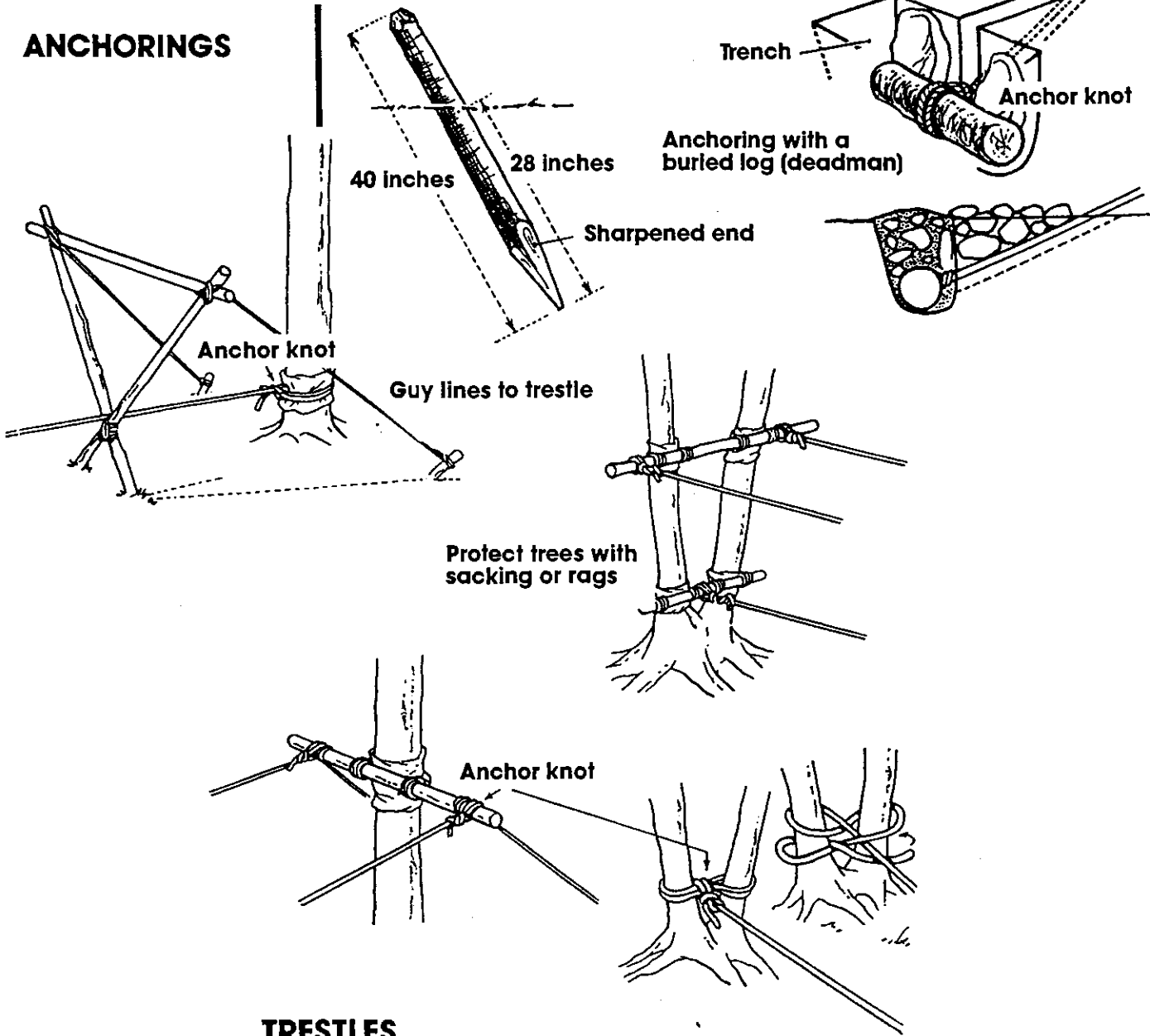


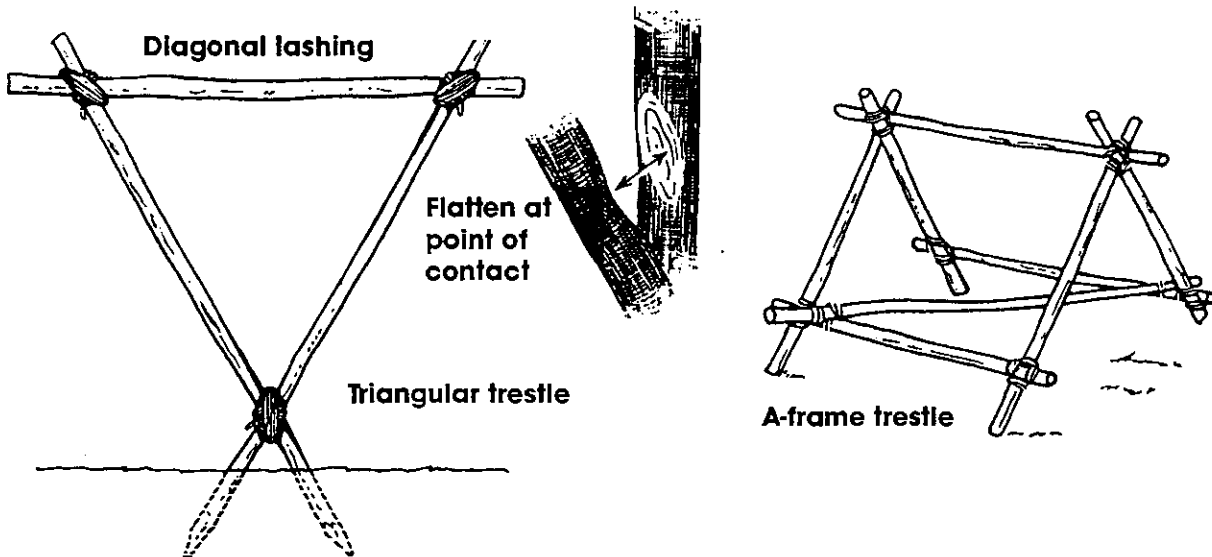
# ROPE

## Building a Rope Bridge

### ANCHORINGS



### TRESTLES



- Three teams work at the same time.
- Team A: Trestle on bank number 1.
  - Team B: Trestle on bank number 2.
  - Team C: The rope bridge on bank number 1.

**The Trestles:** The most efficient is the triangular trestle. Three poles are carefully lashed. Take care with the angle of the 'V' (refer to our illustrations for the proportions).

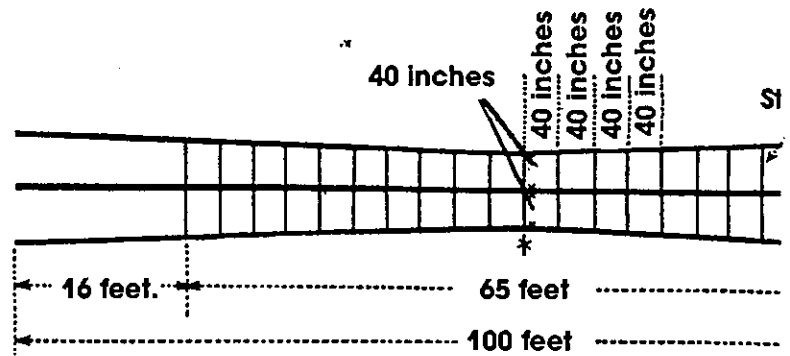
The trestles can be replaced by anchoring to trees. (This is quite common.) In this case two poles lashed to trees will do nicely. Don't forget to protect the trees. Be careful of the elevation of the main support. This should be at least 5 feet above the water. (If not, you'll get wet feet.) This will determine the dimensions and placement of the trestles. Install their anchors with great care.

**The Rope Bridge:** The bridge is constructed flat on the ground. Unroll the ropes and lay them parallel to each other.

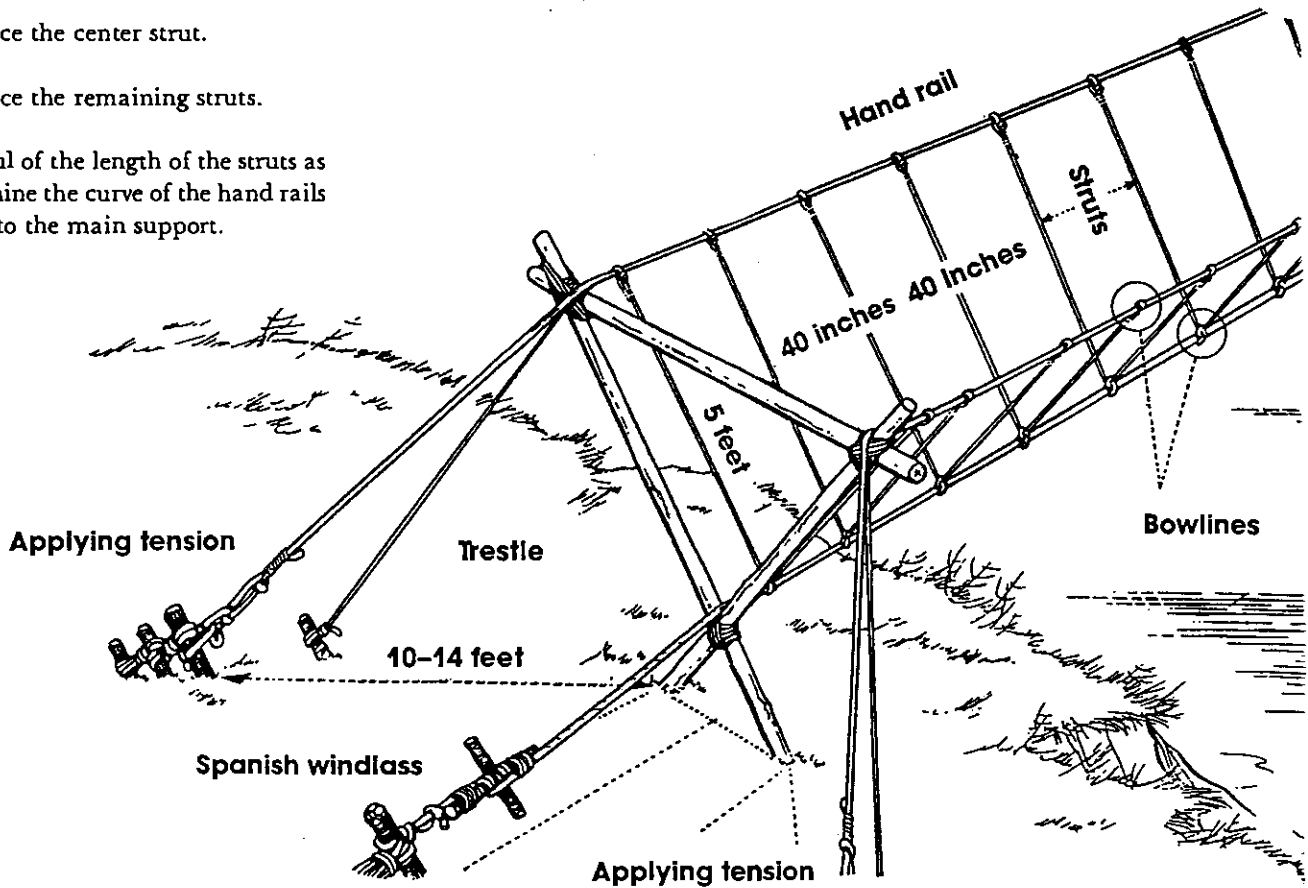
1. Place the two struts at each end.
2. Place the center strut.
3. Place the remaining struts.

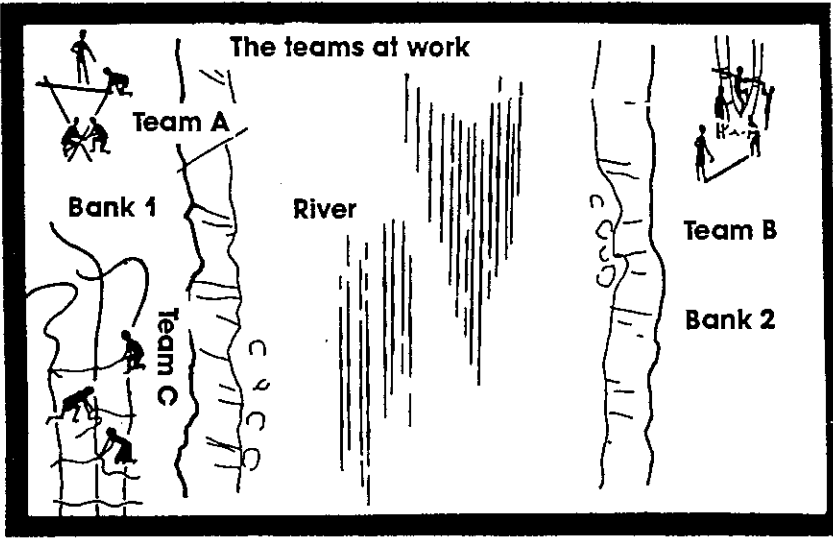
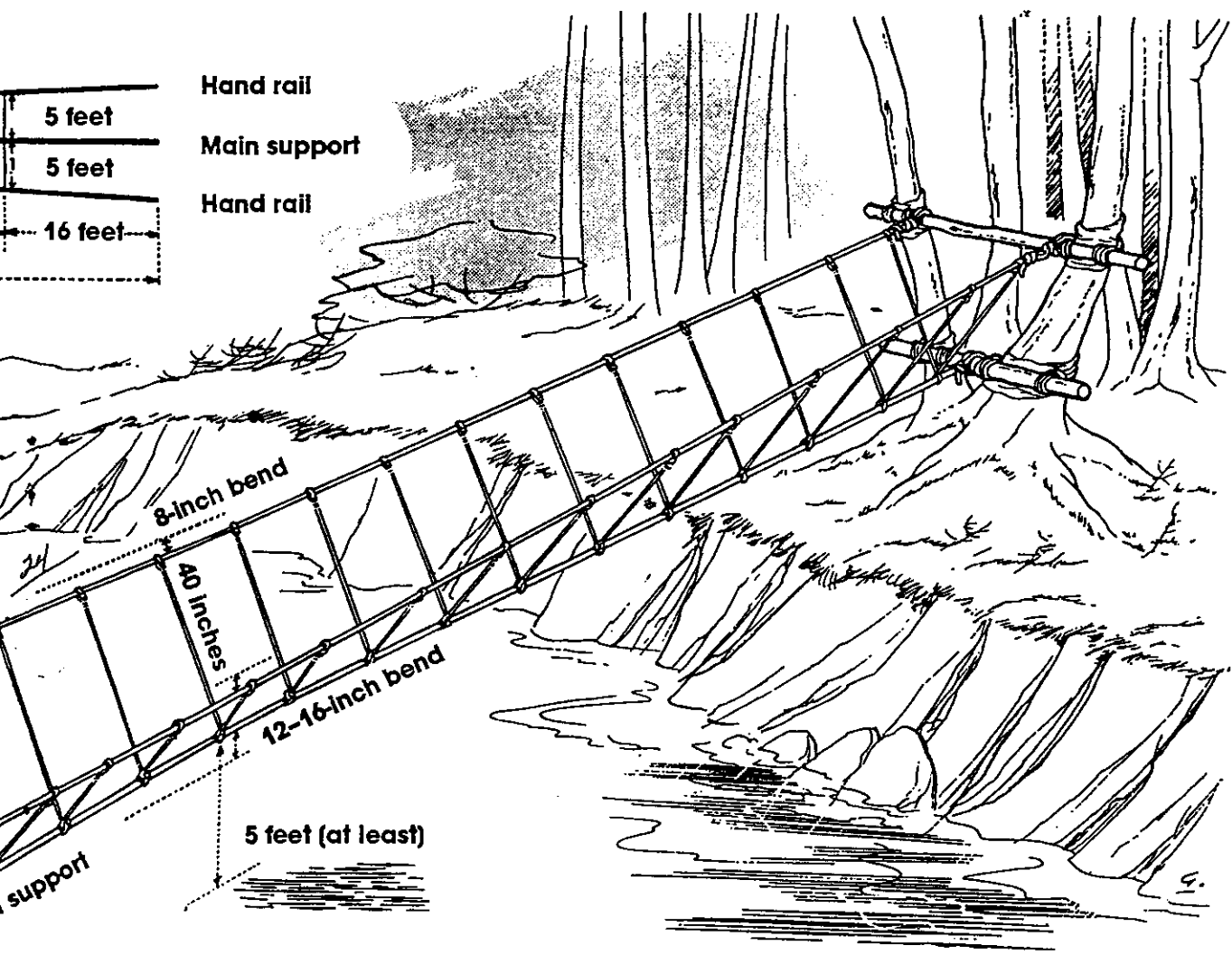
Be careful of the length of the struts as they determine the curve of the hand rails in relation to the main support.

## CONSTRUCTION



## THE FINISHED BRIDGE

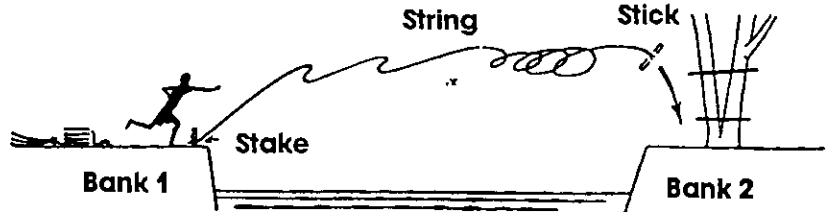




# LAUNCHING

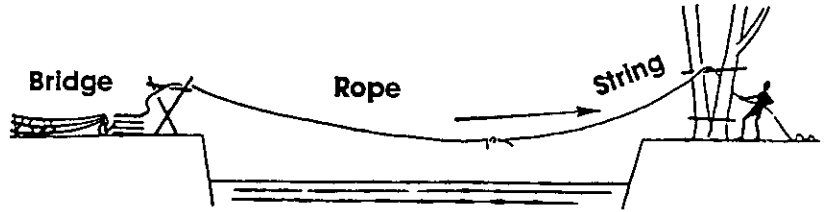
Good work requires that the free ends of the bowlines on the struts be finished with a whipping.

1. When the bridge is complete, Team C ties together one end of the main support and hand rails to the fourth rope.
2. Meanwhile, Team A fastens the end of the ball of string to a stick and throws the stick across the stream.

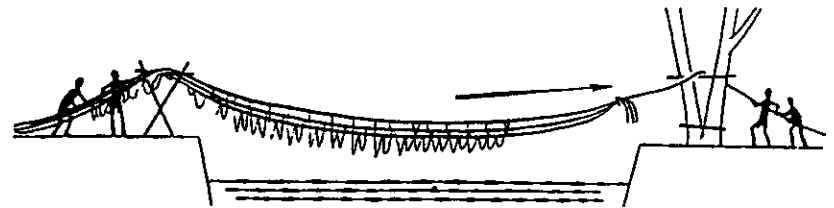


**Attention:** Watch the wind direction and throw with it. Should the stick fall into the water the team on the opposite side can fish it out by throwing a weighted string across it and drawing it to shore.

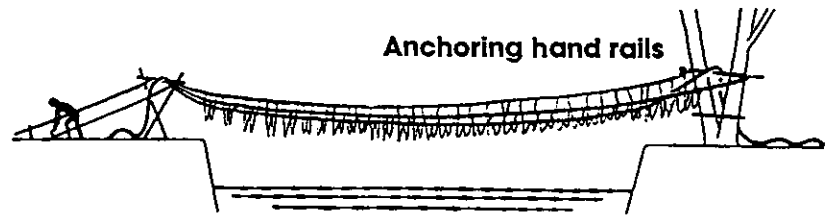
3. The other end of the string is fastened to the fourth rope and Team B now hauls the bridge across the stream by drawing in the string, the top, and then the bridge itself. Team A lets the bridge out over the top of the trestle and holds back when necessary to keep the bridge from touching the water.



4. When the bridge is finally across, Teams A and B anchor their respective hand rails. One uses the anchor knot, the other the tension knot (sheepshank) with a half hitch and bowline. All anchorings must be solid and secure.

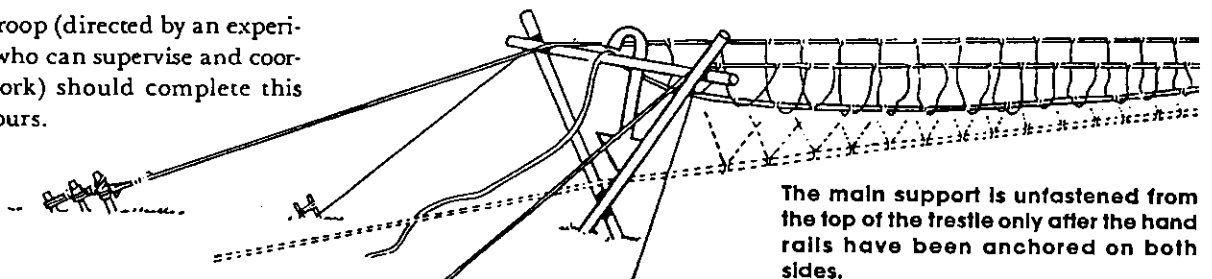
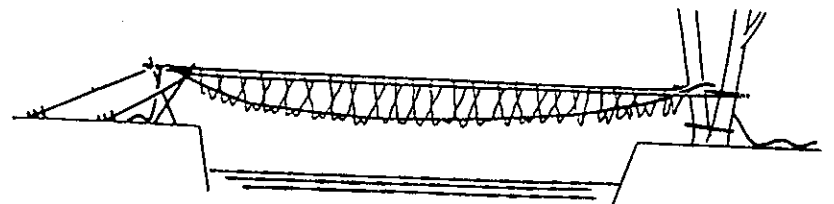


5. The main support which is still lying across the top crosspiece of the trestle is now slipped under it and solidly moored. Put an anchor knot at each end and a Spanish windlass on one end. When the tension is applied, the main support should then get its classic upward curve.



If adjustments need to be made to the struts, then Team C proceeds across the bridge and makes the necessary finishing touches.

A trained troop (directed by an experienced leader who can supervise and coordinate the work) should complete this bridge in 3 hours.



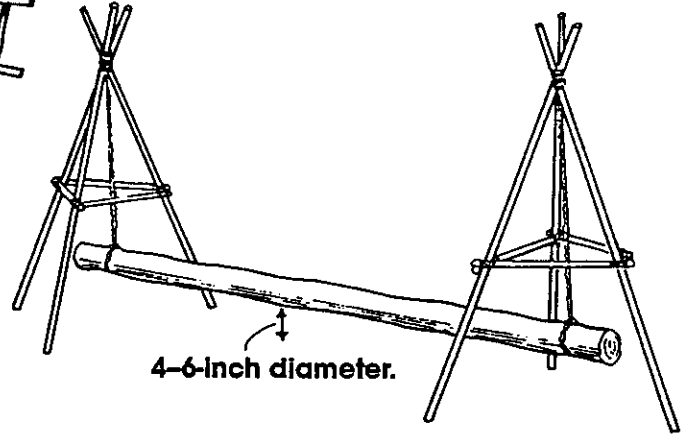
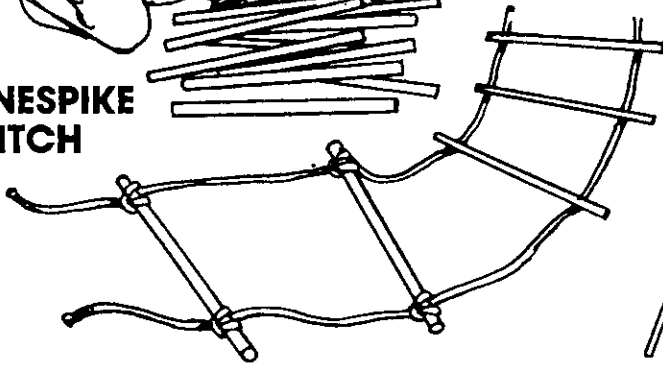
The main support is unfastened from the top of the trestle only after the hand rails have been anchored on both sides.

## Log Walk Challenge

Construct the "Log Walk Challenge" illustrated here. To do so one Scouter, perhaps from your staff, will be asked to cut the spars you have provided, to specific lengths. Others can then be involved by having them build two tripods. Be sure the bottom of the tripod legs are braced well. Next, suspend the log, at least 4-6 inches in diameter, as shown in the illustration. The object is to walk the length of the log. This can be readily judged if part of the bark is peeled away from each end of the log. The walker must walk from bare wood to bare wood.

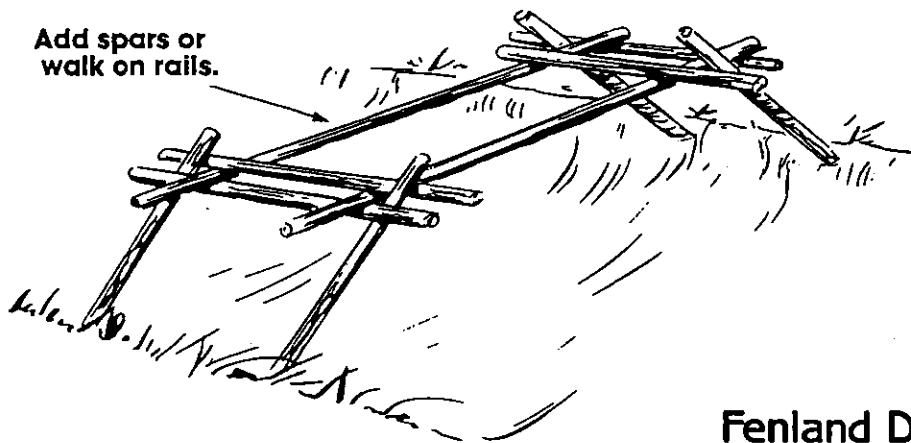


### MARLINE SPIKE HITCH



## Camp Tabletop

For a folding tabletop in camp, use the slats and cord. Attach slats with marlinespike hitch. In camp, lash a simple frame and put the tabletop on it.



## Fenland Double-Lock Bridge

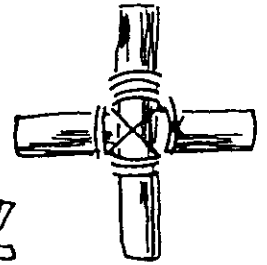
Make a Fenland double-lock bridge. Use spars 3-4 inches in diameter. If your meeting place won't allow for a full-size model, try making a small one. You will need some weights for the smaller one. Either one will take at least two sets of hands.

# Japanese/Norwegian Square Lashing

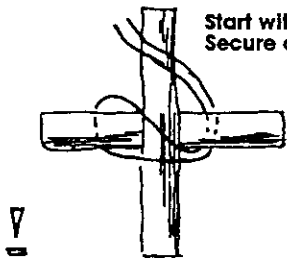
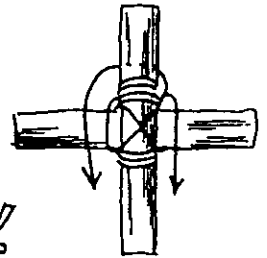
Experienced Scouters know how to tie a square lashing. This is a twist, sometimes called the Japanese square lashing, but if you're from Norway, it may be known as the Norwegian square lashing. More important though, it's simple and effective.

1. Start with a double rope. Secure and turn.
2. Double turn.
3. Turn to frap.
4. Complete the frap.
5. Finish with a clove hitch.

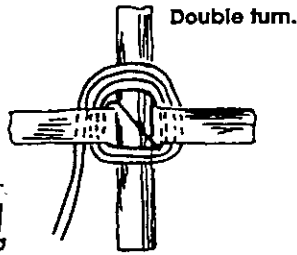
Finish with a reef.



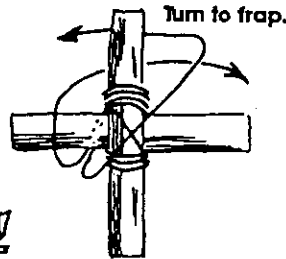
Complete frap.



Start with a doubled rope. Secure and turn.



Double turn.

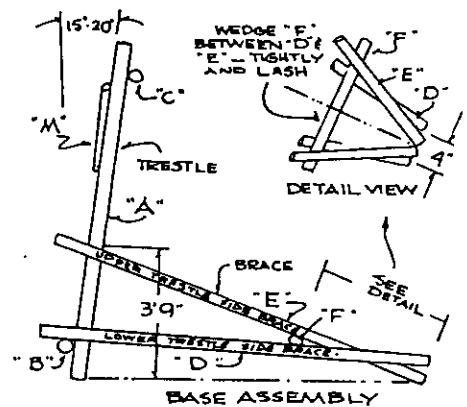
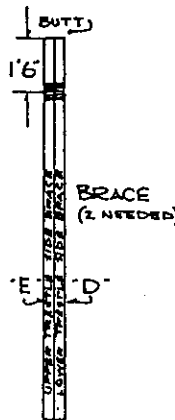
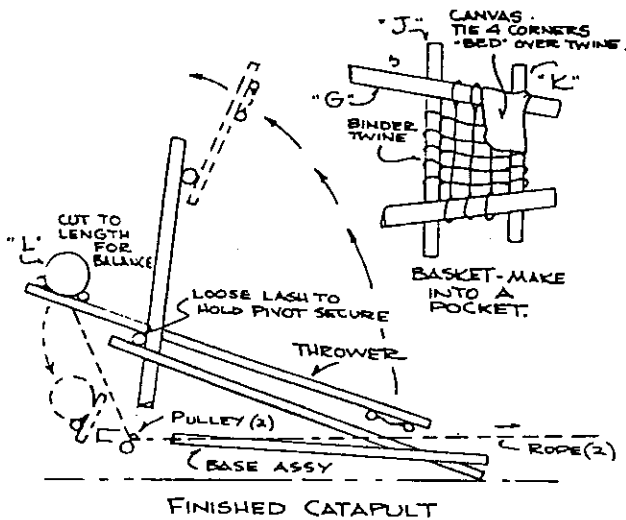
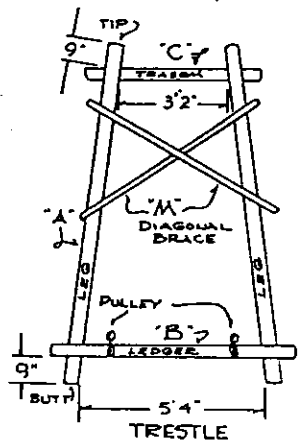
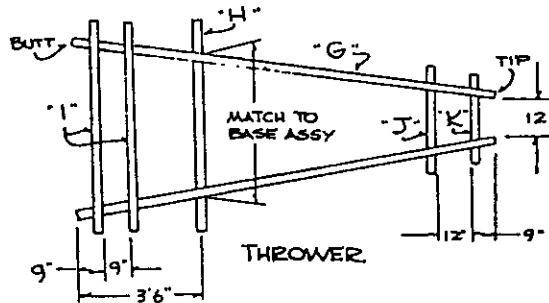


Turn to frap.

# Catapult

There are two keys to successfully constructing this catapult:

- Make all lashings proper and tight.
- Follow all directions and dimensions.

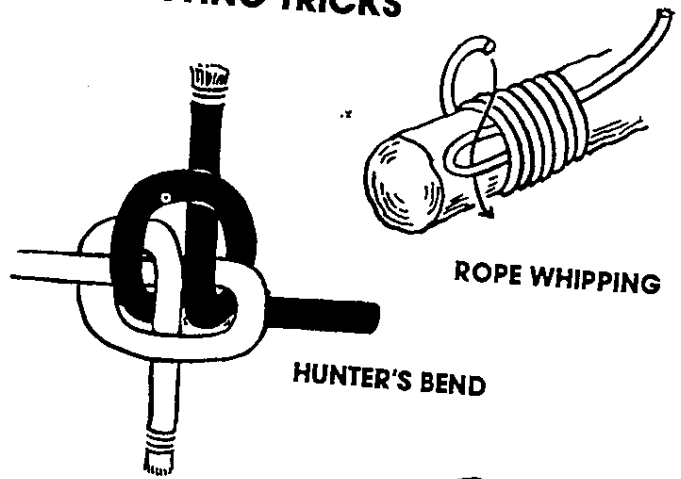


\*Must be green hardwood and at least 2" diameter at the tip.

# Catapult Parts List

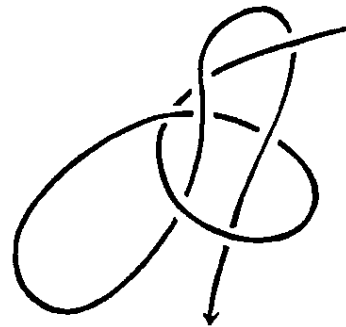
Quantity	Part	Size
2	A	5" diameter x 10' long
1	B	4" diameter x 7' long
1	C	4" diameter x 5' long
2	D	4" diameter x 11' long
2	E	3" diameter x 10½' long
1	F	3" diameter x 5' long
2*	G	3" diameter x 12' long
1	H	3" diameter x 6' long
2	I	3" diameter x 6' long
1	J	2" diameter x 3' long
1	K	2" diameter x 2½' long
1	L	18" diameter x 2' long (Approximate length. Cut to balance.)
2	M	2" diameter x 6' long

# KNOT-TYING TRICKS



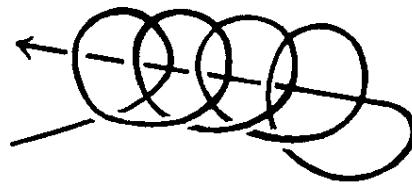
ROPE WHIPPING

HUNTER'S BEND



EASY BOWLINE

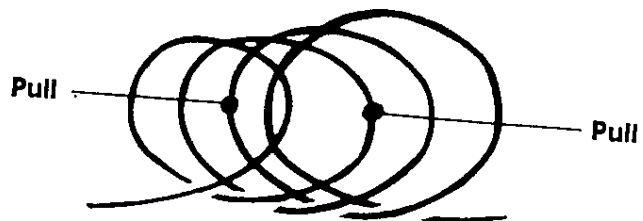
Pass bend up through hoop and over loose end. Pull tight.



KNOT LADDER

Make one overhand loop, followed by a series of underhand loops. Position loops one over the other. Pass free end through all loops and pull. A series of overhand knots will result.

SHEEPSHANK WITH A SQUARE KNOT  
IN THE MIDDLE



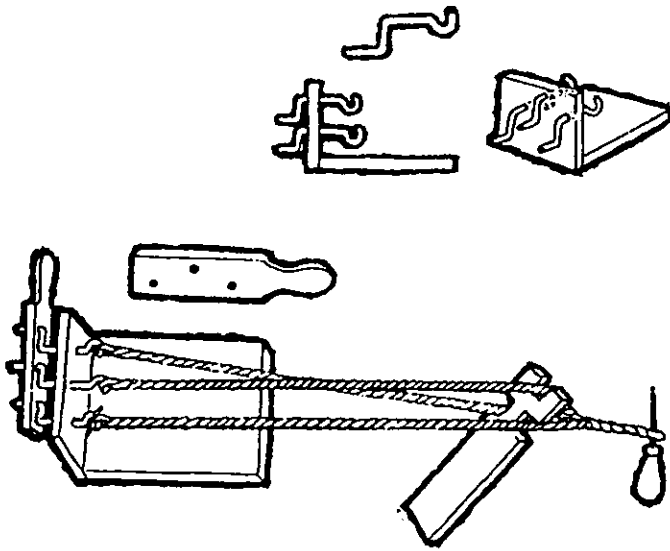
One overhand loop, followed by three underhand loops, each overlapping the first. Count three strands from left and right and pull through in both directions.

# Learn to Tie Knots

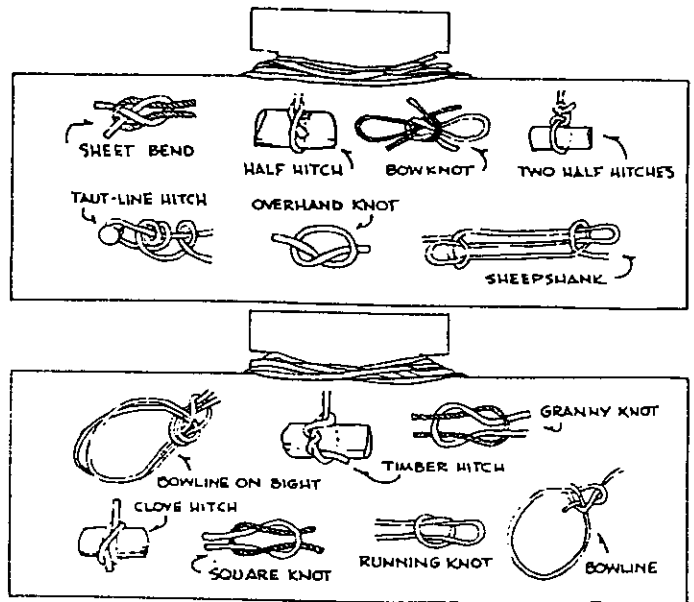
Learning to tie knots doesn't have to be dull. Demonstrate the following knot-tying games or others you are comfortable with.

- Using string, transport a paper cup of water from one table to another at least 6 feet away. The cup may not be punctured or touched by anything other than the string.
- Package wrapping. This may sound too simple. But, when the package is a basketball or soccer ball, the task takes on a new challenge. Use twine and newspaper. Each package is wrapped by two people, using only one hand each.
- Knot races. Depending on the size and age of a troop, some knot games may not be practical. But, the following list should cover any level of knot-tying skill.
  1. Hold a relay with each member tying the same knot at one end of the room and returning to the other end of the room to tag the next patrol member.
  2. Each patrol, working as a team but with each member tying only one knot, ties all the knots required for Camping skill award.
  3. Tie the same knots as above, but behind your back.
  4. Two Scouters must work together to tie a clove hitch around a tree or a pole. The twist is that each can put only one hand on the rope and cannot let loose of the rope until the hitch is secure.

## ROPE-MAKING MACHINE



## PRACTICE KNOT BOARD



Demonstrate a "Tucked Eye Splice." If possible have enough lengths of rope so each Scouter can try his hand at it, too. Here's how to do it:

1. While holding a rope in both hands twist the right hand away from you and the left hand toward you, thus opening the lay of the rope. With the lay open, press your hands together. This causes the three strands to spring outward.
2. Arrange the loops in their natural order (see illustration) and pass the short end of the rope down through the loops.
3. Repeat the unlaying process on the short end and pass the longer length of rope down through the resulting loops.
4. Pull the two sets of loops together to tighten the eye.

## TUCKED EYE SPLICE

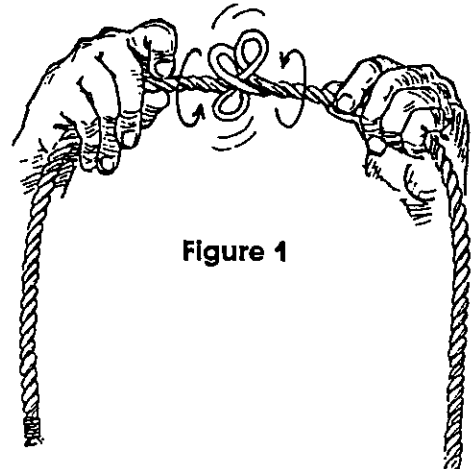


Figure 1



Figure 2



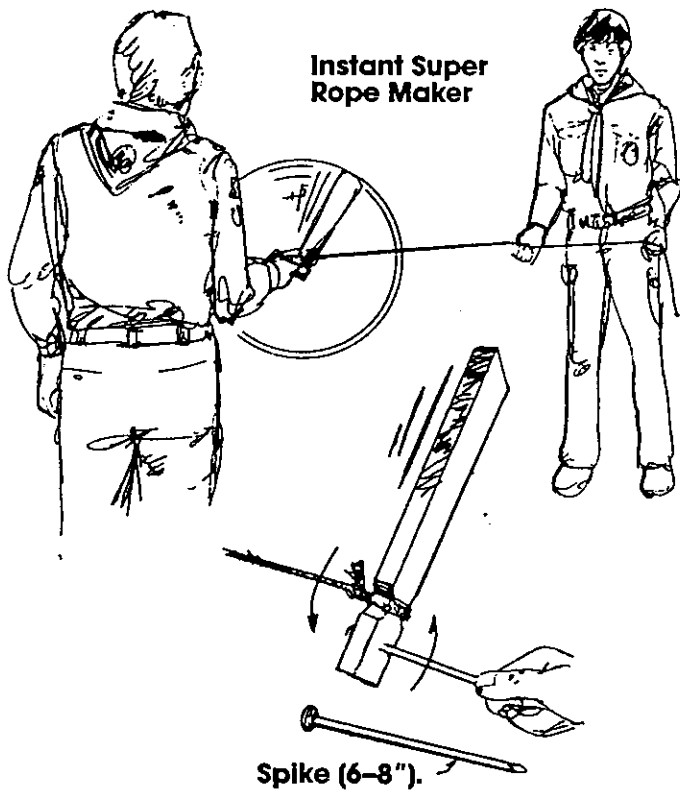
Figure 3



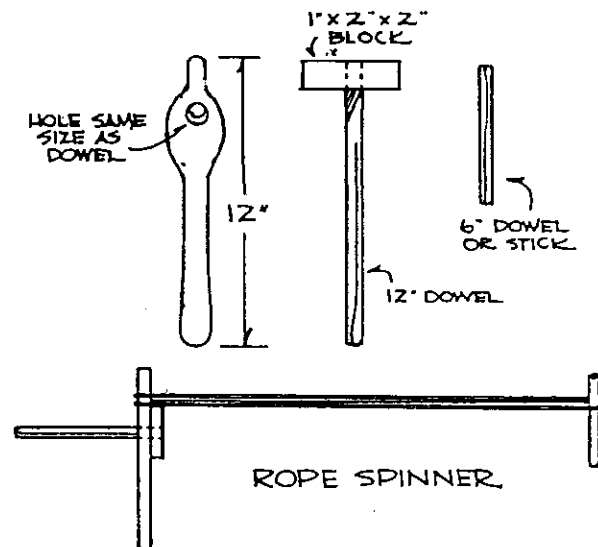
Figure 4



## ROPE GADGETS



## ROPE SPINNER



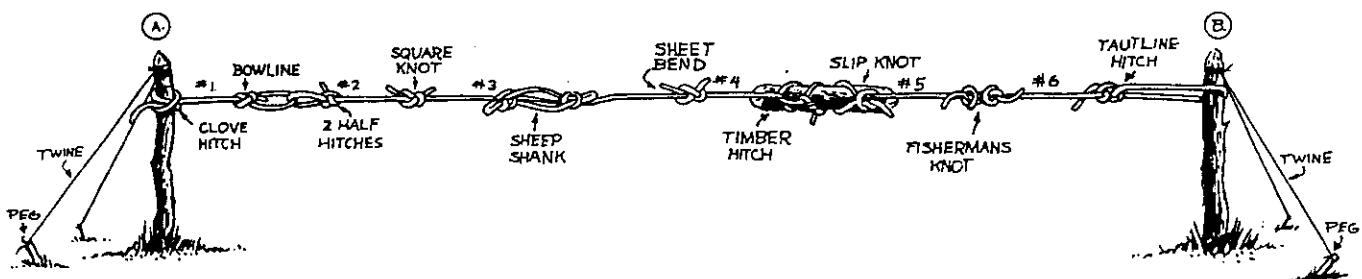
Tie a loop on each end of a long piece of binder twine or heavy cord. Attach the twine to the spinner as shown in the diagram so that you have 3 strands. Spin the spinner in a clockwise direction. When the twine is wound tight triple it again. A third person should do this so that the line can be stretched and held. Otherwise it will kink badly. Spin the spinner counterclockwise until rope is wound tight. Take the rope off the spinner, whip the ends, and it's ready to use.

Drive two stakes into the ground about 30 feet apart. If played indoors, two heavy chairs may serve as stakes.

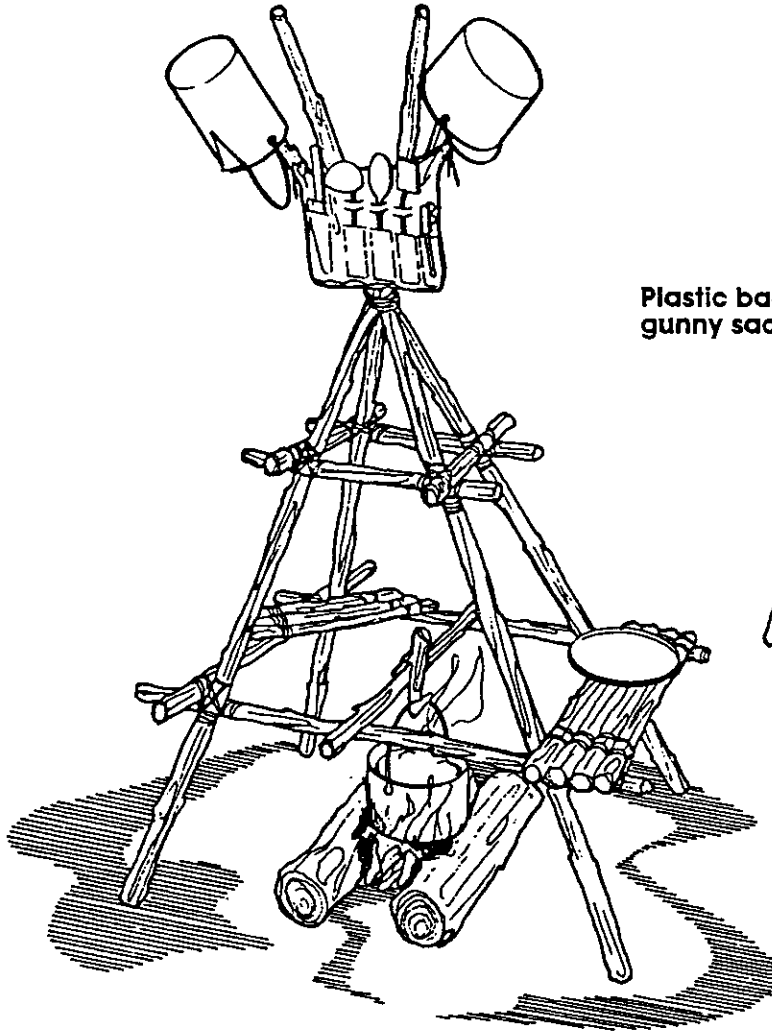
Run like any relay. Scout No. 1 ties rope to stake with clove hitch and ties bowline in other end. No. 2. ties a rope to bowline with two half-hitches. No. 3 ties on the third rope with a square knot. No. 4 uses a sheet bend to tie third and fourth ropes together (the sheepshank comes later). Scout No. 5 ties the fourth rope to a log on the ground with a

timber hitch. Scout No. 6 ties the fifth rope to the other end of the log with a slip knot. Scout No. 7 ties the fifth and sixth ropes together with a fisherman's knot, Scout No. 8 ties the sixth rope to the other stake using taut-line hitch, leaving it loose. The patrol leader then shortens the third rope with a sheepshank. Finally, the log is lifted off the ground by working the taut-line hitch.

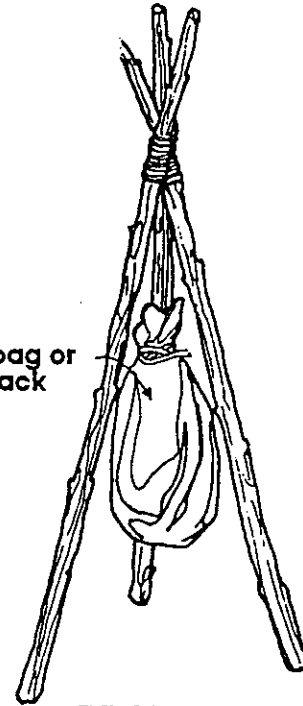
## KNOT-TYING RELAY



# Constructing Camp Projects

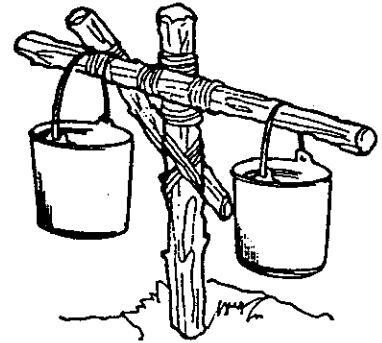


**CHIPPEWA KITCHEN**

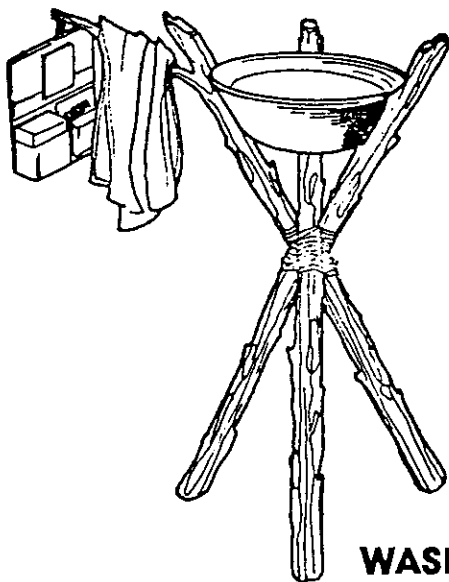


Plastic bag or  
gunny sack

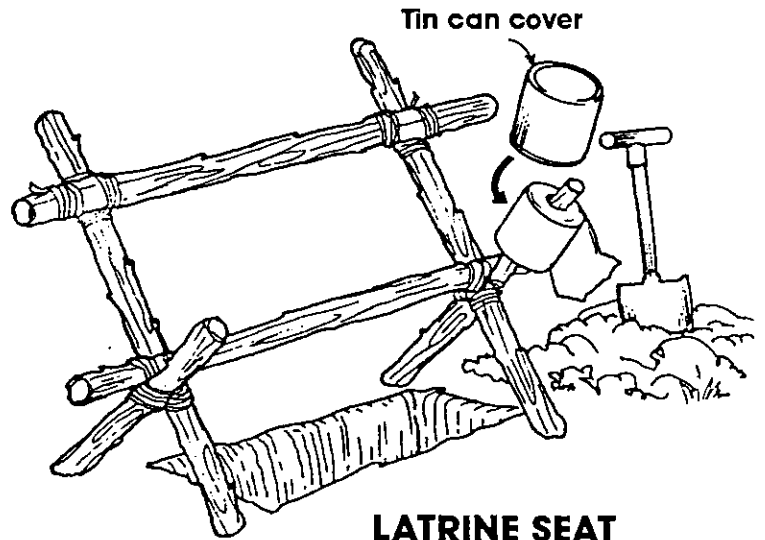
**PROVISION BAG**



**FIRE BUCKET RACK**



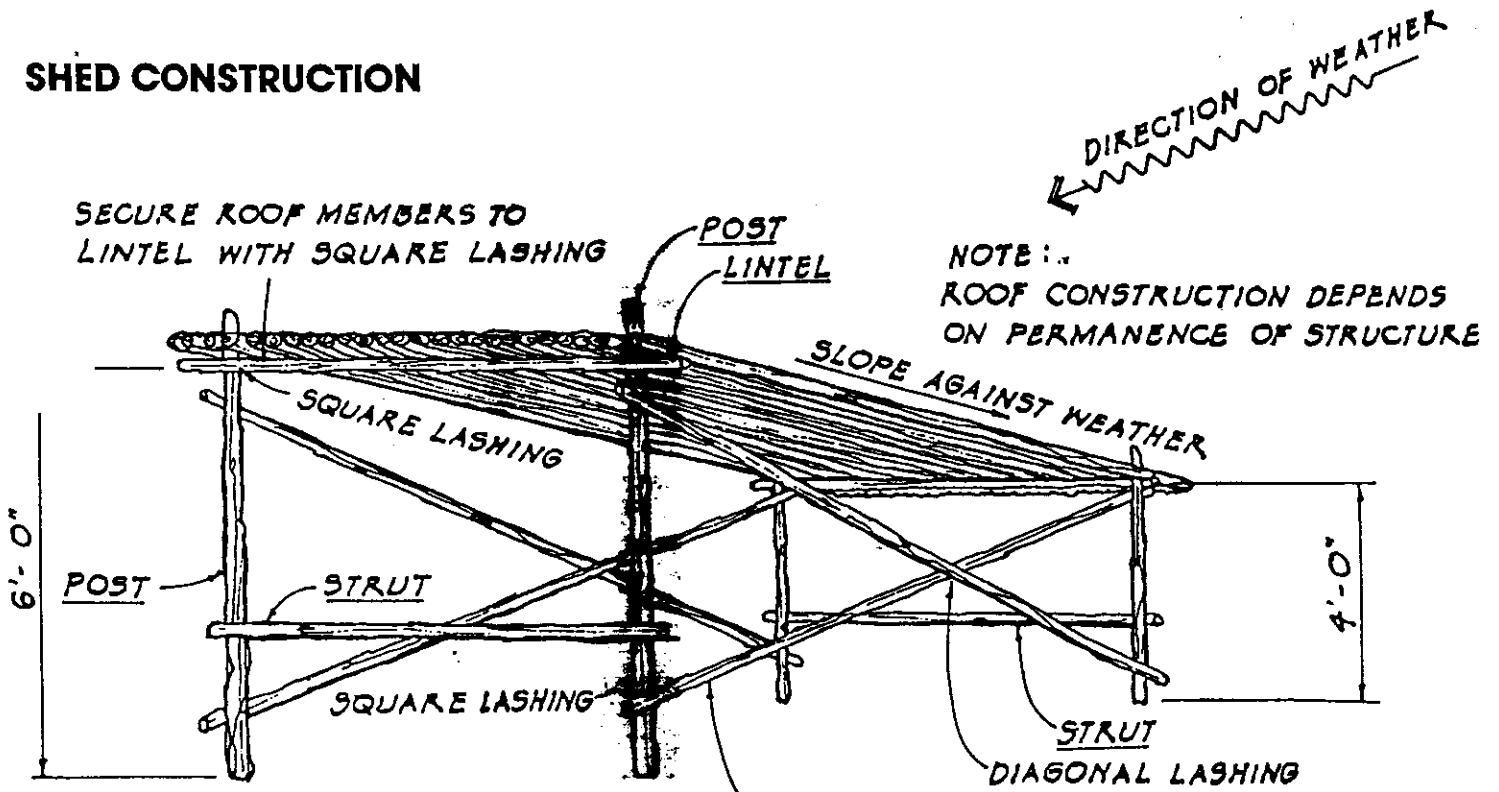
**WASHSTAND**



Tin can cover

**LATRINE SEAT**

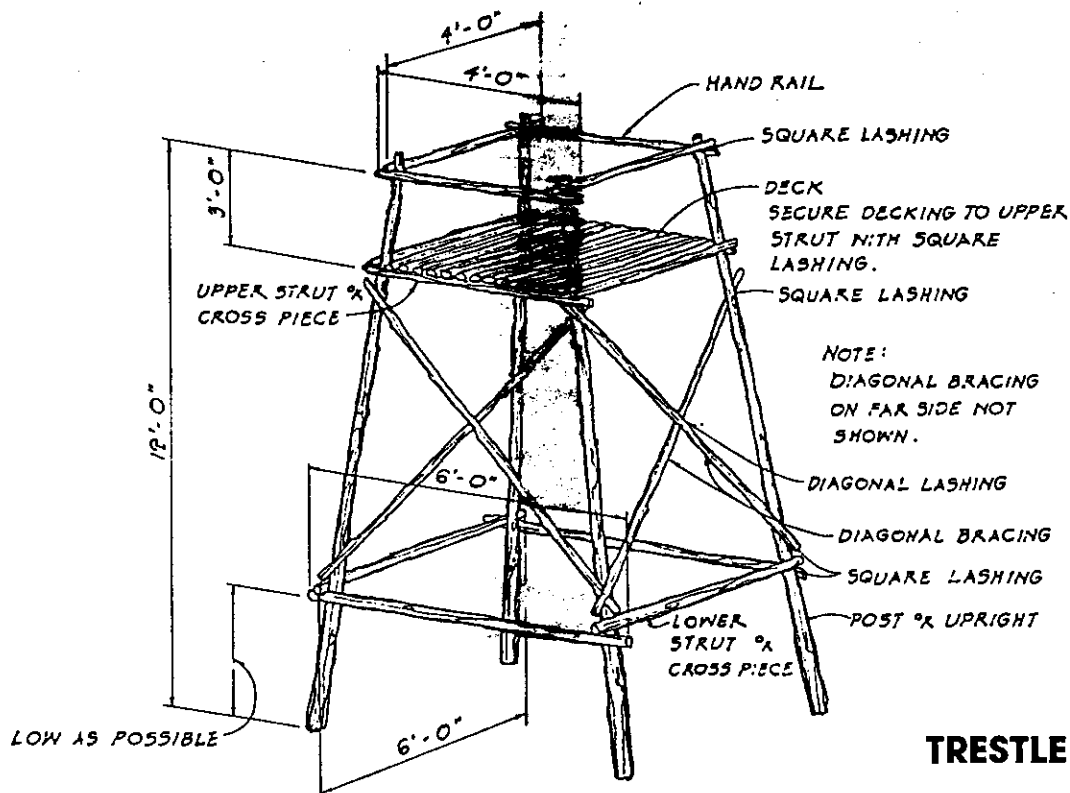
# SHED CONSTRUCTION



Secure roof members to lintel with square lashing. Direction of weather. