DANIEL CARTER BEARD

THE BOOK OF CAMP-LORE AND WOODCRAFT

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FOREWORD

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HIDDEN in a drawer in the antique highboy, back of the moose head in my studio, there are specimens of Indian bead work, bits of buckskin, necklaces made of the teeth of animals, a stone calumet, my old hunting knife with its rawhide sheath and—carefully folded in oiled paper—is the jerked tenderloin of a grizzly bear!

But that is not all; for more important still is a mysterious wooden flask containing the castor or the scentgland of a beaver, which is carefully rolled up in a bit of buckskin embroidered with mystic Indian signs.

The flask was given to me as "big medicine" by Bow-arrow, the Chief of the Montinais Indians. Bow-arrow said—and I believe him—that when one inhales the odor of the castor from this medicine flask one's soul and body are then and forever afterwards permeated with a great and abiding love of the big outdoors. Also, when one eats of the mystic grizzly bear's flesh, one's body acquires the strength and courage of this great animal.

During the initiation of the members of a Spartan band of my boys, known as the Buckskin Men, each candidate is given a thin slice of the grizzly bear meat and a whiff of the beaver castor.

Of course, we know that people with unromantic and unimaginative minds will call this sentimentalism. We people of the outdoor tribes plead guilty to being sentimentalists; but we *know* from experience that old Bow-

arrow was right, because we have ourselves eaten of the grizzly bear and smelled the castor of the beaver!

While the writer cannot give each of his readers a taste of this coveted bear meat in material form, or a whiff of the beaver medicine, direct from the wooden flask made by the late Bow-arrow's own hands, still the author hopes that the magical qualities of this great medicine will enter into and form a part of the subject matter of this book, and through that medium inoculate the souls and bodies of his readers, purify them and rejuvenate them with a love of the World as God Made It.

DAN BEARD

June, 1920

CHAPTER I
FIRE MAKING BY FRICTION

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CAMP-LORE AND WOODCRAFT

CHAPTER I

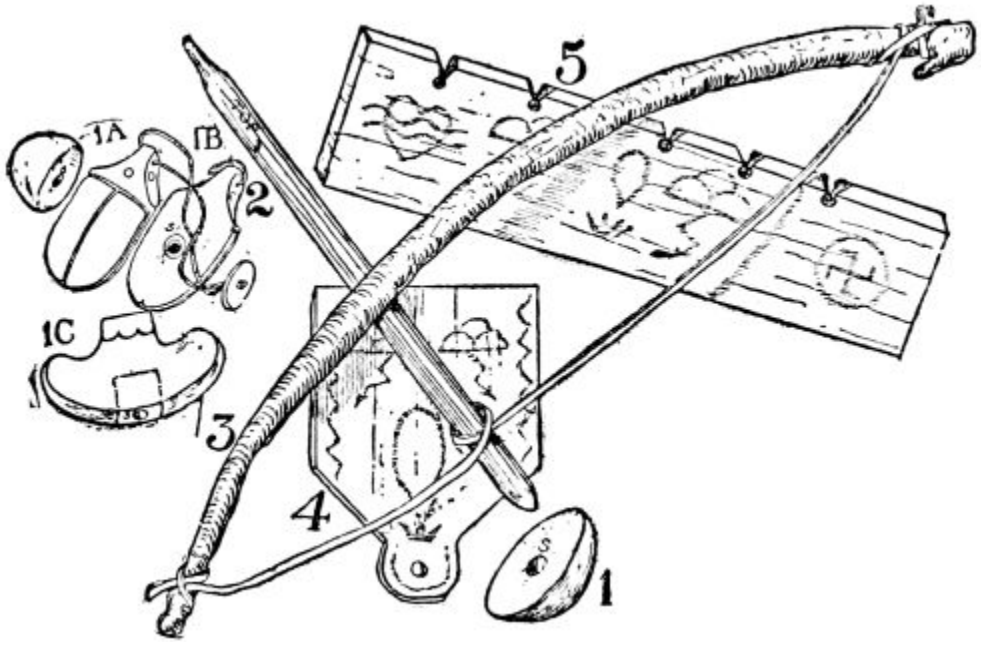
FIRE MAKING BY FRICTION

WHEN the "what-is-its" of Pithecantropus erectus age and other like hob-goblin men were moping around the rough sketch of an earth, there were no camp-fires; the only fire that these creatures knew was that which struck terror to their hearts when it was vomited forth from volcanic craters, or came crashing among them in the form of lightning. No wonder that the primitive men looked upon fire as a deity, no doubt an evil deity at first but one who later became good.

When the vast fields of ice covered Europe during the glacier period and forced men to think or die, necessity developed a prehistoric Edison among the Neanderthal men, who discovered how to build and control a fire, thus saving his race from being frozen in the ice and kept on cold storage, like the hairy rhinoceros and elephant of Siberia.

The fire of this forgotten and unknown glacier savage was the forerunner of our steam-heaters and kitchen ranges; in fact, without it we could have made no progress whatever, for not only the humble kitchen range, but the great factories and power-plants are all depending upon the discovery made by the shivering, teeth-chattering savage who was hopping around and trying to keep himself warm among the European glaciers.

But we people of the camp-fires are more interested in primitive fires just as the Neanderthal men built them, than we are in the roaring furnaces of the steel works, the volcano blast furnaces, or any of the scientific, commercialized fires of factory and commerce.



What we love is the genial, old-fashioned camp-fire in the open, on the broad prairie, on the mountainside, or in the dark and mysterious forests, where, as our good friend Dr. Hornaday says,

> We will pile on pine and spruce,
> Mesquite roots and sagebrush loose,
> Dead bamboo and smelly teak,
> And with fagots blazing bright
> Burn a hole into the night—

Not long ago the author was up North in the unmapped lake country of Canada, and while camping on the portage between two wild and lonely lakes, Scout Joe Van Vleck made himself a fire outfit consisting of Fig. 1, a thimble made of a burl, with which to hold Fig. 2, the spindle made of balsam. Fig. 3 is a bow cut from a standing bush; not an elastic bow, such as one uses with which to shoot arrows, but a bow with a permanent bend to it. Fig. 4 is the fire-pan which is placed under the fire-board to catch the charcoal dust as it falls through the slot when the spindle is twirled.

Fig. 5 is the fire-board, made of a dead balsam tree which was standing within three yards of the camp-fire.

In order to make his fire it was necessary for our Scout to have some tinder, and this he secured from the bark of cedar trees, also within a few yards of our camp. This indeed was a novel experience, for seldom is material so convenient. The fire was built in a few seconds, much to the wonderment of our Indian guide, and the delight of some moose hunters who chanced to be crossing the portage on which our camp was located.

It was an American, Dr. Walter Hough of the U. S. National Museum of Washington, who first proved that a modern up-to-date civilized white man can make a fire with rubbing-sticks, as well as the primitive man. But it was an Englishman who popularized this method of making fire, introduced it among the Boy Scouts of England and America, and the sister organizations among the girls.

According to the American Indian legend the animal people who inhabited the earth before the Redmen lived in darkness in California. There was the coyote man, the vulture man, the white-footed mouse man, and a lot of other fabled creatures. Away over East somewhere there was light because the sun was over there, and the humming-bird man among the animal people of our Indians is the one, according to Dr. Merriman, who stole the fire from the East and carried it under his chin. The mark of it is still there. The next time you see a humming-bird note the brilliant spot of red fire under his chin.

