

SCOUTS-L

FIRE BY FRICTION

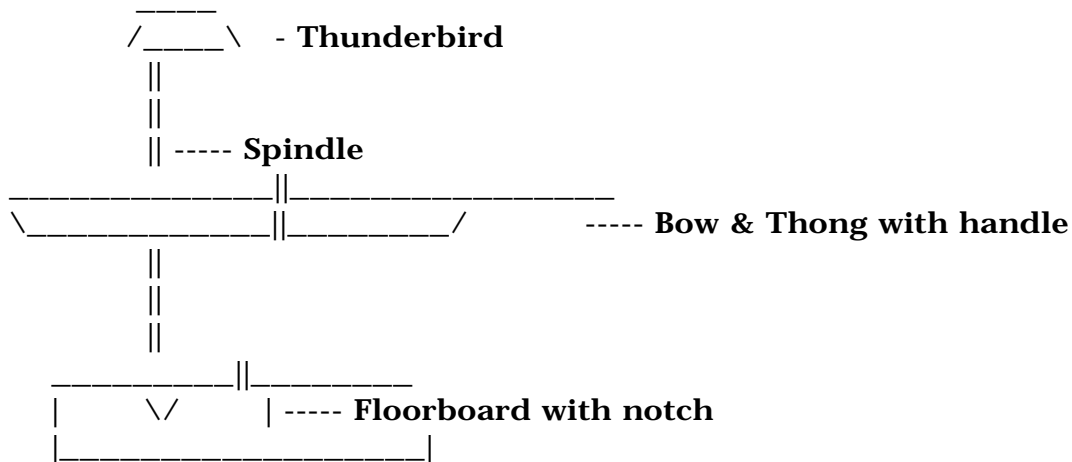
Date: Tue, 16 Apr 1996 22:06:47 -0400 (EDT)
 From: "Michael F. Bowman" <mfbowman@CapAccess.org>
 To: "Kevin M. Dunn" <kmd@hschem.hsc.edu>
 cc: SCOUTS-L - Youth Groups Discussion List <Scouts-L@tcubvm.is.tcu.edu>
 Subject: Fire-by-Friction

Kevin,

If you are getting lots of smoke you are probably very close to being on the mark. You will never get flame directly. This is a myth. What you will get is a hot spark that you can transfer to a birdsnest of cedar fibers or some similar flammable natural material and then while it is still glowing you can blow it into a flame in the birds nest, which is tricky because you will need to hold that in cupped hands until you get it ignited. Then you will very quickly want to insert same into a previously laid fire, where it will ignite the smaller twigs, etc.

Here is the complete story on fire by friction:

Lets start by learning the parts of your fire-by-friction set:



The best wood for your fire by friction set is a porous wood. A soft wood will assure the fire more easily than using a hard wood. It is also better to use the same wood for all of the pieces of your set. If you need an extra advantage, you can use a harder wood for the thunderbird.

The bow of the fire by friction set should be slightly flexible and about the length of your arm. Be very sure that there is enough thickness to the bow to accomodate two or three holes. These holes will be set one at one end and two at the other end of the bow to tighten the thong. Leave extra room for a handle on one end of the bow.

The thong is used to turn the spindle on the floor board. It can be twisted and should be made of good quality rawhide. Cherry sap may be used on the thong to give the spindle a non-slipping surface.

The spindle should be of dead wood, eight sided with an approximate diameter of 1/2 inch. The upper end should be pointed and allowed to burn into the thunderbird (see description below).

The floorboard should be a flat piece of wood split out of a log and should be one and on-half feet in length. It is very important to make sure that there is always a place on the floorboard to put your foot. The hole (about 1/4 inch deep, but not all the way through the floor board) should be far enough from the edge to accomodate the spindle plus enough room to prevent breakage. A U-shape notch should be cut with a sharp knife or bow saw to the center of the hole. The outside opening of the notch should not be more than one-half of an inch.

