is given a slightly more complex form. The Barrow natives call it "the duck-spear," (*nuyaqpak*), while the Copper Eskimos call it "a tent" (*tupiq*).

Position 1.

Take up with the right index the transverse string on the left palm from the proximal side, give it three or four twists and return.

Pass the left index through the right index loop from the distal side, take up the right hand palmar string from the proximal side and return through the loop.

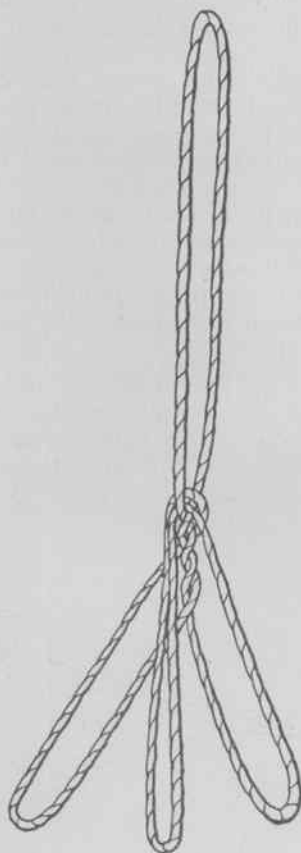


Fig. 213

Drop the thumb and little finger loops of the right hand and draw the hands apart. You have "the duck-spear," or "tent."

Drop the right hand loop and remove the left index loop to the right hand. The Barrow natives say *nuyaγaγa*, *aqavāγa*, "he has launched his duck-spear." The Copper Eskimos, however, call this second figure "a snow-shovel" (*poāλ-āγin*).

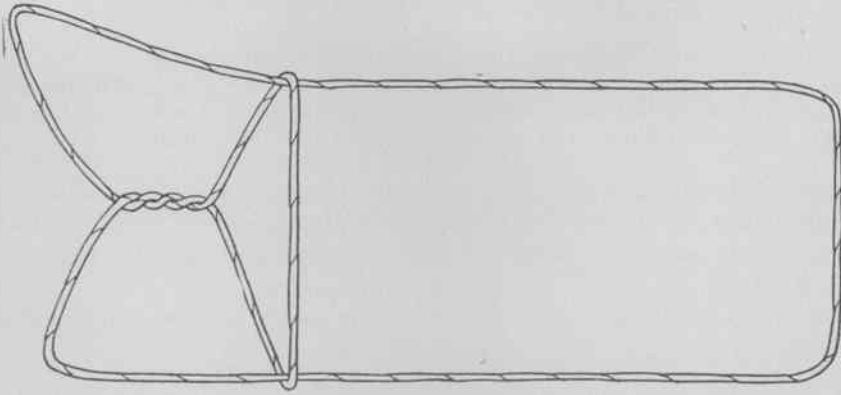


Fig. 214

CXLIII. THE PTARMIGAN

This figure is the same as that recorded with the same name by Dr. Gordon from Cape Prince of Wales. It was learned from some Barrow natives, their word for "two ptarmigan" being *aqagγik*. An Eskimo from Indian point called it "two old squaw ducks." The movements are remarkable in many ways, but since the figure has been recorded already it is unnecessary to repeat the description here.

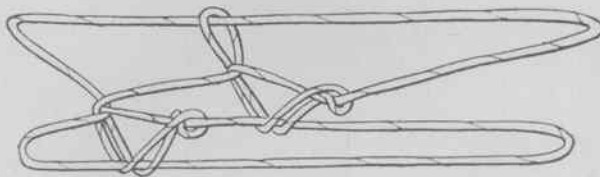


Fig. 215

CXLIV. *auyauiyaheqaq*

This figure, which comes from Indian point, resembles the next, "the boiling pot," known from Barrow to Coronation gulf. It is identical with a figure I learned on Goodenough island, in the D'Entrecasteaux archipelago, off the east end of New Guinea, where the same movement of "cutting" through the loops at the conclusion is also practised. The Indian point natives usually give it the name of the first word of a chant which they sing to it, viz. *auyauiyaheqaq*; it was said to be the name of a woman.

Hold the left hand palm downward and lay one end of the loop over the left thumb and index. Turn the left hand upward so that the index string twists round the index and the thumb string round the thumb.

Lay the other end of the long pendent loop over the left thumb and index and navaho each separately.

Two strings hang vertically from the string that runs behind the left thumb and index. Take these up with the left hand and draw the hands apart. As the radial and ulnar left hand strings are tightened and slackened alternately a triangle opens and closes at the other end near the left hand. Chant:

auyauyangeqag- eqag- eqag
camuy pikna mecamcukictaqta
aumuy pikna mecamcukictaqta
auyauyangeqag
qal'ivackiye piyutaluni
cwqagag

Auyauyangeqag (a woman's name)
 What is that up there you are eating?
 It's blood up there you are eating.
 Auyauyangeqag
 Her coat as she was walking he tore it
 off.

(A man saw a woman named *auyauyangeqag* standing above him and asked her what she was eating. Finding that she was eating blood he tore her coat off.)

At the last word *cwqagag* release the left hand loops, insert the left hand between the radial and ulnar right hand strings and strike it down so that it cuts through the loops below it and comes away clear. The figure is the same as fig. 187, which is obtained in an entirely different manner.

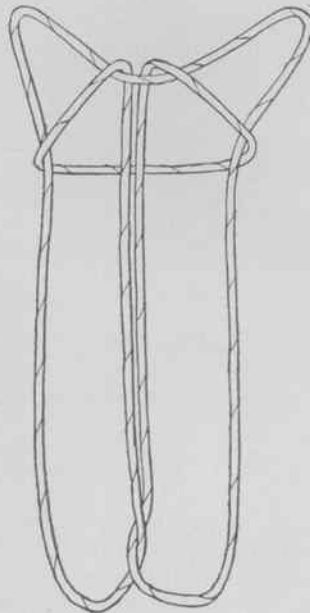


Fig. 216

CXLV. A POT BOILING¹

The Inland Eskimos call this figure *utkucik qālāt:əq*, i.e. "the pot is boiling." In the Mackenzie delta and in Coronation gulf it is called *qim'im uqa*, i.e. "a dog's anus." The Mackenzie natives continue it to produce another figure, "a tent." The "pot boiling" is really the same as the preceding figure, only inverted.

Loop behind the left thumb and little finger. Pass the right hand into the other end of the loop from the proximal side and with the palm of the right index draw through the left palmar string.

Again pass the right hand into the pendent loop from the proximal side and with the palms of the thumb and index draw through the ulnar thumb and the radial little finger strings of the left hand. Spread apart the right thumb and index, holding their ulnar strings firmly in the palm of the hand. See-saw the right hand and "the pot" over at the left bubbles up and down.

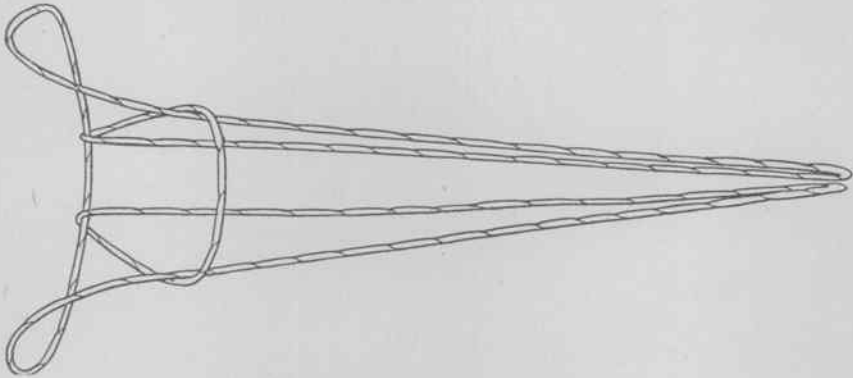


Fig. 217

CXLVI. A TENT

This figure, which the Mackenzie Eskimos call *tupiq*, "a tent," is merely a continuation of the previous one. It is supposed to represent the conical tent, somewhat like the Indian "tipi," which was used in the Mackenzie delta a generation or two ago.

Make the previous figure "a pot boiling."

Spread apart the two radial right hand strings with the left index and ring fingers, then pass the left middle finger in between the two ulnar right hand strings.

Drop the right hand loops over the back of the left hand.

¹ Mr. F. W. Waugh has collected this figure from the Okanagan Indians of British Columbia, who call it "a fish-trap."

Two strings cross the palm of the left middle finger. Take these up with the right hand and spread apart all the strings. You have "the tent," with its door on the proximal side facing you.

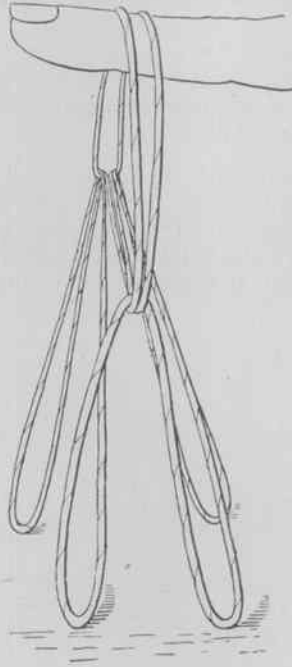


Fig. 218

CXLVII. THE ORPHAN BOY

There are two figures which differ only in the final movement, depending on whether the right hand or the left hand is used. The first is known at Cape Prince of Wales, where a chant is sung with it. It is also found among the Inland Eskimos of northern Alaska with a short chant, but regarded as an aberration of the second figure, and not really as a separate figure of its own. With the second figure these Inland natives sing a chant which is evidently the same as the Mackenzie river chant that accompanies the figure "the little old man" (see No. XIII). Mackenzie river natives call the second figure *uk-waqtog*, "the door is closed," and the same name is found for it in Coronation gulf, *uk-waqtogyyuk*. The movements are found in many other figures, the opening resembling one of the methods of making "the little finger."