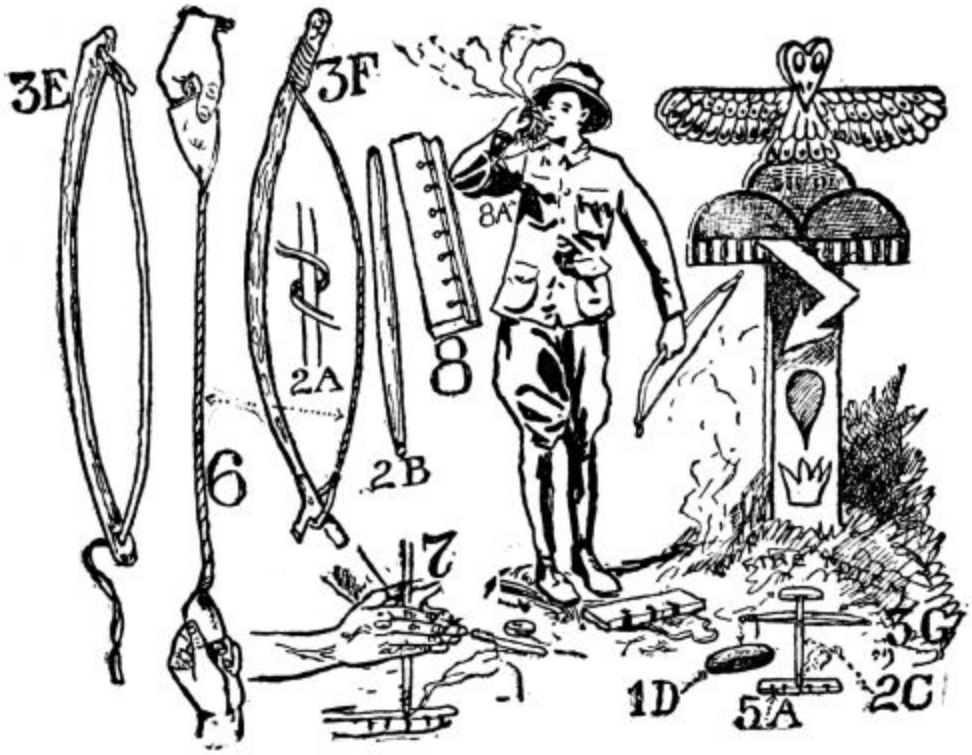
Now you understand why the king-pin in fire making at your camp deserves the title of Le-ché-ché (the humming-bird).

If one gets the fire from a fire-board, spindle and bow in record time, then the title of Le-ché-ché is all the more appropriate because it was the humming-bird man who hid the fire in the oo-noo tree, and to this day, when the Indian wants fire, he goes to the oo-noo (buckeye) tree to get it; that is, provided he has no matches in the pockets of his store clothes and that some white boy, like the Scout previously mentioned, has taught him how to make fire as

did the Indian's own ancestors. But even then the oo-noo[A] wood must be dead and dry.

Austin Norton of Ypsilanti, Michigan, April, 1912, made fire in thirty-nine and one-fifth seconds; Frederick C. Reed of Washington, in December, 1912, made fire in thirty-one seconds; Mr. Ernest Miller of St. Paul made fire in thirty seconds, but it was Mr. Arthur Forbush, one of the author's Scouts of the Sons of Daniel Boone (the scout organization which preceded both the English Boy Scouts and the Boy Scouts of America) who broke the record time in making fire with "rubbing-sticks" by doing it in twenty-nine seconds at the Sportsman's Show at Madison Square Garden, New York. Mr. Forbush made this record in the presence of the author and many witnesses. Since then the same gentleman reduced his own world-record to twenty-six and one-fifth seconds; by this time even that record[B] may have been broken.

The "rubbing-stick" is a picturesque, sensational and interesting method of building a fire, but to-day it is of little practical use outside of the fact that it teaches one to overcome obstacles, to do things with the tools at hand, to think and act with the vigor, precision and self-confidence of a primitive man.



"Rubbing-stick" Outfit

Ever since the writer was a small boy he has read about making fire by rubbing "two chips" or "two sticks" together, and he was under the impression then, and is under the impression now, that no one can build a fire in that manner. When we find reference to rubbing-sticks it is probably a slovenly manner of describing the bow and drill and the other similar friction fire implements. For the bow and drill one requires first a

Thimble

(Figs. 1, 1A, 1B, 1C and 1D). This is a half round stone or pebble, a half round burl or knot of wood, or it may be made of soft wood with an inlay of a piece of stone. In the bottom of the thimble there is always a shallow hole or socket; see S on Figs. 1, 1A, 1B, 1C and 1D. The thimble is an invention of the Eskimos (Fig. 1C); they keep the spindle upright by

holding the pointed upper end of it in a hole (S) drilled into a piece of serpentine, or soapstone.