The Thunderbird should be made of a hard wood that has been taken from a log or a branch. It should fit the hand well and be comfortable to the user. To start the hole in the thunderbird, carve it out with a knife to about 1/4 inch, but not all the way through. After a hole has been started let the spindle burn its way inward until a good hole is made, then start using jewel weed or some other natural lubricant to keep from burning all the way through in successive uses.

The most effective way of using the set is to put your left foot on the floorboard and hold the thunderbird under the knee of the left leg to maximize pressure downward. The bow is pumped with the right hand.

When trying to obtain a spark, make sure to have paper or cardboard under the notch to catch the spark. Once a park is obtained it should be built up with goofer dust and split with a kife. (Goofer dust is produced as the spindle spins in the hole) After the spark has been put into the tinder, it can be blown or waved in a figure eight, so that it will ignite the tinder. Keep waving or blowing until the tinder is burning. Hold the tinder tightly and enclose the spark in the tinder without smothering the spark.

The suggested tinder is the inner bark of grapevine. Shred this bark into fine shreds and form a nest so that the spark can be placed in the center. If using dried grass as tinder, it should be very dry because it tends to absorb moisture. Dried tinder means dry. Make sure you have plenty of tinder. After the tinder is ignited, the fire can be started by placing sticks no bigger than 1/16 inch in diameter on the blaze. However, it is more advisable to have the fire already laid. This will make it unnecessary to run about looking for wood.

**Speaking Only for Myself in the Scouting Spirit, Michael F. Bowman
a/k/a Professor Beaver (WB), ASTA #2566, OA Vigil Honor '71, Eagle
Scout '67, Serving as Deputy District Commissioner for Training,
G.W.Dist., Nat. Capital Area Council, BSA - mfbowman@capaccess.org**

>

**Date: Thu, 6 Mar 1997 07:38:12 -0600
Reply-To: "J. Hugh Sullivan" <sull@MINDSPRING.COM>
Sender: Scouts-L Youth Group List <Scouts-L@tcu.edu>
From: "J. Hugh Sullivan" <sull@MINDSPRING.COM>
Subject: Fire by Friction - another way
To: Multiple recipients of list SCOUTS-L <SCOUTS-L@TCUBVM.IS.TCU.EDU>
Status: RO
X-Status:**

**"Michael F. Bowman" <mfbowman@CAPACCESS.ORG> wrote:
Subject: Re: Fire by Friction**

**>What you will get is a hot spark that you can transfer to a birdsnest of
cedar fibers
>or some similar flammable natural material and then while it is still glowing
>you can blow it into a flame in the birds nest,**

**You may be interested in my sons' story which is probably unique. John
bought a fire by friction kit at Scout camp. After about FOUR HOURS he
finally got some fire - but not from the tinder; the notched board actually
caught fire!. He stuck the tinder that came with the kit into the blaze and
it would not burn!**

Hugh

**Date: Thu, 6 Mar 1997 08:13:41 -0500
Reply-To: Matthew Theophilus Baldwin
<S1169783@CEDARNET.CEDARVILLE.EDU>
Sender: Scouts-L Youth Group List <Scouts-L@tcu.edu>
From: Matthew Theophilus Baldwin
<S1169783@CEDARNET.CEDARVILLE.EDU>
Subject: [Fwd: Re: friction firestarting] -Reply**

To: Multiple recipients of list SCOUTS-L <SCOUTS-L@TCUBVM.IS.TCU.EDU>
Status: RO
X-Status:

"the vital thing nobody writes about is the need for a lubricant. He used the facial surface grease next to his nose to lubricate the stick (fire bow method)."

Another good lubricant is smashed up sassafras leaves. The juice in the leaves lets the spindle turn freely. Or, you could just spit in the thunderhead before you start.