Loop over the indices.

Close the hands over the transverse strings and push the right index loop through the left index, then interchange these loops on the indices.

Pass the left thumb over the radial index string and with its back from the proximal side take up the two radial ring finger strings.

Return, then pass the thumb over the ulnar index string and take up similarly the two ulnar little finger strings.

Drop the loop on the left little finger and transfer to it on the proximal side of all the strings the left thumb loops.

Drop the left index loop and with the indices and thumbs spread apart the two upper transverse strings. You have "the door" beside which "the orphan boy" was wont to sit.

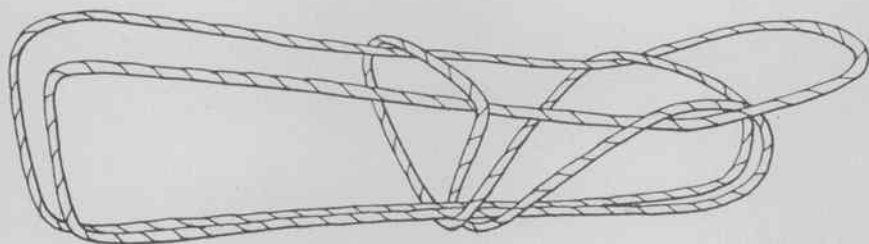


Fig. 219

The story runs that an orphan boy was ill-treated by the inmates of the house in which he lived. His place was just inside the door and he was not allowed to go farther in. The others threw him scraps of food when they were eating. There he was always sitting in his corner, with his arms withdrawn from the sleeves of his coat and pressed against his body to keep them warm, while his knees were tucked up toward his chin and covered with the bottom of his coat. At last he grew old enough to take care of himself and went away.

The chant runs:

<i>upkwaqtuŋeγq</i>	Door-closer (?) (the boy's name),
<i>upkwaqtuŋeγq liken'ane</i>	Door-closer who stays over there,
<i>upkwaqtuŋeγq upkwaŋeqlɔγin</i>	Door-closer, shut the door.
<i>qanoγumi upkwaŋeppit</i>	Why don't you shut the door?
<i>ciq-oak'a qumiγik'a</i>	My knees I have covered with my coat.
<i>upkuriturituri</i>	(The boy going away).

At the last words drop the right little finger loops.

The Inland Eskimos chant:

<i>ukunεqcuαγq</i> (three times)	Name of a small bird (?)
<i>nunmun ukunεγαγāvit</i>	Whither are you going?
<i>ikunα-a</i>	Over there (dropping the right little finger loop).

The natives did not know the meaning of the word *ukunεqcuαγq*, but one of them conjectured that it was the name of a small bird.

The second figure is produced in the same way, only at the last drop the right little finger loop instead of the left, and remove the left thumb loop to that little finger.

You have figure 220, which the Mackenzie and Copper Eskimos call "the closed door."

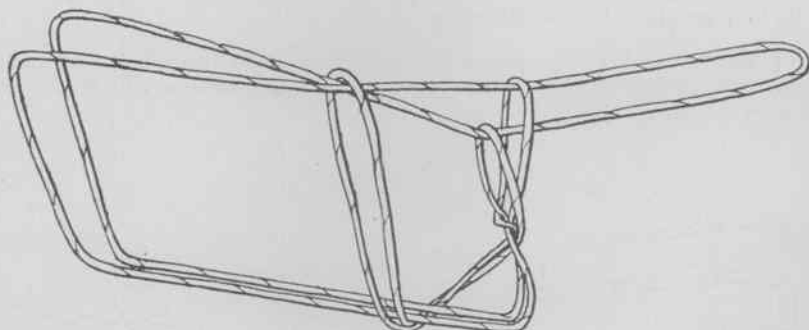


Fig. 220

The Inland Eskimos chant with it:

itq̄q̄ap qaγnin nutcuktuya

From its tail I pull the hairs.

ai ye xya

cautācia ai ye xya

putuaγote

It snapped.

CXLVIII. THE BREAST-BONE AND RIBS OF A CARIBOU

This figure is known from Barrow to Coronation gulf under the same name, though modified a little according to the dialect. At Barrow it is called *cākieγik*, in the Mackenzie delta *cākjūt*, and in Coronation gulf *hākjūt*. A native at Baillie island called it *cākiātciūt*, which means "a small breast-bone." Mrs. Jaynes gives it from a "Tupek" Eskimo of Alaska with the same name. On the west coast of Hudson bay, and in Cumberland sound, Baffin island, it is called "the breast-bone and ribs of a man." The opening is found in two other figures, *tanāγot* (No. LXII), and "caribou" (No. XXV).

Loop behind the thumbs, middle fingers, and little fingers of each hand.

With the backs of the indices take up the opposite palmar index strings. Similarly with the ring fingers.

With the thumbs from the proximal side take up in succession, navahoing them after each operation:

the radial index strings;

the radial mid-finger string on one side and the ulnar index finger string on the other (*i.e.* the upper of the two crossing strings);

the single transverse radial mid-finger string;

the upper of the crossing radial ring finger strings;

the single transverse radial ring finger string;

the upper of the crossing radial little finger strings;

the single radial little finger string.

With the little fingers from the distal side, and on the distal side of all the strings, remove the thumb loops.

Hold the uppermost transverse string in the mouth, and you have "the sternum" with "the ribs" running off on each side.

(Drop the string in the mouth and the distal little finger loops. You have a series of transverse strings, single at the top and bottom and with three intersecting pairs in between.)

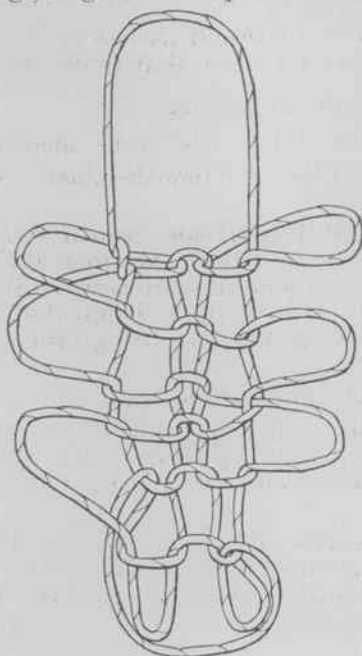


Fig. 221

CXLIX. A WOLVERINE

The movements in this figure are extraordinary. It seems to be confined to the Eskimos of Cape Prince of Wales; at least I have not seen it anywhere along the north coast. It is called *qavik nipitaqtoaq*, *i.e.* "a wolverine subans."

Loop behind the left thumb and little finger.

Circle the other end of the loop clockwise through 180 degrees, then lay it over the left middle finger.

Take hold of the left ulnar little finger string, pass it across the palm, round the outside of the left thumb, across the palm again and behind the little finger; now drop the remainder of the string.

There are now three palmar strings, but one runs underneath the radial and ulnar middle finger strings.

Raise this string up from between the radial and ulnar middle finger strings, and between also the other two palmar strings, and drop it over the left middle finger.

Drop the two loops on the left little finger and take up with the right thumb from the distal side (*i.e.* from below) the two ulnar middle finger strings. Drop the middle finger loops.

Draw the hands apart and, holding the thumb loops in the hands, spread apart with the indices the radial strings. You have "the wolverine."

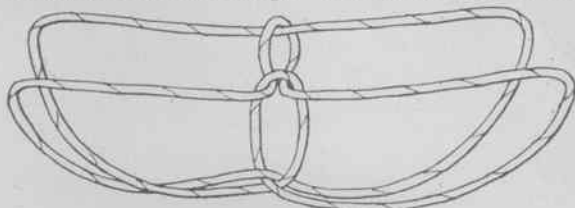


Fig. 222

CL. A BAG-NET

This figure comes from the Inland natives of northern Alaska, who call it *qaλu*. The movements are very unusual and difficult to describe.

Loop behind the thumbs and indices.

With the backs of the thumbs take up the ulnar index strings.

The transverse strings then run from the ulnar sides of the thumbs and the radial sides of the indices.

Take up in the mouth the left hand palmar thumb-index string where it lies between the two transverse strings, and from the back (*i.e.* the distal side) inserting the right thumb and right index in between the strings that hang down from the mouth, take up with the right thumb the string which becomes the ulnar index string and take up the other string with the right index. Drop the strings in the mouth.

Repeat this movement with the left hand.

Carefully lay the strings on a flat surface, one hand at a time, the fingers pointing downward; then from below insert the left thumb into the old left index loops and the left index into the old left thumb loops. Similarly with the right hand.

Four diagonal strings now cross in the middle. Take these up in the mouth and turn the thumbs and indices downward, allowing the two radial thumb and the two radial index strings to fall over, but retaining the ulnar thumb and radial index string of each hand.