The author has a thimble personally made for him by Major David Abercrombie. This beautiful implement is made of hard fine-grained wood carved into the form of a beetle (Fig. 1B). It is inlaid with copper and semi-precious stones. The socket hole was drilled into a piece of jade (B), using for the purpose some sand and the drill shown in Fig. 23. There was a piece of steel pipe set into the end of the wooden drill with which to bore a hole into the hard jade. The jade was then inlaid or set into the middle of the bottom of the thimble, and cemented there, Fig. 1B. The author also has a thimble made for him by Edmund Seymour of the Camp-fire Club of America. This thimble is a stone fossil with a hole drilled in it, Fig. 1A.

It is not necessary to tell the reader that when using the bow for power, the twirling spindle cannot be held down with the bare hand, consequently the use of the thimble for that purpose is necessary. Fig. 1C shows an Eskimo thimble so fashioned that it may be held in the fire-maker's mouth.

The Bow

Is a stick or branch of wood (Figs. 3, 3E, 3F and 3G) about a foot and a half long and almost an inch in diameter, which has a permanent bend in it—the bend may be natural or may have been made artificially. To the bow is attached a slack thong, or durable string of some kind. The Eskimos, more inventive than the Indians, made themselves beautiful bows of ivory, carving them from walrus tusks, which they shaved down and strung with a loose strip of walrus hide.

The Bow String

The objection to whang string or belt lacing is that it is apt to be too greasy, so if one can secure a strip of buckskin, a buckskin thong about two inches wide, and twist it into a string, it will probably best serve the purpose (Fig. 6).

The Spindle

The spindle is the twirling stick (Figs. 2, 2A, 2B and 2C) which is usually about a foot long and was used by our American Indians without the bow (Fig. 7). The twirling stick or spindle may be three-quarters of an inch in diameter at the middle; constant use and sharpening will gradually shorten the spindle. When it becomes too short a new one must be made. The end of the spindle should not be made sharp like a lead pencil, but should have a dull or rounded end, with which to bore into the fire-board, thus producing fine, hot charcoal, which in time becomes a spark: that is, a growing ember.

The Fire-board

The fire-board (Figs. 5 and 5A) should be made of spruce, cedar, balsam, tamarack, cottonwood root, basswood, and even dry white pine, maple and, probably, buckeye wood. It should not be made of black walnut, oak or chestnut, or any wood which has a gummy or resinous quality. The fire-board should be of dry material which will powder easily. Dr. Hough recommends maple for the fire-board, or "hearth," as it is called in the Boy Scout Handbook. Make the fire-board about eleven inches long, two inches wide and three-quarters of an inch thick.

Near the edge of the board, and two inches from the end, begin a row of notches each three-quarter inch long and cut down through the fire-board so as to be wider at the bottom.

At the inside end of each notch make an indenture only sufficiently deep to barely hold the end of your spindle while you make the preliminary twirls which gradually enlarge the socket to fit the end of your spindle.

The Fire-pan

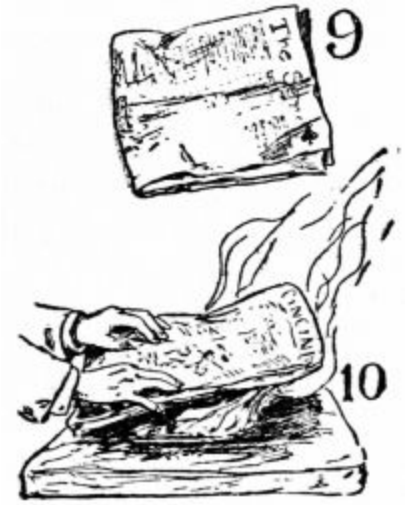
The fire-pan is a chip, shingle or wooden dust-pan used to catch the charred dust as it is pushed out by the twirling spindle (Fig. 4). The use of the fire-pan is also an Eskimos idea, but they cut a step in their driftwood fire-board itself (Fig. 8) to serve as a fire-pan.

Tinder

When you can procure them, charred rags of cotton or linen make excellent tinder, but the best fabric for that purpose is an old Turkish towel.

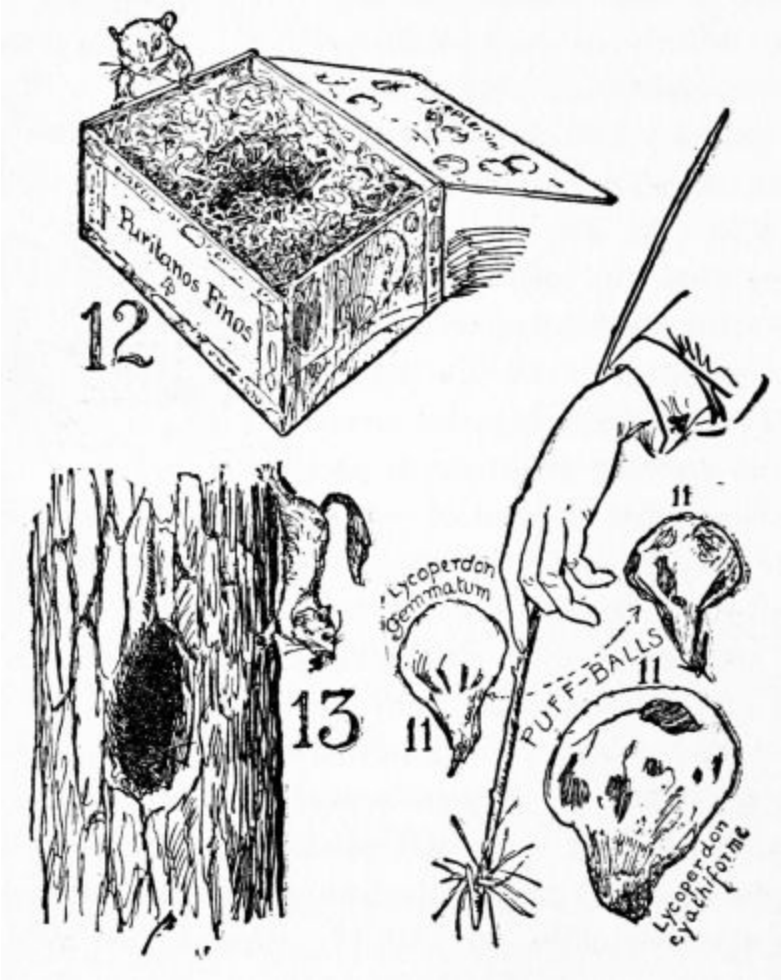
How to Char a Rag

Find a flat stone (Fig. 10), a broad piece of board, a smooth, hard, bare piece of earth; set your cloth afire and after it begins to blaze briskly, smother it out quickly by using a folded piece of paper (Fig. 9), a square section of birch bark or another piece of board. This flapped down quickly upon the flames will extinguish them without disturbing the charred portion (Fig. 10). Or with your feet quickly trample out the flames. Keep your punk or tinder in a water-tight box; a tin tobacco box is good for that purpose, or do like our ancestors did—keep it in a punk horn (Fig. 30).



Very fine dry grass is good tinder, also the mushroom, known as the puff-ball or Devil's snuff-box. The puff-balls, big ones, may be found growing about the edges of the woods and they make very good punk or tinder. They are prepared by hanging them on a string and drying them out, after which they are cut into thin slices, laid on the board and beaten until all the black dust ("snuff") is hammered out of them, when they are in condition to use as punk or tinder (Fig. 11). In olden times there was a mushroom, toadstool or fungus imported from Germany, and used as punk, but woodcraft consists in supplying oneself with the material at hand; therefore do not forget that flying squirrels (Figs. 12 and 13), white-footed mice (Fig. 14) and voles, or short-tailed meadow mice, are all addicted to collecting good

with which to make their warm nests: So also do some of the birds—the summer yellow bird, humming-bird and vireos. While abandoned humming-birds' nests are too difficult to find, last year's vireos' nests are more easily discovered suspended like cups between two branches, usually within reach of the hand, and quite conspicuous in the fall when the leaves are off the trees.

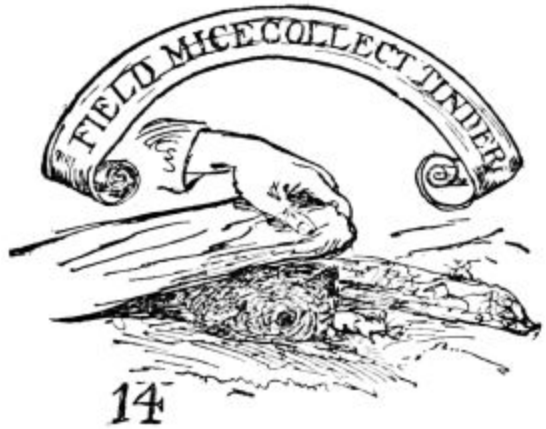


Cedar bark, both red (Fig. 15) and white, the dry inner bark of other trees, dry birch bark, when shredded up very fine, make good tinder. Whether you use the various forms of rubbing-sticks or the flint and steel, it is necessary to catch the spark in punk or tinder in order to develop the flame.

How to Make a Fire with a Drill and Bow

First find a level solid foundation on which to place your fire-board, then make a half turn with the string of the bow around the spindle, as in the diagram (Fig. 16); now grasp the thimble with the left hand, put one end of the drill in the socket hole of the thimble, the other end in the socket hole on the fire-board, with your left foot holding the fire-board

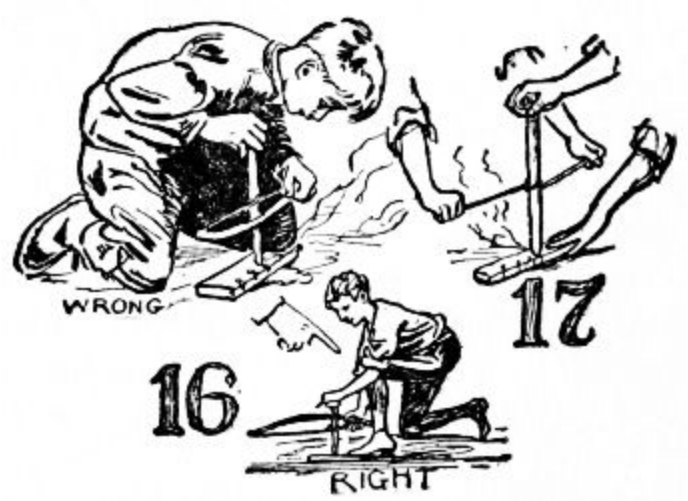
down. Press your left wrist firmly against your left shin. Begin work by drawing the bow slowly and horizontally back and forth until it works easily, work the bow as one does a fiddle bow when playing on a bass viol, but draw the bow its whole length each time. When it is running smoothly, speed it up.



Or when you feel that the drill is biting the wood, press harder on the thimble, not too hard, but hard enough to hold the drill firmly, so that it will not slip out of the socket but will continue to bite the wood until the "sawdust" begins to appear. At first it will show a brown color, later it will

become black and begin to smoke until the thickening smoke announces that you have developed the spark. At this stage you gently fan the smoking embers with one hand. If you fan it too briskly, as often happens, the powder will be blown away.

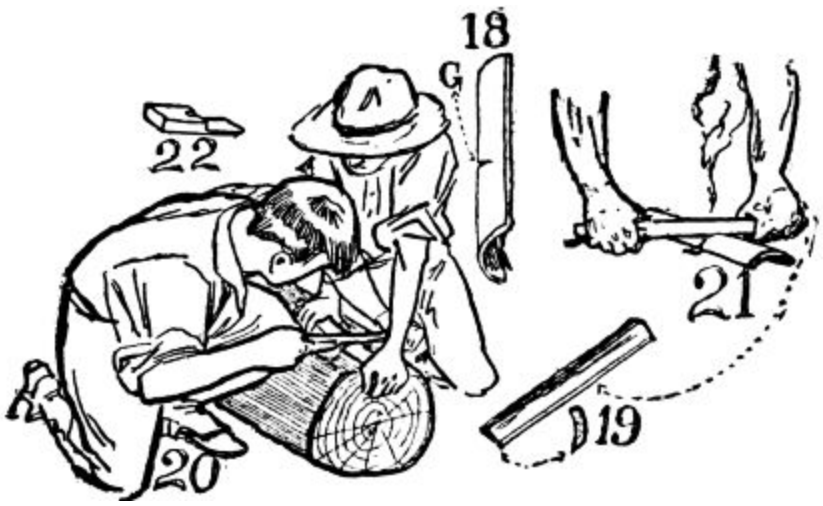
As soon as you are satisfied that you have secured a spark, lift the powdered embers on the fire-pan and place carefully on top of it a bunch of tinder, then blow till it bursts into flame (Fig. 8A). Or fold the tinder over the spark gently, take it up in your hand and swing it with a circular motion until the flame flares out.



Even to this day peasantry throughout the Carpathian and Balkan peninsulas build their fires with a "rubbing-stick." But these people not being campers have a permanent fire machine made by erecting two posts, one to represent the fire-stick and the other the socket thimble. The spindle runs horizontally between these two posts and the pressure is secured by a thong or cord tied around the two posts, which tends to pull them toward each other. The spindle is worked by a bow the same as the one already described and the fire is produced in the same manner.

Fire Without a Bow

My pupils in the Woodcraft Camp built fires successfully by using the rung of a chair for the spindle, a piece of packing case for a fire-board, and another piece for the socket wood and the string from their moccasins for a bow string. They used no bow, however, and two or three boys were necessary to make a fire, one to hold the spindle and two others to saw on the moccasin string (Fig. 17).



CO-LI-LI—THE FIRE SAW

is made of two pieces of bamboo, or fish pole. This is the oldest instrument for fire making used by the Bontoc Igorot and is now seldom found among the men of the Philippines. Practically all Philippine boys, however, know how to make and use it and so should our boys here, and men, too. It is called "co-li-li" and is made of two pieces of dry bamboo. A two-foot section of dead and dry bamboo is first split lengthwise and in one piece, a small area of the stringy tissue lining of the tube is splintered and picked until quite loose (Fig. 18). Just over the picked fibres, but on the outside of the bamboo, a narrow groove is cut across it (Fig. 18G). This piece of bamboo is now the stationary lower part or "fire-board" of the machine. One edge of the other half of the original tube is sharpened like a chisel blade's edge (Fig. 19); it is then grasped with one hand at each end and is slowly and heavily sawed backward and forward through the groove in the board, and afterwards worked more rapidly, thus producing a conical pile of dry dust on the wad of tinder picked from the inside of the bamboo or previously placed there. (Figs. 20 and 21). Fig. 22 is the fire-pan.

"After a dozen strokes," says our authority, Mr. Albert Ernest Jenks, "the sides of the groove and the edge of the piece are burned down; presently a smell of smoke is plain and before three dozen strokes have been made, smoke may be seen. Usually before a hundred strokes a larger volume of smoke tells us that the dry dust constantly falling on the pile has grown more and more charred until finally a tiny spark falls, carrying combustion to the already heated dust cone."

The fire-board is then carefully lifted and if the pinch of dust is smouldering it may now be gently fanned with the hand until the tinder catches; then it may be blown into a flame.

FIRE PUMPING OF THE IROQUOIS

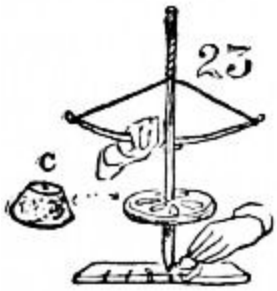


Fig. 23 shows another form of drill. For this one it is necessary to have a weight wheel attached to the lower part of the spindle. A hole is made through its center and the drill fitted to this. The one in Fig. 23 is fitted out with a rusty iron wheel which I found under the barn. Fig. 23C shows a pottery weight wheel which I found many years ago in a gravel-pit in Mills Creek bottoms at Cincinnati, Ohio. It was brick-red in color and decorated with strange characters. For many, many years I did not know for what use this unique instrument was intended. I presented it to the Flushing High School (Long Island), where I trust it still remains. The fire-