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MASTERING THE ANCIENT ART OF FIRE-MAKING

By Christopher Nyerges

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Making fire with the Indian bow and drill is a survival skill worth acquiring should more conventional methods of fire-starting become unavailable. Due to fire's importance in survival situation, I regularly stress the need to carry several fire-starting devices, and to learn several methods. Nevertheless, all the modern gadgets in the best backpacking shops cannot replace the secure feeling of knowing you can produce a fire using only what nature has supplied.

The procedure will seem strenuous at first – maybe even "impossible". But attention to the specific details will enable you to produce a hot coal by friction in a matter of minutes. The record is 6.4 seconds with a bow and drill, no doubt achieved by a Boy Scout who had carefully chosen components honed to perfection.

Although I had attempted this method perhaps 100 times over the course of several years, it wasn't until one day in the late 1970s that I was successful. One day I decided that I would not stop trying until I succeeded. I spent approximately 3 hours in various attempts, all the while adjusting my position and slightly altering my components. Finally, I tried again and produced a hot coal in about 3 minutes.

Here is a listing of the parts you'll need to do this, and how to properly use them.

You'll need a bow, a thong, the drill, a hand block for holding the drill upright, and the fireboard.

BOW

The bow should be about as long as your arm (about 2 feet), and the diameter of your thumb. A bow with a small fork on each end is ideal, but not mandatory. It can be either a dried branch with a natural curve, or a young, supple branch which can be easily bent.

THONG

The thong is likely to be the most difficult piece to find in nature. Plant fibers of yucca, agave, nettle, milkweed, and cattail can all be used. Yucca and agave are probably the best from this list, but cannot be found over the entire U.S. Even if you can't identify fiber plants, you can test various vines, leaves, stems, and barks for their tensile strength until you find one that is suitable. A strip of leather would do fine.

If you can't find thong material in nature, it is likely that some part of your clothing or gear could serve this function. Top quality nylon shoelaces are ideal. The half-inch nylon cord on those baseball-size

"camper's hammocks" is excellent. Other possible sources for the thong material include camera straps, a bra strap, a belt, a kerchief or two, or a torn sock. Use your imagination.

Tie the thong onto the bow, leaving enough slack so the thong can be twisted once around the drill. It should be snug around the drill, but not so tight that it causes unnecessary strain on the bow.

DRILL

The drill should be about 1 to 1-1/2 feet long, as straight as possible, and about the thickness of a broomstick. A relatively soft wood is best since it will powder more quickly. Willow and yucca work good. A dry, straight piece of driftwood would work well also. The top end of the drill should be sharpened to reduce friction, and the bottom end should be blunt and rough and increase the friction.

HANDBLOCK

The handblock is simply a small piece of hard wood which comfortably fits the hand and into which the top end of the drill spins. A depression is carved into the handblock in which the drill will spin. I have used small burls, discarded electrical sockets, certain rocks, and even the socket bone of a deer's leg for the handblock. However, a suitable handblock can be easily carved out of any piece of wood.

FIREBOARD

The fireboard is the piece into which the drill will spin and in which the coal will develop. Any flat piece of wood that is at least an inch thick and a few inches wide will work. For practical reasons, you want a fireboard about a foot long. A length of discarded 2x4 lumber would make an ideal fireboard. Cedar, redwood, yucca and willow make good fireboards. A triangular notch must be carved from an outer edge of the fireboard. The notch should be carved the full depth of the fireboard. Then, at the tip of the notch, you will a make a depression with your knife, and enlarge it with a few spins of the drill.

Now you're ready to go to work.

One can produce a coal by friction in several positions. I've even done it while sitting in a chair and using a drill that was nearly three feet long. However, I suggest you start with the traditional kneeling position.

Assuming you are right-handed, kneel on your right knee and hold down the fireboard with your left foot. Position the fireboard so that the notch is on your right (this is not critical, but helps you to see what you're doing). When the thong is twisted once around the drill, hold the drill in place with the handblock in your left hand. Your left forearm should press against your left shin. This gives you greater stability.

Now, beginning slowly, turn the drill with long steady strokes of the bow.

You may experience frustration at this point if the drill repeatedly flips out of the thong, perhaps because you were not pressing down hard enough, or because the hole in the fireboard isn't yet deep enough to hold the drill. Don't give up, but persist. Carefully selected components, correct pressure with the handblock, and steady, even strokes with the bow should alleviate much of the difficulty in this beginning stage.

The more you attempt to produce a coal, the more "broken in" the parts will become, and this will enhance your success.

The only part not enhanced by the “breaking in” is the thong, which is usually the first to wear out. So, unless you have an unlimited amount of fiber or cord, you’ll want to do everything you can to increase your odds for success.

Be certain that the bottom of the drill is rough before you begin. Cutting or scraping it with your knife to give it a crude finish is desirable. Shortly after you begin to drill with even regular strokes, all the while applying just the right amount of pressure from above, you will start to see smoke rising from the notch. Continue to exert pressure on the handblock, and continue the steady, even strokes.

Keep stroking until the smoke begins to pour out profusely. The wood dust will begin to fill the notch. When it begins to look black, and the smoke takes on a distinct “burnt” aroma, continue to stroke for about 15 to 30 more seconds. Quickly remove you drill and immediately blow lightly into the pile of dust. If it does not continue to smoke, you didn’t succeed. If it continues to smoke, keep gently puffing. Within a few seconds, a red ember will develop. This ember should then be carefully placed into a bundle of prepared tinder. It is then blown on until the coal spread and finally bursts into flame.

Many Indian people used a small flat piece of wood or bark – called a spark catcher – which they placed directly under the notch. Once they created their coal, they were able to more easily transport it into the waiting tinder by use of the spark catcher.

One cannot appreciate the gift of fire merely by reading about it. In order to truly appreciate fire, one must actually experience the high degree of skill, persistence, and coordination required to produce a coal using only the products of nature. And once you have mastered this so-called “primitive” art, you will never experience fear of being without fire again.

According to Larry Dean Olsen, author of *Outdoor Survival Skills,* “The only way to become skillful in the art of firemaking is to practice. If after hours of practice you are still unsuccessful and have begun to see the futility of being an amateur firemaker, then it is time to make up your mind to be a professional firemaker. So wipe the sweat from your brow, reconsider your style and improve your equipment. Then practice some more. Once you have developed a style and have successfully started a fire or two, you may rest assured that future attempts will be quickly rewarded.”

A variation of the bow and drill method is the pump drill, which is a bit easier to produce a coal, but takes longer to carve all the pieces. Additionally, there is the hand drill, simply twirling the drill between the hands onto the fireboard. This method requires only two pieces of wood, but takes significantly more patience and practice than either the bow and drill or the pump drill. We’ll discuss these other two primitive methods in upcoming articles.