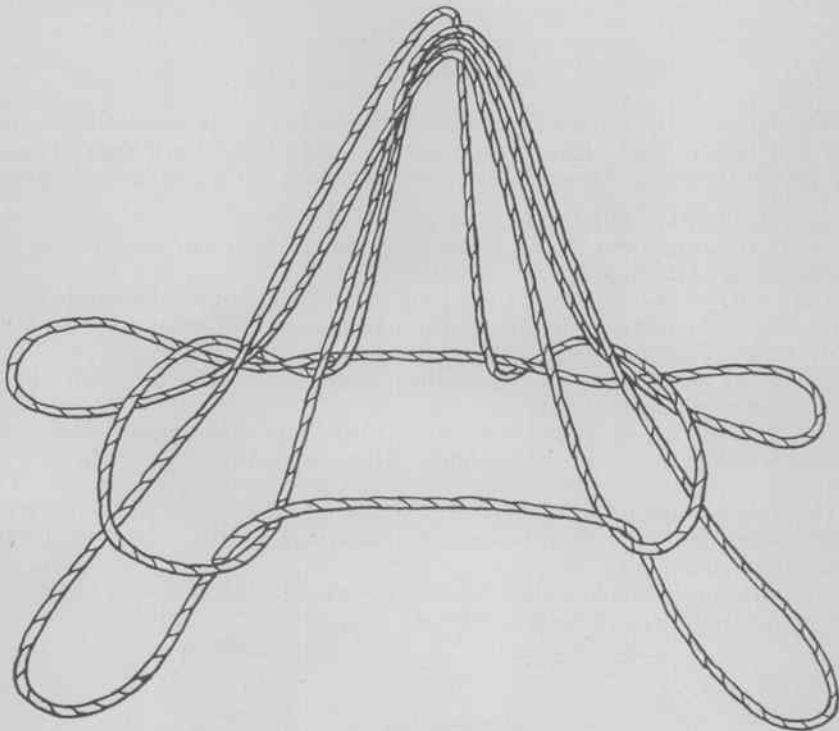


Fig. 223

You have "the net." Spread out the hands and bring them together again and the mouth of "the net" contracts and expands.

From the distal side remove the right index loop to the left index and the right thumb loop to the left thumb.

Drop the strings in the mouth, hold the left thumb loops in the left hand and the left index loops in the right hand, and you have "the little finger" (fig. 20).

CLI. *ucuyyuk*

This figure, which comes from the Mackenzie river, begins in exactly the same way as "the children" and "the angry man" (see Nos. LXXIV and LXXV). The later movements resemble several figures, e.g. "the brown bears coming out of their caves," "the squirrel," etc. The Copper Eskimos know this figure in a simpler form, with a modification of the opening movement. They too call it by the same name, in their dialect *uxuyyuk*. In its Copper Eskimo form it is evidently the same figure as that described by Dr. Boas from Cumberland sound, under the name *ussuqdjung* (reproduced by Mrs. Jaynes as "the circle").

Mackenzie Opening.

Loop over the thumb and index of each hand.

Drop the left thumb-index loop over the transverse strings, then thread the tip of the right thumb-index loop through the double-stringed noose thus formed and draw the knot tight.

With the two strings that come away to the right make Opening A.

Continuation of both.

Pass the hands into the thumb loops from the distal side, and dropping the thumb loops, draw the hand loops over the thumbs on to the wrists.

Drop the little finger loops and with the index loops again make Opening A.

Remove the loops from the wrists. You have *ucuyyuk*.

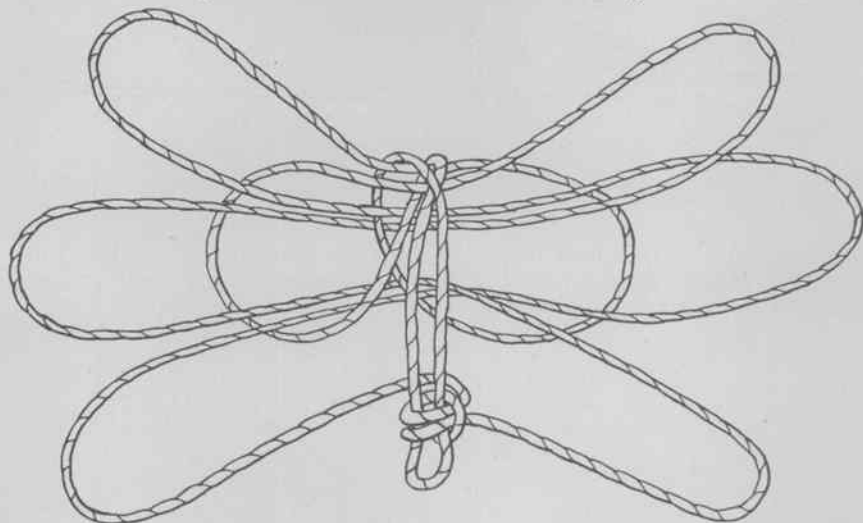


Fig 224

In the Mackenzie figure, pull apart the two strings that run to the lower transverse string. The knot breaks and you are left with Opening A.

CLII. A FALSE KNOT

The Copper Eskimos make a figure which they call *xukat-áluk*, i.e. "pulling tight." The movements are not remarkable in any way.

Position 1.

With the palm of the right index draw across the left palmar string, without twisting it.

Pass the left index from the distal side into the left thumb loop, push out the ulnar string, then take up with the palm of that index in succession the radial little finger string of its hand, then the upper transverse string, and finally the lower transverse string.

With the palm of the left little finger on the distal side of all the strings draw through the ulnar index string, thereby navahoing the little finger.

Drop the left index loop and transfer the left thumb loop to the left index.

Near the left hand a short vertical string loops round the lower transverse string on the proximal side, then continues on the distal side up to the ulnar left index string.

With the palm of the left thumb from the right take it up on its proximal aspect, then with the back of the thumb (dropping the former string) take it up over the top of the radial little finger string just before it passes over the ulnar index string.

Drop the index loops on both hands, straighten the loop on the left thumb and circle the right hand loop once clockwise. You have the figure *xukat-áluk*.

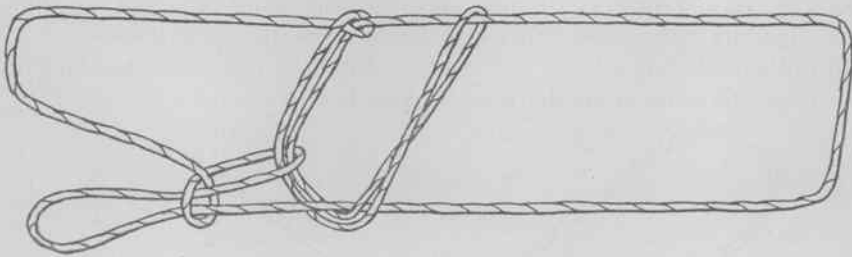


Fig. 225

Drop the left little finger loop and draw the strings taut. They form first a knot, then if they slip easily through one another the knot will dissolve and you are left with the original string.

PART V

FIGURES REQUIRING TWO PEOPLE

There are a few figures which require the looping of the string round one or occasionally two objects. Usually the indices of some other person are used, though sometimes the operator uses his foot. Two of these figures have a wide distribution.

CLIII. A MAN SLIDING ACROSS THE ICE

This figure is known from Indian point, Barrow, the Inland natives of northern Alaska, and from the Mackenzie river. In each place it has a different chant. The movements are almost identical with those of "the bow" (see No. XL).

Loop one end of the string over the foot; with the other end make Opening A.

With the thumbs from the proximal side remove the index and little finger loops.

Pass the little fingers into the thumb loops from the proximal side and, pressing down the ulnar strings, hook the little fingers down from the outside over the strings running to the foot.

Pass the indices from the distal side into the thumb loops, and with their palms draw through the upper transverse string.

Drop the thumb loops and, passing the thumbs into the little finger loops from the distal side, take up with their backs from the proximal side the two strings running from the radial to the ulnar little finger strings on each side and katilluik.

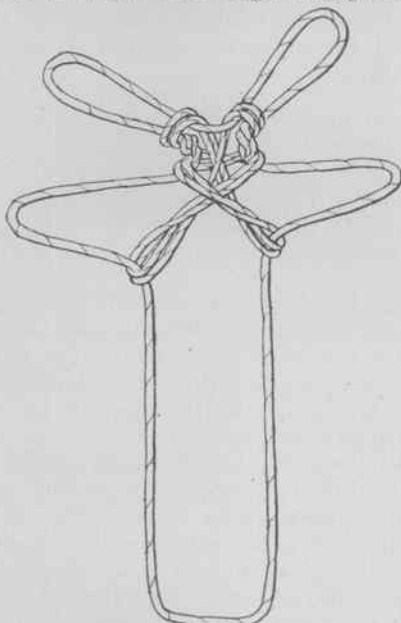


Fig. 226

You have the figure of "a man." Spread the little fingers out and he will slide up and down the two strings running to the foot.

(To resolve the strings drop the thumb loops.)

The Indian point natives chant:

anaulu hai ya
cigtaulu hai ya
nānum tapkwa mayuwatin

Anaulu (a man's name).
Was easing himself.
That polar bear stole up behind you (?)

