FIRE METHODS

Convex Lens

Use this method (Figure 7-6) only on bright, sunny days. The lens can come from binoculars, camera, telescopic sights, or magnifying glasses. Angle the lens to concentrate the sun's rays on the tinder. Hold the lens over the same spot until the tinder begins to smolder. Gently blow or fan the tinder into flame, and apply it to the fire lay.

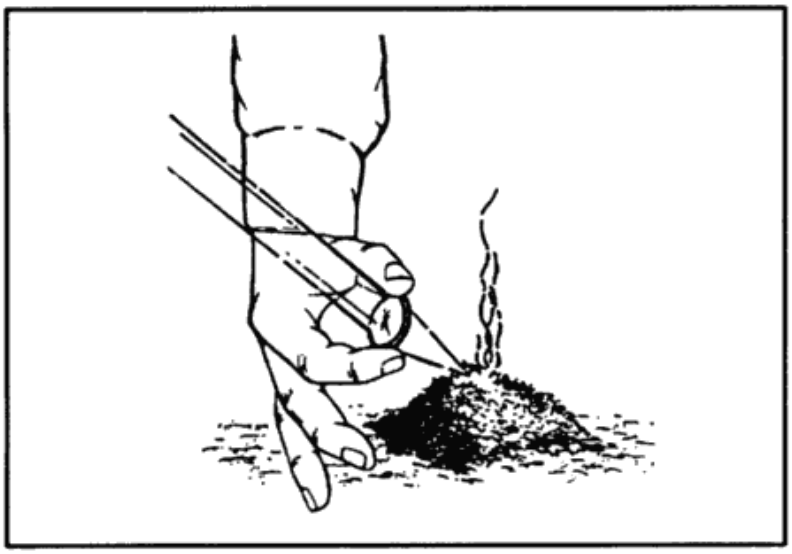

Figure 7-6. Lens method.

Fire-Plow

The fire-plow (Figure 7-7) is a friction method of ignition. You rub a hardwood shaft against a softer wood base. To use this method, cut a straight groove in the base and plow the blunt tip of the shaft up and down the groove. The plowing action of the shaft pushes out small particles of wood fibers. Then, as you apply more pressure on each stroke, the friction ignites the wood particles.

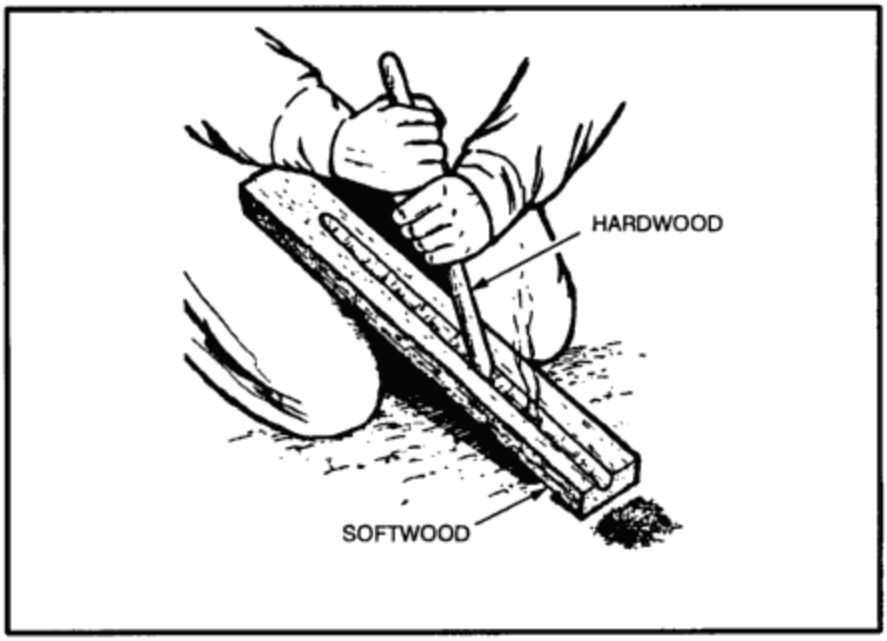

Figure 7-7. Fire-plow.

Flint and Steel

The direct spark method is the easiest of the primitive methods to use. The flint and steel method is the most reliable of the direct spark methods. Strike a flint or other hard, sharp-edged rock edge with a piece of carbon steel (stainless steel will not produce a good spark). This method requires a loose-jointed wrist and practice. When a spark has caught in the tinder, blow on it. The spark will spread and burst into flames.

Bow and Drill

The technique of starting a fire with a bow and drill (Figure 7-8) is simple, but you must exert much effort and be persistent to produce a fire. You need the following items to use this method:

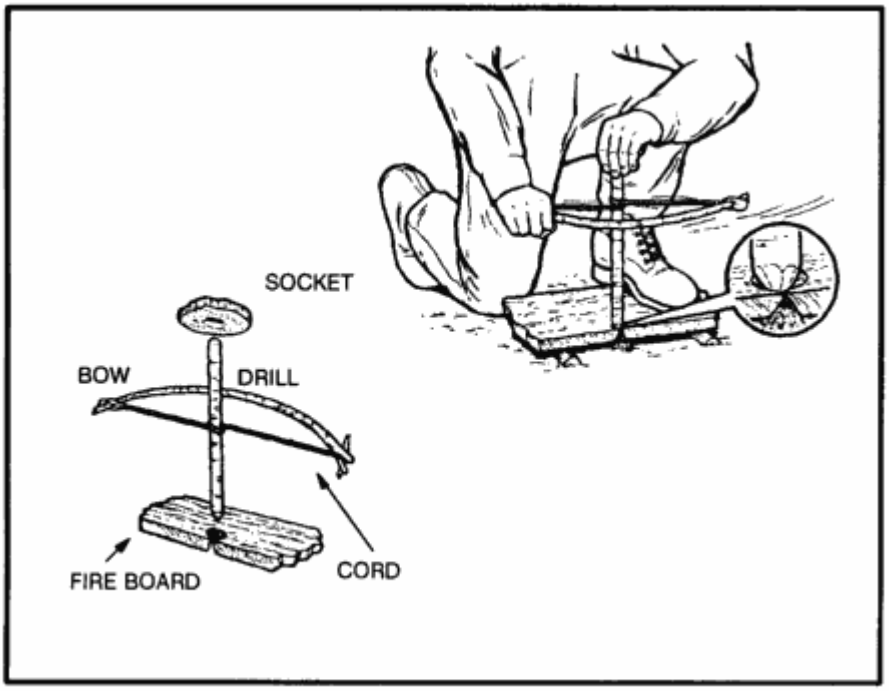

Figure 7-8. Bow and drill.

- **Socket.** The socket is an easily grasped stone or piece of hardwood or bone with a slight depression in one side. Use it to hold the drill in place and to apply downward pressure.
- **Drill.** The drill should be a straight, seasoned hardwood stick about 2 centimeters in diameter and 25 centimeters long. The top end is round and the low end blunt (to produce more friction).
- **Fire board.** Its size is up to you. A seasoned softwood board about 2.5 centimeters thick and 10 centimeters wide is preferable. Cut a depression about 2 centimeters from the edge on one side of the board. On the underside, make a V-shaped cut from the edge of the board to the depression.
- **Bow.** The bow is a resilient, green stick about 2.5 centimeters in diameter and a string. The type of wood is not important. The bowstring can be any type of cordage. You tie the bowstring from one end of the bow to the other, without any slack.

To use the bow and drill, first prepare the fire lay. Then place a bundle of tinder under the V-shaped cut in the fire board. Place one foot on the fire board. Loop the bowstring over the drill and place the drill in the precut depression on the fire board. Place the socket, held in one hand, on the top of the drill to hold it in position. Press down on the drill and saw the bow back and forth to twirl the drill (Figure 7-8). Once you have established a smooth motion, apply more downward pressure and work the bow faster. This action will grind hot black powder into the tinder, causing a spark to catch. Blow on the tinder until it ignites.

Based on U.S. Army Field Manual 21-76

Battery and Steel Wool

The technique of starting a fire with a battery and steel wool (Figure 7-9) is simple, and requires little effort.

Steel wool is made up of very fine steel strands. Steel wool is usually made from low-grade carbon steel but can be made of other materials such as aluminum or stainless steel. Ignition can be achieved using current from an electrical source such as a battery. Contact with an energized electrical circuit will cause ignition. We can use a flashlight, jumper cables or a battery to complete a circuit and ignite steel wool.

Gather the necessary items together for a safe fire. Create a nest of material needed to start your fire (i.e. tinder). Create a strand of steel wool about ½ inch thick and about 6-8 inches long. Touch the steel wool to the positive and negative ends of your battery source. Place the steel wool in the nest and you have fire. Different size batteries can be used. 9 volt batteries are commonly used due to the positive and negative posts positioning.