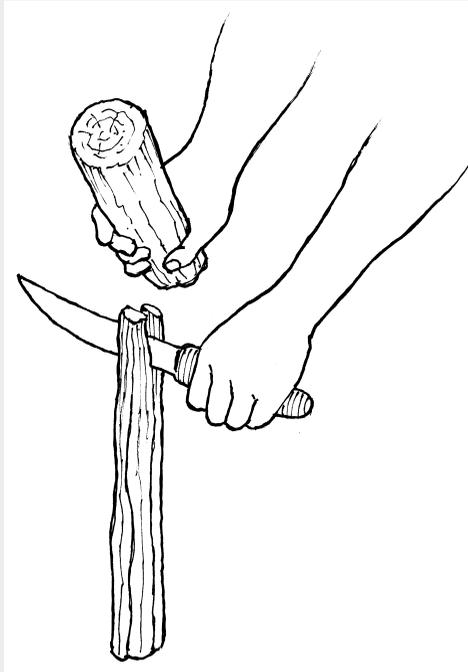


Figure F-3. Here's a safe and powerful way to split thick kindling with your knife. **Caution:** Don't use a folding knife for this unless it has a locking blade.



on the spine. Get a sheath knife if you adopt this procedure.

Tip: Stumps and roots are rich in volatile resins. Conifers, especially, have so much pitch that they will burn on their own for hours—a reason why fires in evergreen forests are so devastating. If you can find an old broken-down stump, save some of the fatwood for starting fires.

Fire-Building Procedures

Build a well-ventilated platform fire according the three steps below.

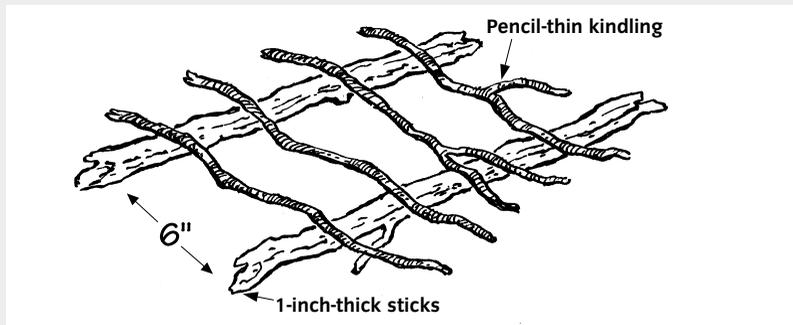
Step 1

Establish a fire base of 1-inch-diameter sticks as illustrated in figure F-4. Place pencil-thin support sticks at right angles to the fire base.

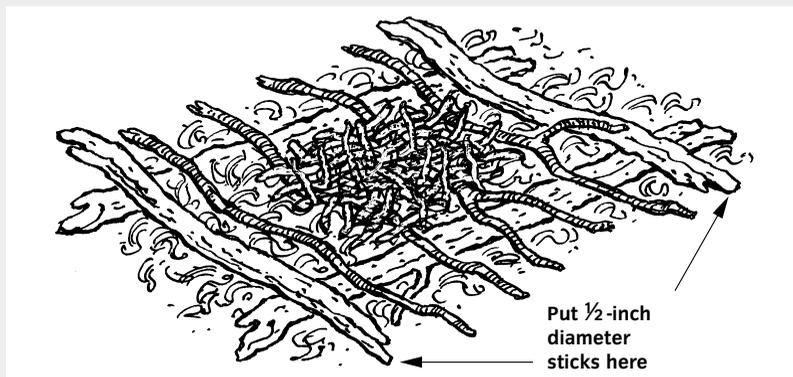
Step 2

Meticulously stack wafer-thin shavings on top of the kindling to a height of about 1 inch. Place the shavings so that plenty of air can get between them. Smoke is nature's way of saying you're smothering the flame!

Figure F-4. Fire-burning procedures.

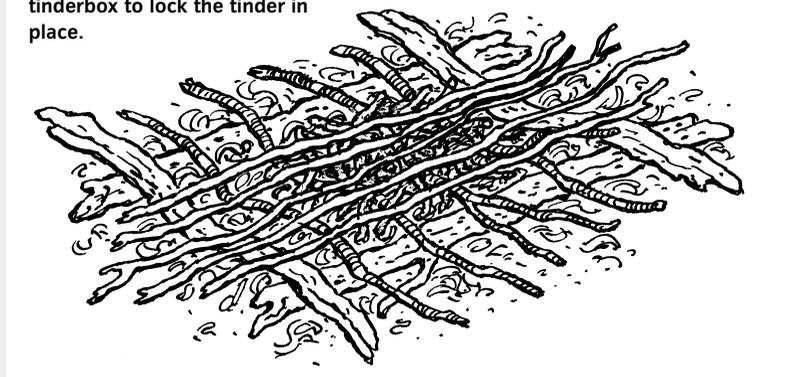


Step 1: Establish base.



Step 2: Stack shavings.

Add fine-split kindling above the tinderbox to lock the tinder in place.



Step 3: Add kindling.

Next, put two ½-inch-diameter support sticks at right angles to the fire base. These will support the heavier kindling you'll add over the tinder in step 3.

Step 3

Now pile on fine-split kindling above the tinderbox to lock the tinder in place. Again, leave space between the splittings so your fire can breathe.

Your fire is now ready to light. Apply flame directly below the tinder (shavings). A small candle will furnish the sustained heat necessary to ignite damp wood.

Hand-feed shavings (not kindling) one at a time into the developing flame. Don't heap kindling on until you have a bright, reliable blaze.

Fire-Starting Tips

Carry strike-anywhere matches in addition to a butane lighter and candle. Keep matches in a plastic jar with a cotton wad on top. A spent 16-gauge shot shell nested inside a 12-gauge case makes a tough watertight match safe. Some campers waterproof matches by painting on nail polish, but this causes match heads to deteriorate. A waterproof match case is a better idea.

An effective method of drying matches is to draw them briskly through your hair. Don't use your clothes; they are too abrasive.

Fire Ribbon—a semiliquid fire-starting paste is available at most camp stores. Just squeeze it on like toothpaste. A summer's supply will fit in a 35-millimeter film canister.

You can make your own fire starters by soaking miniature "logs" of rolled newspaper in paraffin.

Cotton balls dipped in Vaseline make wonderful fire starters!

Emergency fire-making kits: You'll need a flattened half-gallon milk carton, a handful of wood shavings (cedar is best), some splittings of scrap wood, Fire Ribbon, and a small candle. Store everything in a zipper-lock bag. When emergency strikes, rip up the milk carton, splash tinder with Fire Ribbon, and light your match. Materials will burn reliably for at least five minutes—enough time for you to search the woods for additional fuel.

Witch's broom is a blue gray lichen that grows on the branches of some evergreen trees. It is extremely flammable when dry.

Paper is hydrophilic (loves water). It absorbs moisture on damp days. Don't depend on paper to start your fires!

In an emergency, you can always burn money!

One or two sticks robbed from a beaver's house make good kindling and tinder. Beaver wood has been de-barked so it is apt to be rot free. For the sake of the beaver, please take only one or two sticks, and then only in an emergency.

Emergency ignitors: You can't beat a butane lighter and dry matches! The chemically impregnated magnesium rods sold as survival tools will ignite dry tinder but are next to worthless when things are damp. And magnifying glasses must be very large (at least 2 inches in diameter) to reliably ignite tinder.

Steel wool makes excellent emergency tinder.

Flour (any kind) will burst into potent flames if sprinkled lightly over a blaze.

Cooking oil (vegetable oil) will enrich a flame only if the fire is already very hot. Brazil nuts, potato chips, and corn chips burn brightly. Try trick birthday candles—the kind you can't blow out—to ignite damp wood. Some campers store a few popsicle sticks inside their stove fuel (gasoline or kerosene) bottles. The fuel-saturated sticks make powerful fire starters.

Make a tubular fire blower (figure F-5)! You'll need a 6-inch-long piece of narrow diameter copper or aluminum tubing and 18 inches of plastic or rubber Bunsen-burner hose. Most hardware stores have these materials.

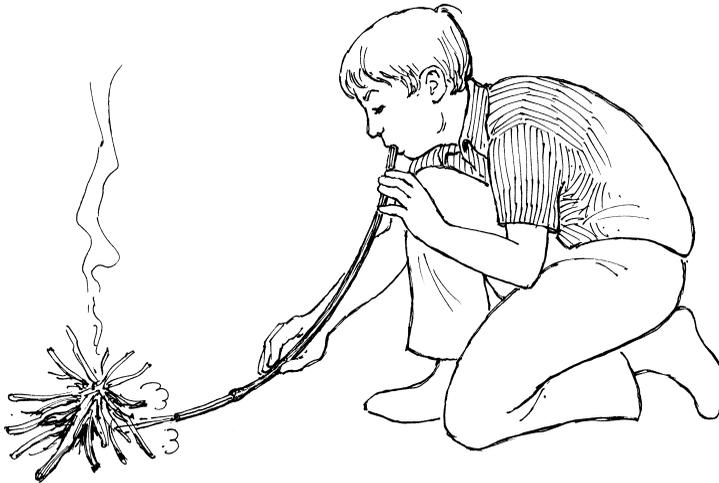


Figure F-5. Tubular fire blower.

Use your blower to nurse a fickle flame and whenever wood is too thick or damp to burn well. The concentrated air turbocharges hot coals and turns them into willing flames.

An unused rain jacket or small square of plastic will provide all the overhead protection you need to start a fire in a driving rain. So will an overturned canoe, propped up by paddles shoved through the seat braces.

To maintain fire in a driving rain: Build a loose “log cabin” around your fire with whatever wood is available. Construct a two-tier flat “roof” for your cabin from newly cut kindling and fuel. The roof will deflect rain and the fire below will dry out the lower level of wood and bring it to flame. If you maintain a two-tier roof, you’ll have a continuous supply of dry wood no matter how much it rains. *Note:* Since you’re robbing the fire of oxygen, expect smoke . . . lots of it!

Banking the fire to preserve fuel: Use this procedure when you have a good hot fire but little wood to maintain it. Bank your fire by setting small logs, parallel to one another, across the top. The rule of thumb for a smoke-free flame is to allow a radius width between parallel pieces of wood. Thus, a pair of 2-inch-thick logs should be separated by a full inch to ensure adequate ventilation. Banking will reduce this distance to a mere (though identifiable) slit, which will naturally diminish use of oxygen and slow combustion. You should also eliminate any breeze coming into the fire. A large flat rock or a tier of logs will work fine.

Extinguishing the fire: Throwing water on a fire is not good enough. You must ascertain it is out by checking the once-fiery bed with your hands. If water is in short supply, use the “sprinkle/stir” method outlined below.

1. Sprinkle a handful of water on the flames with your hands. Continue to sprinkle until the fire has gone out.
2. Stir the fire with a stick and sprinkle some more. Repeat as needed until the fire is DEAD OUT!

FIRST-AID KIT AND PROCEDURES

The following recommendations are from the pen of my friend William Forgey, M.D., the guru of wilderness medicine. “Doc” Forgey is the past president of the Wilderness Medical Society, an assistant clinical professor