The natives of Barrow chant:

qayyiyayā qayyiyā
qayyiyayā qayyiyā
ikuṅa qayyiyā
kanaya qayyiyā

He is bringing it, bringing it.
He is bringing it, bringing it.
From over there he is bringing it.
From down there he is bringing it.

The Inland Eskimos have a different chant:

cicoṅaqtoq cicoṅaqtoq
nīṅani nātmaxuni

He is sliding, sliding,
Carrying his snares on his back.

The Mackenzie river chant is different again:

qātqecaṅa qātqeca
kanaya pikuna
qātqeca ātiṅāluktin
mayṅṅalautotyut

He is moving it up and down, up and down.
From down there, to up there.
He is moving it up and down, your coat.
Did you raise it up?

CLIV. THE ARCTIC TERN

This figure, which is somewhat of a trick, is called by the Barrow and Inland natives *mutqutailaq*, "the Arctic tern." The Mackenzie natives consider it a trick pure and simple, and have no name for it. They modify the final movement also, merely drawing the strings out instead of diving down in imitation of the tern. I have seen the Copper Eskimos act both ways; their name for the figure is *iṅyātciag*, for which I could find no meaning. The movements are very intricate and difficult to describe.

Loop one end of the string over the foot (or another person's finger). Hold the other end of the string in the right hand.

Grasp both strings half-way to the foot with the left hand, and passing the right hand into its own loops from below, draw through with it the two strings running from the left hand to the foot.

Withdraw the left hand, leaving a loose string resting on the two "transverse" strings.

Remove the two right hand loops to the left hand, and, inserting the right hand through the left hand loops from the right side, again take hold of the two "transverse" strings below the loose string that crosses them. The two strings held in the left hand now rest on the right wrist. Remove them, dropping them over the two transverse strings below the right hand. They now lie loosely over the "transverse" strings just above the foot.

Hold the right hand loops in the left hand again, and passing the right index under all the strings up between the "transverse" strings, take up with its back the two strings lying loosely across them. Draw them out under the right "transverse" string, turning the index inward; then over the transverse strings and from the left side up between them, the tip of the index pointing inward.

Grasp the loops held on the right index with the right thumb and middle finger.

Thread the two left hand radial strings through the right thumb—middle finger loops and draw the left hand loops back again with the right hand. Push the former right hand loops down towards the foot.

In the middle four strings run parallel from the left "transverse" string to the right. Raise them with the left hand and thread under them the radial right hand strings, recovering these with the left index.

Carefully draw down towards the foot the strings running underneath from one transverse string to the other. Say *pi'q pi'q* (like the tern), and dive down under these two strings (between the "transverse" strings) with the right index and snatch them up, just as the tern snatches up its prey. Both foot and index are caught in running nooses.

(The Mackenzie Eskimos, instead of diving down with the right index, quietly pulled the ulnar left index strings with the right thumb and index, when the figure resolved.)



Fig. 227

CLV. A FLOUNDER (?)

This figure, which comes from Indian point, requires the use of both the indices of another person. It can be made, however, by using two pins or similar objects instead of the other person's indices.

Loop one end of the string over both the other person's indices, keeping these close together.

Pass both hands into the other end of the loop from below and, turning the hands downward over their side strings, allow the wrist loops to fall over them.

With each index draw out through each hand loop the string that runs between the other person's indices, drawing your left index string through the left hand loop and the right index string through the right hand loop.

A string now runs from one hand to the other, and two strings come up from the side strings, loop round it and return, thereby making a radial and an ulnar string on each side. Pass the indices into these loops from the inside and take up the ulnar strings.

Thread one index loop through the other, interchanging them on the indices, then draw through each the side string of its hand, and release all but these latter.

Repeat the movement with the radial strings.

Now separate the two loops on the interhand string, drawing out this latter from between them, and drop all the strings save this one.

The loops now slide up the side strings towards the other person's indices; just above where they cross is a large diamond, "the body of the fish"; "the head" is beyond, close to the indices, and "the bifid tail" is represented by the two loops behind, one on each side.

Chant:

ταγιααλυμια-αγ ατγαμιαγτγ

taxakun taxakun

nuvitik'o

Tariaxluqistaq went down into the water.

Through the base of its tail

He passed a line.

At the word *nuvitik'o* thread the loop held in the hand from above through the diamond and draw it out again on the other side. The figure dissolves, leaving only the loops round the other person's indices as in the earlier stage of the figure. "The man" has strung a line through the base of "the fish's tail" and drags it away.

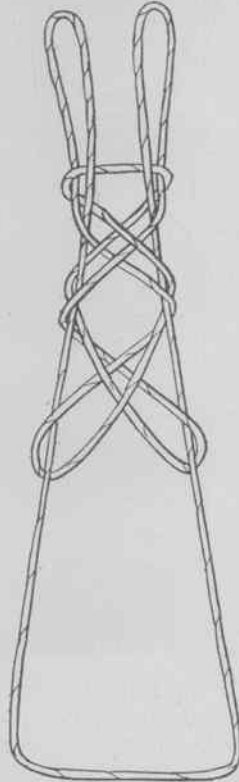


Fig. 228

CLVI. *hiktγagτργγuk*

The meaning of this name is unknown. The figure comes from Coronation gulf, but appears to be a simplified version of the preceding figure, "the flounder." All the earlier movements in each figure are the same, but the later movements in "the flounder" are omitted in *hiktγagτργγuk*.

Loop one end of the string over both the other person's indices.

Pass both hands into the other end of the loop from below and, turning the hands downward over their side strings, allow the wrist loops to fall over them.

With each index draw out through each hand loop the string that runs between the other person's indices, drawing your left index string through the left hand loop and the right index string through the right hand loop.

A string now runs from one hand to the other, and two strings come up from the side strings, loop round it and return, thereby making a radial and an ulnar string.

With the backs of the thumbs from the proximal side take up the radial strings of these loops, each with the nearer thumb, thread one thumb loop through the other, then, pressing each to the side with the palms of the thumbs, draw the side strings through them with the backs of the thumbs. Drop the index loops.

Invert inward (*i.e.* in the direction of each other) the loops on the other player's indices. You have *huktɔʔaqtɔʔɔʔuk*, his legs being represented by the loops at the bottom which cross the radial and ulnar index strings of the other player.

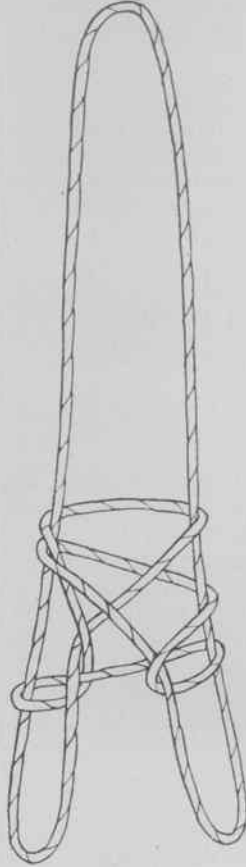


Fig. 229

ADDENDUM

At Barrow I saw the European figure "sawing wood," which Miss Haddon has described in her book, "Cat's Cradles from Many Lands" No. L. The native who made it called it "sawing wood" also, and said that it came from the whites. Consequently I have not included it among the Eskimo string figures.

There is a figure known at Cape Prince of Wales which is called *qaqcɔʔauk nūʔivɔʔɔʔmi*, *i.e.* "two loons in a lake." The woman who told me of it was unable to make it, but said that the following chant was sung with it:

qayaɔʔuma qayaɔʔuma
qaqcɔʔauk piɔʔacuwatɔʔn maq

While I was paddling my kayak
Loon, he will catch you—maq.

PART VI

STRING TRICKS AND GAMES

I. CUTTING THE HAND

This trick is known to the Barrow and Inland natives as *āyiyaeγiniq*, "cutting the hand." It is known in some form everywhere from Cape Prince of Wales to Coronation gulf. Mrs. Jaynes gives it from the Philippines and Caroline islands (p. 339).

Make Opening A.

Let another person insert his hand through the middle between the index loops. Drop all but the thumb loops; the hand is caught in a loop.

Make Opening A with the thumb loops without releasing the other's hand, and again, but this time from the proximal side, let the other person insert his hand through the middle. Drop all but the thumb loops again and the hand is released.

(Generally the string is wound round the other person's wrist instead of being caught by the Opening A movements. The Mackenzie and Coronation gulf natives seem never to do it by Opening A. Occasionally the trick is played by the operator on himself by winding the string round his neck instead of round some one else's wrist.)

II

This trick is also known everywhere from Barrow to Coronation gulf.

Loop on the little fingers. Pass the ring fingers over the radial little finger strings and take up with their backs the ulnar strings. Similarly with the middle fingers take up the ulnar ring finger strings, with the indices the ulnar middle finger strings and with the thumbs the ulnar index strings.

Now from the distal side pass the indices over the radial thumb strings and with their backs take up the ulnar string; then similarly with the middle fingers take up the ulnar index strings, with the ring fingers the ulnar middle finger strings, and with the little fingers the ulnar ring finger strings.

Drop the thumb loops and draw the hands apart. The loops all unravel and the string is free.

III

Another trick known from Barrow to Coronation gulf is "the mouse" of Mrs. Jaynes, p. 340 ff. Mr. F. W. Waugh found it also among the Eskimos near Nain, in Labrador.

Pass one end of the loop round the foot. Hold the right hand on edge, so that the other end of the loop passes over the right thumb, and there is a palmar and a dorsal string passing over the hand.

Pass the left index under the right palmar string from the proximal side and with its palm draw through the dorsal string, taking it up where it passes between the thumb and index on the back of the hand. Give the index a half-turn counter-clockwise (*i.e.* inward) and drop its loop over the right index.

Similarly draw out the dorsal string between the right index and middle finger, and, turning it, drop it over the middle finger.

Repeat the movements with the ring and little fingers of the right hand, then withdraw the right thumb from its loop and pull the long string that runs from the right palm to the foot. All the loops on the fingers resolve and the hand is free.

IV

Another trick known from Point Hope to Coronation gulf.

Loop over the left thumb, and hold the rest of the string in the palm of the right hand. Spread apart the radial and ulnar left thumb strings about 3 inches from that thumb by inserting the right thumb and index between them from above.

Give the right hand a half-turn clockwise and hook the left little finger over the ulnar right thumb string.

Give the right hand a half-turn counter-clockwise and with the back of the left index from below hold back the radial right index string.

Give the right hand a half-turn clockwise and hook the left ring finger over the ulnar right thumb string.

Give the right hand a half-turn counter-clockwise and with the back of the middle finger from below hold back the radial right index string.

Give the right hand a half-turn clockwise and hold back the ulnar right thumb string with the back of the left ring finger.

Give the right hand a half-turn counter-clockwise and hold back the radial right index string with the back of the left index.

Give the right hand a half-turn clockwise and hold back the ulnar right thumb string with the back of the left little finger.

Give the right hand a half-turn counter-clockwise and take up the radial right index string with the palm of the left thumb.

Drop the right thumb strings and remove the left middle finger loop, allowing it to drop. Pull the two strings of the long loop hanging from the left hand. All the loops on the left hand resolve and the hand is free.

V. A CAPE PRINCE OF WALES TRICK

Place one end of the loop on another person's finger and hold the other end in the right hand. Lay the left index over the two transverse strings, then place your end of the loop also on the other's finger. Point your left index upward or downward. Two strings cross diagonally between it and the other person's index.

Take these up where they cross with the right thumb and index and lay them also over the other person's index. Now draw your left index away and his finger is released.

VI. A POINT HOPE TRICK

This closely resembles one that is practised on Goodenough island in south-eastern Papua, and another known in Europe.

Hold one end of the loop in the left hand, palm upward, so that you have a radial index and an ulnar little finger string.

Bring the long pendent loop back between the fingers, the radial index string coming back between the index and middle fingers and the ulnar little finger string between the ring and little fingers.

Now pass the pendent strings between the left index and thumb and round the thumb.

With the palm of the left index take up the upper of the two strings (its old ulnar string) from above, after it passes round the thumb; similarly with the back of the left little finger from below take up the lower string (its old radial string). Drop the remnant of the string in the right hand.

Take hold of the two strings on the back of the left thumb, draw them taut, remove them from the thumb and pass them between the middle and ring fingers, then drop them.

Pull the palmar string; the loops all resolve and the left hand is free.

VII. A BARROW TRICK

Hold one end of the loop on the tip of the left thumb, the other in the right hand so that you have an upper and a lower transverse string.

Pass the right hand with its loop below the transverse strings from the proximal side, then loop its upper or radial string counter-clockwise round the left thumb and draw the right hand back by the way it came (*i.e.* between the two transverse strings and its own ulnar string).

Throw the radial string of the right hand clockwise over the left thumb, then half-circle the right hand loop clockwise to straighten the strings.

Repeat the movement three or four times, taking care to keep the original left thumb loop distal to all the others.

Now drop this distal left thumb loop and pull the radial transverse string. The knots on the left thumb all resolve, and the string comes away free.

VIII. A COPPER ESKIMO TRICK

Place one end of the loop on the tip of the left index.

Pass both the strings that lead from it round the proximal side of the index below the first knuckle so that the index is bent double, then round the distal side under the tip of the index and back round over it again. Repeat the operation in a contrary direction, and so on alternately in each direction until the string is exhausted.

Remove the loops that pass round the tip of the index and shake the strings on the palm of the index. The index is freed.

IX. ANOTHER COPPER ESKIMO TRICK

Hang one end of the loop on the left thumb and separate the radial and ulnar strings by inserting the right thumb and index in between them.

With the palm of the left index from above take up the radial left thumb string.

Turning the right hand palm downward take up with the left thumb the radial right index loop from the proximal side (*i.e.* from above).

Drop the left index loop. The left thumb is released.

X. ANOTHER COPPER ESKIMO TRICK

Hold one end of the loop between the left thumb and index so that about an inch falls over the back of the thumb.

Thread the other end of the loop through this loop on the back of the thumb and draw the slip-knot tight.

Separate the two long pendent strings about two inches from the left thumb by inserting the right thumb and index in between them. You have now on the right hand a radial thumb and an ulnar index string.

Pass the ulnar right index string round the left thumb in a counter-clockwise direction. Pass the left index under the two transverse strings, push out with it the radial thumb string, then draw up with its palm the ulnar index string and turn the left index outward. Remove the left index loop to the left thumb from the distal side, straighten the two strings that come away from the left thumb, and repeat the movements.

Continue to repeat these movements until the left thumb is covered with loops.

Now drop the right hand strings and pull out the proximal ulnar left thumb string. The loops all dissolve and the left thumb is freed.

XI

This game is played by the Barrow, inland northern Alaskan and Mackenzie delta natives. Different chants are employed and all manner of variations are experimented with. In the neighbourhood of Barrow a common chant, the meaning of which was unknown, ran:

εγγειpaku εγγειpaku εγγειpaku he (repeated two or three times), and, while twisting the string in the contrary direction, *caiyiγauṭk caiyiγauṭk caiyiγauṭk he* (repeated the same number of times).

Place one end of the loop over the foot, and hold the other end on the right index. Begin a chant and at each beat in the music circle the finger once, but always in the same direction. At the end of the chant push down the twisted portion of the strings and hold it down with the left index inserted between the transverse strings above them. Now repeat the chant, or a similar one, circling the finger in the opposite direction. At the end withdraw the left index. If the circling has been correctly carried out the strings should entirely unravel without leaving a twist.

XII

One child places an end of the loop over his ear and another does the same with the other end. The two then pull against each other until one, unable to bear the pain, gives in or the loop slips off an ear. The Mackenzie river natives in our party were teaching this game to the Copper Eskimos.

APPENDIX I

ESKIMO SUPERSTITIONS CONCERNING STRING FIGURES

Among nearly all Eskimo tribes there were various superstitions concerning string figures, although for the most part they have disappeared under the influence of Europeans. From Kotzebue sound, in Alaska, to Kent peninsula, at the eastern end of Coronation gulf, there was a taboo against playing the game except in the winter, when the sun no longer rose above the horizon. The Eskimos of Alaska and the Mackenzie delta have long since abandoned this taboo, and the game has become a pastime for every season of the year; but in Coronation gulf it was observed, though not very rigidly, down to the year 1916. Thus a woman showed me some new figures in the summer of 1915, but remarked that we ought to postpone playing the game until the winter. In the same summer a girl who was showing me some figures carefully closed the door of the tent in order that the sun might not shine in on us; for the Eskimos of this region base their taboo on a legend that the sun once beheld a man playing cat's cradles and tickled him. In the autumn of 1915 my half-breed interpreter was making some figures before the sun had disappeared, and an old man accused him of causing all the blizzards that were raging at the time. Dr. R. M. Anderson informs me that while some Coppermine river natives were making string figures in his tent during the spring of 1910 a curious noise was heard outside, and the Eskimos immediately laid aside their strings and filed quietly outside. His Alaskan interpreter then told him they thought an evil spirit had come amongst them because they were violating the taboo.

This last superstition resembles the Alaskan belief, that there is a definite spirit associated with string figures. The same superstition was evident again in a shamanistic seance that took place in Dolphin and Union strait during the winter of 1915.¹ It was not at all prominent among the Copper Eskimos, how-

¹ See "The Life of the Copper Eskimos," Vol. XII, Part I of this series, p. 203.

ever, and there is a strong probability that it was introduced by some western natives within comparatively recent times. In Alaska, on the other hand, many stories are told about this spirit of string figures, which could even become the guardian spirit of a shaman. It was thought to reveal its presence by a peculiar sound like the crackling of dry skins, and it made string figures with its own intestines or with an invisible cord. At Cape Prince of Wales the Eskimos believed that Opening A would drive it away, if the proper words were uttered; but in other parts of Alaska there was a special figure for the purpose.¹ A mere pretence at making the figure was enough, if no string were available; but if the movements were not made every inmate of the house would be paralyzed and die.

The following story about this spirit was narrated by a woman of Cape Prince of Wales:

"On the site of Tin City (a deserted tin mine near Cape Prince of Wales) there once lived a boy who spent all his evenings in making string figures. One evening, as he was amusing himself with his usual pastime, the spirit of cat's cradles entered the house, drew forth its own intestine and began to make the figures also. The mother of the boy snatched the string from her son's hands, exclaiming, 'I told you not to be always playing that game.' Sitting down on the floor opposite the spirit she made Opening A, unmade it, made it again, again unmade it, then, with the exclamation 'I've raced you,' quickly made the figure for the third time and flourished it in the intruder's face. The spirit shuffled nearer the door, and the woman shuffled after it, each striving to outdo the other in manipulating the string. At last the spirit vanished through the door—the woman's presence of mind had saved both her son and herself."

From Alak, a North Alaskan Eskimo who lived on the Noatak river during his youth, came these two stories:

"The Noatak river Eskimos once constructed a dance-house and gathered inside to practise their dances before sending out runners to invite their neighbours to the festival. Another boy and myself were sent to bring in more food, and while we were absent some of the children created a great uproar, despite the warnings of the older people. Everything seemed normal when I returned, but suddenly there was a sharp report outside the house, and a noise like the crackling of dry skins. The sound travelled around the house until it reached the door, which was merely an opening covered by a curtain of skin. Presently a stream of mist began to pour in, and behind it, concealed by the mist, the spirit of string figures entered the room. The lamps at first flared brightly, then slowly grew dimmer and dimmer. We sat motionless, paralyzed with fear. One by one the lamps expired and no one stirred, although now and then an old man would cry, 'Will no one go out?' The house grew darker and darker, and my grandfather, who was sitting on one of the benches, called me over to his side. I ran quickly, for I was very frightened, and my grandfather placed me on his knee. Nearly all the lamps had expired when an old man suddenly rushed outside with one of them and raced around the house. The air outside extinguished his lamp, but the people re-lit it, and then lit all the other lamps that had expired. The spirit disappeared, and everything seemed normal again; but presently the old man's hands grew very cold and he sat dumb and motionless. His brother asked him what was the matter, but he could not answer. Then some shamans who were present invoked their magic powers, and in the morning the old man was able to move about again, although his speech did not return to him until some time afterwards. Had he not carried out one of the lamps before they were all extinguished every one of us would have been paralyzed and died.

¹See No. XXIII, Two Labrets.

"I knew also of two men who lived in another settlement on the Noatak river. They did not believe in a spirit of string figures, but said they originated from two stars, *ayyuk*, which are visible only when the sun has returned after the winter night. One of these men was inside a dance-house when a flood of mist poured in through the curtain door. His two companions rapidly made and unmade the figure "Two Labrets," uttering the usual formula that goes with it; but the mist kept pouring in. Presently it cleared a little, and between the door and themselves they discerned the form of an old man who was moving his hands as though he were making string figures; nor could the men drive him away, despite the persistency with which they made "Two Labrets." The lamp was slowly expiring when the sceptic caught it up, raced around the house with it and returned inside again. The figure vanished as soon as he rushed towards the door. Both the sceptic's companions were shamans, and by their magic they saved the man from any evil consequences."

From Aqsiataq, a Colville river Eskimo, comes the following account:

"I was a young boy at the time, and staying inside the house with my mother. We heard a loud crackling sound outside as though a number of dried skins were shaking in the wind. My mother immediately ran outside and raced around the house. When she came in again she told me that the sound had been made by the spirit of string figures. We listened again for a time, but the noise was not repeated.

"Certain shamans can control this spirit. I once saw a shaman extend his hands as though he were holding out a string figure, yet no cord could be seen on his fingers. Some of the men laid their belts over the invisible cord, and their belts remained suspended in the air."

The Eskimos of Hudson bay have a slightly different belief from their kinsmen in Alaska. According to Captain Comer¹ the natives of Iglulik play cat's cradles in the fall when the sun is going south, to catch it in the meshes of the string and so prevent its disappearance. Again, the same authority states² that on the west coast of Hudson bay "boys must not play cat's cradle, because in later life their fingers might become entangled in the harpoon-line. They are allowed to play this game when they become adults. Two cases were told of hunters who lost their fingers in which the cause was believed to be their having played cat's cradle when young. Such youths are thought to be particularly liable to lose their fingers in hunting ground-seal." Among the Copper Eskimos, as well as farther west, young and old play alike; indeed the parents take a special delight in teaching their young children.

APPENDIX II

DISTRIBUTION OF ESKIMO STRING FIGURES

Several facts have to be borne carefully in mind when studying the distribution of the figures in this collection. In the first place the number of ways in which the string is manipulated is limited, and slightly different combinations of the same movements will produce entirely different results. Hence new figures, which are only slight modifications of figures previously known, are liable to arise at any time; they may retain the old names and entirely supercede the older figures, or they may co-exist with them but be given new interpretations. From many regions only the completed figures are known, and these may sometimes be made in two or three ways. It is therefore very difficult to determine what figures are genetically connected, and still more difficult to decide which should be assigned the priority.

¹ Boas, F., *The Eskimos of Baffin Land and Hudson Bay*. Bulletin of the American Museum of Natural History, Vol. XV, part 1, p. 151.

² *Id.*, p. 161.

Another point to be remembered is that the Eskimos of different regions have come into much closer contact with one another during the last few generations. In the Mackenzie delta, for example, one may today find representatives of Siberian, central Alaskan, north Alaskan, and Coronation gulf Eskimos living alongside of, or married to, Mackenzie natives proper. String figures are very easily passed on from one tribe to another, and their distribution in pre-European times can hardly have been quite the same as it is today.

Another difficulty to be encountered is the practical impossibility of securing an absolutely complete collection from any one region. I believe that my north Alaskan and Coronation gulf collections are as nearly exhaustive as could well be obtained, and my Mackenzie delta collection only a little less so; but the collections from the eastern Eskimos, as well as those from Central Alaska and from Siberia, are fragmentary only. The mere fact that a certain figure has not been recorded from these latter places is no evidence that it is unknown there. On the other hand, if it appears in Central Alaska, but nowhere between northern Alaska and Coronation gulf, it is almost certain that it is unknown in those regions at the present time; it may, of course, have been forgotten there, and will recur farther east in Hudson bay, but the probabilities are against this supposition. Similarly a figure that occurs in Hudson bay or in Coronation gulf, but has not been found either in the Mackenzie delta or in northern Alaska, is probably absent also in Central Alaska and in Siberia. Exceptions are always liable to occur, but on the whole these principles will be found fairly accurate.

The table given below does not include all the figures that have been gathered by others from the Chukchee, Central Alaskan and Hudson bay regions, but only those for which I have parallels from the Eskimos between Alaska and Coronation gulf. The column Eastern Eskimos includes the figures obtained by Boas from Hudson bay and Cumberland sound, together with the five recorded by Kroeber from Smith sound. All tricks and figures requiring the co-operation of two people have been omitted, because they have not been recorded outside of the region from North Alaska to Coronation gulf.

DISTRIBUTION OF FIGURES

Figure	Chukchee	Siberian Eskimos	Central Alaska	North Alaska	MacKenzie Delta	Coronation Gulf	Eastern Eskimos
I			caribou	brown bears	brown bears	brown bears	brown bears
II			rabbies, caribou	mountain sheep	two cubs		one who is sent out
III			caribou	bear and cubs	brown bears	brown bears	<i>neputakjoo</i>
IV				bear and shaman	bear and cubs		
V				dog and sled	dog and sled		
VI				dog and sled	dog and ordure		
VII							
VIII		man and noose		platform		bird and noose	<i>nighatchea</i> (?)
IX	mice (?)	(CXL) (?)					
X						evil spirit	
XI		deer and sled (XIV)		man with seal	man and beluga	man and sled	
XII			trap	little finger	anus	knife	
XIII	(See XIII)		youths	dogs feeding	youths	anus	
XIV			red fox	man and dog	dogs feeding	youths	
XV			labrets	beaver	open door	dogs feeding	
XVI			caribou	labrets	labrets	wolverine	ermine
XVII			rabbit	caribou in willows	caribou	stones	caribou
XVIII	<i>madlititik</i> (rabbit?)		rabbit	rabbit	rabbit	caribou	
XIX	fox	raven	wolf	raven	wolf	rabbit	rabbit
XX	arms	dog	dog	fox	fox	raven	wolf (?)
XXI		dog	dog	fox	fox	fox	fox
XXII		dog	dog	fox	fox	fox	
XXIII		arms	arms	man and kayak	arms	arms	arms
XXIV		arms	arms	man and kayak	man and kayak	man and kayak	<i>kutakjoo</i>
XXV		arms	arms	man and kayak	man and kayak	man and kayak	mammoth (?)
XXVI		arms	arms	man and kayak	man and kayak	man and kayak	
XXVII		arms	arms	man and kayak	man and kayak	man and kayak	
XXVIII		arms	arms	man and kayak	man and kayak	man and kayak	
XXIX		arms	arms	man and kayak	man and kayak	man and kayak	
XXX		arms	arms	man and kayak	man and kayak	man and kayak	
XXXI		arms	arms	man and kayak	man and kayak	man and kayak	
XXXII		arms	arms	man and kayak	man and kayak	man and kayak	
XXXIII		arms	arms	man and kayak	man and kayak	man and kayak	
XXXIV	(See XXXIII)		lake fish (XXXIV)	spirit of lake	mammoth	fish nibbling hook	
XXXV	whale's head (?)		shovel	child at breast	door post	lamp stick	
XXXVI				shovel	<i>pikekatakak</i>	upraised arms	shears (?)
XXXVII				seaplane	seaplane	seaplane	
XXXVIII				man meeting	seaplane	seaplane	
XXXIX				barbot	(no name)	2 ribs	
XL				hair pulling	hair pulling	hair pulling (XLI)	hair pulling
XLI	<i>marark</i>			beluga	beluga	beluga	beluga, narwhal
XLII	(See XLI)			gullet	gullet	gullet	
XLIII	poke			walrus (LIX)	walrus	walrus	
XLIV				fish net	fish net	fish net	
XLV				fish net	fish net	fish net	
XLVI				fish net	fish net	fish net	
XLVII				fish net	fish net	fish net	
XLVIII		kayaker (CXXXVI)	kayak	kayak	kayak	caribou head	kayak

C	fox-skin	squirrel	ermine	ermine	ermine	fox	ermine
CI		walrus pike	brant	brant	brant	ermine	ermine
CII			<i>asqutovin</i>			ermine	ermine
CIII			seal holes			dog at seal-holes	
CIV			knife			mouth	
CV			butterfly				
CVI			child				
CVII			child				
CVIII			children and bear				
CVIX			(CXIII)				
CX			shaman			dancers and drum	
CXI			shaman (?)			(CXIV)	
CXII			pack			dancers and drum	
CXIII	(See CXII)		dripping water			(CXIV)	
CXIV	(See CXII)		nest			shaman	
CXV			man			shaman	
CXVI			moon and mountains			pack	
CXVII			mountains			suspended object	
CXVIII			mountains			suspended object	
CXIX			dogs			loot (CXXVIII)	
CXX			clothes line			sun and mountains	
CXXI						mountains	
CXXII						snare	
CXXIII						sun and mountains	
CXXIV						mountains	
CXXV						poke	
CXXVI						woman with pack	
CXXVII						mountains	
CXXVIII						poke	
CXXIX						poke	
CXXX						poke	
CXXXI						poke	
CXXXII						poke	
CXXXIII						poke	
CXXXIV						poke	
CXXXV						poke	
CXXXVI						poke	
CXXXVII						poke	
CXXXVIII						poke	
CXXXIX						poke	
CXL						poke	
CXLI						poke	
CXLII						poke	
CXLIII						poke	
CXLIV						poke	
CXLV						poke	
CXLVI						poke	
CXLVII						poke	
CXLVIII						poke	
CXLIX						poke	
CL						poke	
CLI						poke	
CLII						poke	
CXXXVII	bear-skin					bear	bear
CXXXVIII	dead raven					man hanging	swan
CXXXIX						swan	swan
CXL	(See IX)					<i>akidugpak</i>	
CXLI						tent	
CXLII						dog's anus (CXLV)	
CXLIII						tent	
CXLIV	old-squaw ducks					dog's anus (CXLV)	
CXLV	woman cutting					tent	
CXLVI						closed door	
CXLVII						chest-bones	
CXLVIII						chest-bones	
CXLIX						wolverine	
CL						bag net	
CLI						<i>usuk</i>	
CLII						false knot	

Perhaps the most striking feature about this table is the large number of figures that are known to nearly all Eskimo tribes outside of Greenland and Labrador, the two places from which no figures at all have as yet been recorded. It would seem to be a reasonable assumption that any figure known from Hudson bay to northern Alaska is or was known at some time in central Alaska (probably also to the Siberian Eskimos), thus giving a continuous distribution throughout the Eskimo tribes of North America. Such figures are clearly very ancient, but until we discover that they are found in Danish Greenland, or among Indian or Siberian tribes, it would be unwise to assign too remote a period for their origin. Undoubtedly the Eskimos were accustomed to make string figures from the very earliest times, but any of those now known might easily have arisen during the last few hundred or a thousand years and been handed on from one tribe to another.

At least twenty-four figures are found from Alaska to Hudson bay;¹ probably the number is greater still, since no collection from any area is absolutely complete. Of these eleven are found also among the Chukchee.² There is nothing to show whether they arose in Asia or in America, or some in one continent and some in the other; but unless future researches show them to be equally wide-spread in northern Asia the presumption must be that the majority at least originated with the Eskimos and spread from them to the Chukchee.

Of figures that appear in one locality alone the table shows 69 examples. Some of these will no doubt be discovered in other regions, but this decrease in the number will be more than counterbalanced by new figures that are also limited to one district. So large a total indicates how popular the game is among the Eskimos, and how easily new figures can arise.

Two figures, LXII and CXXIV, are known only from the Siberian Eskimos of Indian point and from the adjacent Chukchee. The former probably spread from the Chukchee to the Eskimos, since its name, *tāḡaγot*, seems to be the same as *tanwin*, which Bogoras gives as the Chukchee term for Russians, or, more usually, Koryaks. It is not unlikely, therefore, that the second figure came also from the Chukchee. One other figure, LXXXI, may have the same source. It appears in both central and northern Alaska, but not to the eastward, and in both these places it has the same name, and the same significance, as among the Chukchee. Of course it may have spread westward from the Alaskan Eskimos to the Chukchee, but then one would expect it to have spread eastward also to the Eskimos of the Mackenzie delta.

This leaves fifty figures that appear in two or more regions, but are not known to be widely distributed throughout the whole American Eskimo area. Now the western Eskimos from Siberia to the Mackenzie delta have been in close contact with one another for at least two centuries. The Mackenzie delta natives used to meet their kinsmen of northern Alaska each summer at Barter island or at some other point along the Arctic coast; and the north Alaskan natives were in close contact with those of Kotzebue sound, who in turn conducted a regular trade with the Asiatic coast natives. It is only to be expected, therefore, that certain figures have drifted eastward along this route; some may not have passed beyond northern Alaska, while others reached beyond the Mackenzie delta. Cases where such figures can be recognized are bound to be rare, but LXXIV appears to be an example. Its opening movements are peculiar, and appear in two other figures only, both of which are confined to the western Eskimos. Among the Siberian Eskimos LXXIV has a very definite significance, but this fades away towards the east and beyond the Mackenzie delta the figure seems unknown. Another example is CXXXVI, which from its meaning would seem to have arisen among the Eskimos around Bering strait.

¹ Nos. I, IV, IX, XXI, XXIV, XXVI, XXVII, XXVIII, XXIX, XXXI, XXXII, XXXIII, XXXVI, XLI, XLIII, LXXVIII, LXXXVIII, CI, CXL, CXVII, CXXXIII, CXXXVII, CXXXIX, CXLVIII.

² Nos. IX, XXI, XXVI, XXIX, XXXI, XXXVI, XLI, XLIII, CI, CXL, CXXXVII.

A much clearer case is furnished by CXXVII and CXXVIII. The movements in these two figures are very unusual among the Eskimos. CXXVII appears at Indian point in Siberia as a complete series of four figures that illustrate a consecutive story. On the Kobuk river in Alaska the four have dwindled down to three, but the story is still partly retained. The same three figures, with the meaning largely lost, are known to the inland Eskimos of the Endicott mountains in northern Alaska. They are known also at Barrow, but with an entire loss of meaning; for all three are grouped together under one name, the very interpretation of which is uncertain. In the Mackenzie delta but one of the series was found, strangely enough the first, slightly modified and with an altogether new interpretation. Finally, in Coronation gulf, none of the figures are known, but the same peculiar movements recur in the figure of "the loon" (CXXVIII). It seems fairly certain that the original figure must have come from somewhere around Bering strait, whence it travelled by way of the Kobuk and Noatak rivers to the north coast, spreading westward to Barrow and eastward to Coronation gulf.

Doubtless there are cases where the drift was westward rather than eastward, although I can discover no certain example of this in my collection. Many other figures besides those mentioned above testify by their manner of construction, by their names, and by the chants that accompany them, to the close connection between the Eskimos of the Mackenzie delta and the Alaskan natives. In this respect the string figures merely corroborate what we already know from historical sources, and from the distribution of labrets, fish-nets and other articles.

Rather more importance attaches to the figures when we pass on to Coronation gulf. We know that during the 19th century, probably also at a still earlier period, the natives around Dolphin and Union strait, at the western end of the gulf, maintained a more or less sporadic intercourse with their kinsmen farther west; while the natives at the eastern end of the gulf, and some of the inhabitants of Victoria island, have been in close contact for many years with the Netchilik Eskimos to the eastward, and, to a lesser extent, with tribes to the south who dwell inland from Hudson bay. The Copper Eskimos of Coronation gulf, therefore, have been exposed to influences from both the east and the west, and the question at once arises as to which group of Eskimos they are more closely affiliated. Their string figures may be worth examining in some detail from this point of view.

The table shows eighty-three figures from the Copper Eskimos. They may be tabulated thus:

- 24 are common to nearly all Eskimo tribes.¹
- 25 have not been found outside of Coronation gulf.²
- 29 appear also in the Mackenzie delta or Alaska, but have not been reported from the eastern Eskimos.³
- 4 appear both among the eastern Eskimos and in the Mackenzie delta, but have not been discovered in Alaska.⁴
- 1 appears also among the eastern Eskimos, but is not known from any other region.⁵

¹ Nos. I, IV, IX, XXI, XXIV, XXVI, XXVII, XXVIII, XXIX, XXXI, XXXII, XXXIII, XXXVI, XLI, XLII, LXXVIII, LXXXVIII, CI, CXII, CXVII, CXVIII, CXXXVII, CXXXIX, CXLVIII.

² Nos. XI, XII, XLIV, LIII, LXVI, LXVII, LXVIII, LXIX, LXXI, LXXII, LXXXII, XC, XCI, XCVIII, XCIX, C, CII, CVI, CXX, CXXI, CXXII, CXXIII, CXXXII, CXL, CLI.

³ Nos. XIII, XV, XVII, XVIII, XXIII, XXX, XXXV, XXXVII, XXXVIII, XLV, XLVI, LV, LVII, LVIII, LXX, LXXIII, LXXVI, LXXXIII, XCV, XCVII, CIV, CXV, CXXVII, CXXXIX, CXXX, CXLII, CXLIV, CXLVII.

⁴ Nos. LII, LIV, LVI, CLI.

⁵ No. XCIV.

In the first group of figures, those known to nearly all Eskimo tribes, it is noticeable that the eastern and Coronation gulf natives have a similar interpretation for CXVII, but the interpretation among the western natives is different. IX is a doubtful case of the same thing. In IV, XXXII, and LXXVIII, on the other hand, the interpretations in Coronation gulf and the Mackenzie delta are the same, but are uncertain for the eastern Eskimos. XXXIII and CXII are two rather doubtful cases where the eastern, Coronation gulf and Mackenzie delta regions seem to line together in opposition to Alaska.

Very little can be gathered from the twenty-five figures that are not known from anywhere outside of Coronation gulf. Two of them, XCVIII and XCIX, are very intricate, and may have arisen in this area or farther east. Of the twenty-nine figures known from Coronation gulf westwards, but not reported from the eastern Eskimos, one notices that ten of them are reinterpreted in the gulf. Furthermore the chants that accompany so many of them in the west do not appear in Coronation gulf, which may be described as an altogether chantless region as far as string figures are concerned. Four figures are common to the Mackenzie delta, Coronation gulf and Hudson bay Eskimos, but are not known from any other region. Two of them have the same names in the Mackenzie delta and in Coronation gulf, but different names to the eastward; the third has different names in all three places, although there is a similarity between the interpretations among the Copper and eastern Eskimos; the fourth has the same name in all three places, but the two eastern ones agree in making only a simple form of the figure, whereas the Mackenzie delta form is more complicated. It is not improbable, in view of their absence from Alaska, that these four figures all originated among either the Copper or the eastern Eskimos, and spread west from them to the Mackenzie delta. The one figure, XCIV, that has been found in the two eastern regions alone is also probably of eastern origin, for not only is it made in a very unusual way, but it has no definite significance in Coronation gulf, whereas the eastern natives give it quite a plausible interpretation.

It would appear from this distribution of the figures that the influence of the western Eskimos on the inhabitants of Coronation gulf was on the whole considerably greater than the influence of the eastern natives. In support of this view we may recall that the Copper Eskimos agree with the western natives in their taboo regarding the time for making string figures, and in their belief in a definite spirit of cat's cradles, although the latter superstition is far less prominent than in Alaska and may have been introduced in recent years.

On the other hand it must be remembered that there is a far larger collection of figures from the Mackenzie delta and from Alaska than from the eastern Eskimos, so that the resemblances between the two former regions and Coronation gulf are certain to appear disproportionately great. Furthermore, most of my Coronation gulf figures were collected at the western end of the gulf, where western rather than eastern influences might be expected to predominate. One striking difference between the string figures of Coronation gulf and those of the Mackenzie delta and Alaska is the total absence of chants in the gulf area;¹ but whether this is the case also in Hudson bay and in Baffin island I do not know.

There are four figures² that seem to be absent from Coronation gulf, but are found among the eastern and the Mackenzie delta Eskimos. Two of them have identical meanings in both places, and the interpretation of the third seems to correspond very closely; the meaning of the fourth figure among the eastern Eskimos is uncertain. That there are four such gaps in Coronation gulf, where my collection is fairly exhaustive, would appear to favour a separate

¹ The Copper Eskimo chant in XXVII is almost certainly a fragment of a dance song.

² Nos. III, XLVIII, XLIX, LXXXV.

contact between the Mackenzie delta and Hudson bay natives, thus supporting the theory³ that the Copper Eskimos are intrusive into the Coronation gulf region. However, no great weight can be attached to merely negative evidence.

It may be interesting to notice that the names or interpretations of the figures, like art patterns, are influenced by local conditions. Thus XIII was interpreted by the inland Eskimos of northern Alaska as an old man dragging a bearded seal, whereas the Mackenzie delta natives considered the animal a beluga. Bearded seals are not uncommon along the Alaskan coast, but are rare in the Mackenzie delta. The beluga, on the other hand, is particularly common in the delta, and the hunting of it in spring was as much a feature of native life as the hunting of the bowhead whale at Barrow. The very next figure, XIV, "the reindeer dragging a sled," could never have been so interpreted outside of Siberia, since there alone (until within the last few years) are reindeer used to drag a sled. XXXI must have received its name of "beaver" in a region where that animal was known; in Coronation gulf and eastward, where the beaver does not exist, the figure bears a different name. Many other examples could be cited, but it is unnecessary to labour the point.

Many of the Eskimo figures here recorded will undoubtedly be found among the northern Indians of Canada and Alaska. Some, perhaps, were originally not Eskimo figures at all, but were borrowed from their Indian neighbours. The game is fairly popular among these Indians, but so far as I know none of their figures have as yet been published.

String figures have been recorded in large numbers from different parts of the world, particularly from Melanesia. It may be worth pointing out some of the differences between the Melanesian and Eskimo methods of manipulating the string. In both regions the majority of the figures begin with Opening A or Position 1. There are in addition a few abnormal openings, some of which are the same in both places; but what I have called in this memoir Opening C, which occurs in at least twenty Eskimo figures, seems to be quite unknown in Melanesia. Again, very characteristic of Eskimo figures is the interchanging or combining of the loops on opposite thumbs or fingers, a movement that is rarely found in Melanesia. On the other hand Melanesian players seem often to use the middle fingers instead of the indices, whereas the Eskimos rarely use the middle fingers at all if the indices are available. Altogether foreign to the Eskimos, again, is that most characteristic feature of Melanesian figures, the "Caroline Islands Extension," with its outward position of the palms. There is very little difference as regards the complexity of the figures from the two regions, or their realistic interpretations, but it is comparatively rare to find in Melanesia a sequence of figures illustrating a narrative, whereas such sequences are very common among the Eskimos.

³ D. Jenness, "The Origin of the Copper Eskimos and their Copper Culture," *The Geographical Review*, New York, XII, 4, Oct., 1923, pp. 549-551.

NOTE

The figures submitted by Dr. Boas from the eastern Eskimos which I was unable to identify are as follows:—

1. From the west coast of Hudson bay:

Inuits and drum
 Whale
 Walrus head
 Inwards of belly
 Sculpin
 Rope for jumping in play
 Gull
 Two deer
 Level land and pond
 Inuit lamp and light

2. From Cumberland sound:

Egeavatchea ("platter;" probably a mistaken version of LXXXV)
Avatatchea ("poke;" probably a mistaken version of CXXXIII)
Ammorokjew ("wolf;" probably a mistaken version of XXVIII)
Nighatchea ("snare;" probably a variant of IX)
Nittonatcheak
Toongoongalouteew
Anarlootetjew
Mizetowatto
Angoosakjew
Nikkattwattu
Naakawatchew
Kanetoolekjew
Akbackjew



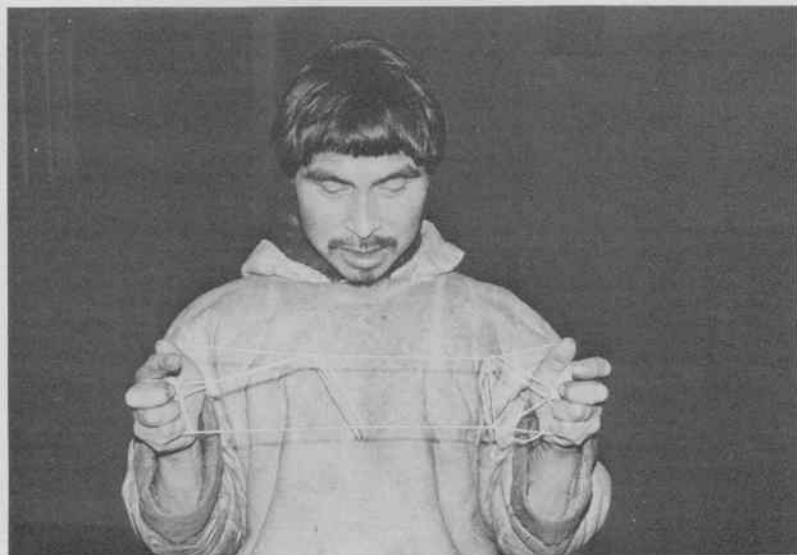
A. *Tamuannuaqattaq* (98), par Fabien Ūgak.



B. *Qerpartuyorjuk* (72), par Fabien Ūgak.



A. *Noqaciak iglugêk* (4 bis), par Bernard Equgaqtoq.



B. *Akhlârjuk anisartorjuk* (9), par Fabien Ûgak.

Report of the Canadian Arctic Expedition, 1913-18.

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