****WARNING**** Only lubricate the top end of the spindle (the end that goes in the thunderhead) should be lubricated. Do not touch the bottom end with even your fingers. The loss of friction from the oils on your hand could cause you to crank for hours without getting a spark.

Sincerely Yours in Scouting,
Matt Baldwin XXX

Firecrafter ('95)
s1169783@cedarville.edu

Date: Thu, 6 Mar 1997 14:59:35 -0500
Reply-To: Matthew Theophilus Baldwin
<S1169783@CEDARNET.CEDARVILLE.EDU>
Sender: Scouts-L Youth Group List <Scouts-L@tcu.edu>
From: Matthew Theophilus Baldwin
<S1169783@CEDARNET.CEDARVILLE.EDU>
Subject: Re: [Fwd: Re: friction firestarting] -Reply -Reply
X-To: jal@CRAY.COM
To: Multiple recipients of list SCOUTS-L <SCOUTS-L@TCUBVM.IS.TCU.EDU>
Status: RO
X-Status:

>>> Jim Lindberg <jal@CRAY.COM> 03/06/97 12:44pm >>>
OK you firebugs, a question for those who have started a fire this way, how long does it usually take?
[end message]

A good rule of thumb is 20/20/20. First take 20 long, steady strokes to establish the rhythm. Speed is unimportant at this

point. It is important that you use the full length of the bow by taking long strokes. Then, take 20 more strokes the same way, but faster. You should have a little smoke by now. Finally, keep up the speed and add pressure. Put as much pressure on as possible and go as fast as possible (but still remember long strokes)! Smoke should be pouring out from the notch by now. Keep this up as long as you can. If you can make it at least 20 more strokes, you probably have a spark.

Gently move your floorboard to the side and fan the spark with a knife blade. There's no need to hurry in this part. After adding goofers dust, cutting the spark in half, and fanning some more, gently pick up one of the glowing embers and place it in your "bird's nest" (I use the inner bark of cottonwood). Pick up the nest and blow gently into it, like you are whispering to it. Slowly blow harder and harder, and soon it will burst into flame. If your first spark doesn't light the nest, put the other half in and try blowing again.

If you do all this correctly, you can have a flame in less than a minute. I've not been able to do this (yet), it usually takes me three or four minutes at least. Scouts and Scouters with a good Scoutmasters' belly have a distinct advantage here, being able to apply more pressure during the last twenty strokes because of their weight.

Sincerely Yours in Scouting,
Matt Baldwin XXX

Firecrafter ('95)
ASM Troop 301 Crossroads of America Council
ACM Pack 75 Tecumseh Council
|| <===== <<< ||
Wulakamike #21

Date: Wed, 05 Mar 1997 19:17:15 -0800
From: Marvin Rosen <marv@nebula.ispace.com>
Reply-To: marv@nebula.ispace.com
X-Mailer: Mozilla 3.0 (Win16; U)
MIME-Version: 1.0
To: "Michael F. Bowman" <mfbowman@CAPACCESS.ORG>
Subject: Re: Fire by Friction

References: <Pine.SUN.3.91-FP.970304221845.21938A-100000@cap1.capaccess.org>

Content-Type: text/plain; charset=us-ascii

Content-Transfer-Encoding: 7bit

Status: RO

X-Status:

Michael F. Bowman wrote:

>

> Brad,

>

> >From my previous posting last April:

>

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> the mark. You will never get flame directly. This is a myth. What you
> will get is a hot spark that you can transfer to a birdsnest of cedar fibers
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> you will need to hold that in cupped hands until you get it ignited.

> Then you will very quickly want to insert same into a previously laid
> fire, where it will ignite the smaller twigs, etc.

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> Here is the complete story on fire by friction:

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> Lets start by learning the parts of your fire-by-friction set:

>

>

> /_____\ - Thunderbird

>

>

> || || ----- Spindle

>

> || || ----- Bow & Thong with handle

>

>

>

>

> || || ----- Floorboard with notch

>

>

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> wood will assure the fire more easily than using a hard wood. It is also

- > better to use the same wood for all of the pieces of your set. If you
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- > However, it is more advisable to have the fire already laid. This will
- > make it unnecessary to run about looking for wood.
- >
- > Speaking only for myself in the Scouting Spirit, Michael F. Bowman
- > Dep. Dist. Commissioner-Training, G.W. Dist., NCAC, BSA (Virginia)
- > U. S. Scouting Service Project FTP Site Administrator (PC Area)
- > ftp1 or ftp2.scouters.com/usscouts E-mail: mfbowman@capaccess.org

A good spark catcher is char cloth, it catches and holds a spark for quite easily and is simple to make.

materials needed

as metal can with a lid, a clean quart paint can is ideal.

100% cotton (I buy muslin its cheap)

If the cotton materiel is new wash it to get rid of the manufacturing chemicals. Cut or tear the cotton into 4" squares. Loosely pack the can with the cotton. Put the lid on the can. Put about a nail hole in the top of the can. cook the can in a campfire. Smoke will come out the nail hole. when the smole slows down or quites. take the can out of the fire let it cool for at least 30 minutes. When you open the can you should see some black "char" cloth. seep this dry and it will serve you well. I use a small tin with the edges waxed and it works great even in the Florida humidity.

YIS

Marvin Rosen

Cent FLA used to ba an OWL...

Date: Thu, 6 Mar 1997 17:52:45 -0500
Reply-To: David Berg <berg@SURF-ICI.COM>
Sender: Scouts-L Youth Group List <Scouts-L@tcu.edu>
From: David Berg <berg@SURF-ICI.COM>
Subject: fire by friction instructions - long
To: Multiple recipients of list SCOUTS-L <SCOUTS-L@TCUBVM.IS.TCU.EDU>
Status: RO
X-Status:

Dear Scouts and Scouters

Visit the Firecrafter homepage at:

<http://expert.cc.purdue.edu/~agray/xxx/>

These instructions for fire by friction are modified from Wayne Walker "Mr. Fire by Friction" - an expert at fire by friction who is able to make a fire by friction kit from scratch (except for the bow) and have flames in about 20 minutes!

The first step is to find the wood for your spindle and fireboard. These two parts of the set should ideally be made out of the same type of wood. If for some reason your spindle and fireboard are not made of the same type of wood, make sure that the spindle is a harder wood. Red Elm (Slippery Elm), Cedar, Basswood, Walnut, Blue Beech and Cottonwood are all good to use for your set. Your wood must be bone dry. The spindle should be straight wood and preferable from the center of the log. A good height for your spindle is to make it as long as your lower leg, while the diameter should be about > inch.

Start out by quartering a log of red elm about 8-10 inches in diameter and about 12 inches long. Pick out the best quarter and split off one side one inch thick. Take this piece and split another piece off about an inch in diameter next to the heart. Lay this piece aside for the spindle. At this point the spindle is roughly square.

Next split a piece from another quarter of the log about > of an inch thick for the fireboard and lay this piece with the spindle.

The hand piece (also called the thunder head) can be made out of scrap pieces or can be made out of a small limb about 2 inches in diameter and 5 inches long. Split the piece in half

and drill a shallow hole in the flat side of one half. Lay the thunder head aside.

The bow should be a sapling about 30 inches long. It will work better if it has a slight curve. I like to cut one end where there is a fork and this makes a good place to tie the cord. Unless your bow has a fork at the end(s), you will need to put notches or holes in it to keep the rope from slipping. So make sure your bow is thick enough. Do not forget to leave room for a handle. Use sash cord or small diameter (about 1/8 inch) nylon rope. Cherry sap may be used on the rope to give the spindle a non-slipping surface.

Now go back to spindle, with a sharp hand ax, shave the corners down so as to make it 8 sided and about > inch in diameter. When looking down on the spindle from one end it will be shaped like a stop sign. Leave the edges sharp so it will bite into the rope. Next sharpen both ends.

The fireboard should have a flat surface so it doesn't rock when placed on the ground. Take your hand ax and true it up. Next start 3 shallow holes > inch from one edge. The sharp corner of a hand ax or a sheath knife works well for this.

Now is the time to burn the holes deeper in your fireboard and your thunder head. Place the spindle in the bow so the loop that it's in is on the inside. Place one end of the spindle in the thunder head and the other end in one of the holes in the fireboard. Stroke the bow back and forth slowly until a smooth bearing is burned in the hand piece. Burn all 3 holes in the fireboard a little deeper. Now you have three holes to use - "Be Prepared" you know. From this time on always use the same end of the spindle in the thunder head. You can mark the thunder head end of the spindle with a marker pen so you won't forget. One final step and you are ready to try for a spark. With a hand saw or bow saw cut a narrow "V" notch in the fireboard so the point of the "V" is at the center of the hole in the fireboard. Then with a knife shave the rough edges out of the notch and the bottom of the fireboard. It's best if the notch is a little wider at the bottom of the fireboard so the spark does not hang in it.

Now you are ready to try for a spark. Place a large leaf or piece of bark under the fireboard so the dust can fall out of the hole on

it as you crank the spindle. This dust is called "goofers dust". Don't ask me why because I don't know - it just is. . Save all the goofers dust in a film canister so you can use it to build your spark up. If you want to build a fire then have your tinder or birds nest ready. Place some lubrication in the hole of the hand piece. A piece of soap or a wad of grass will do. Tighten your bow before you start to pump and tighten it again when necessary. Assemble the set always with the same end of the spindle in the hand piece. Place your left toe on the fire board, (left toe if you are right handed) kneel down on the other knee. Place the other end of the spindle in the hole over the leaf or bark. Stroke the bow slowly at first until you get the rhythm. As smoke starts to appear, increase pressure on the hand piece and stroke the bow faster. Do not stop pumping when smoke starts appearing. Add pressure and a little bit more speed. Even if you think you have a spark, keep pumping until you think your arm will give out. Pressure is very important, so force as much weight as possible onto the thunder head. Keep a good rhythm and keep the bow parallel to the ground. Only practice and experience will tell you when you have a spark. If after you take spindle out of the fireboard, smoke still appears, you have a spark. It will look like a small piece of charcoal and will glow when you very gently blow on it. Once a spark is obtained, fan it with a knife blade. Catch your breath, and get your tinder or birds nest ready. An old dry birds nest is very good for tinder. Shavings from grapevine and or cedar bark is also good.

DON T HURRY. Very carefully take the handle of your knife and peck the board and the spark should fall out. If the spark seems to hang, pick it out with the tip of your knife. Don't pick up the fireboard to do this. After the spark has been built up with your extra goofers dust, cut it in half and place one half in your tinder with some goofers dust. Keep the other half burning in case something goes wrong with the tinder. Enclose the spark with the nest but do not smother it. Hold the nest as if you were praying to something in the Sky, and whisper to that beautiful spark. If you blow too hard, you will blow it out. As the tinder starts to glow, blow a little harder. If you have done everything right it should burst into flame.

If you can't get the set to work then try re-sharpening the spindle. Don't cut the notch in the fireboard too large .

**It shouldn't go past the center of the hole in the fireboard.
One hole in the fireboard is usually good for 2 sparks.
Experiment with the set, if the charred goofers dust keeps
falling away then lay a chunk of wood against the notch.
Try different types of wood. Sometimes a sycamore fireboard
and a redelm spindle work well. Other woods to try are, red
cedar, basswood, aspen, poplar and yucca. I believe the
efficiency of the set depends on the stage of deterioration
the wood is. The drier and more decomposed the better it
is up to a certain point.**

--

**David T. Berg
berg@surf-ici.com**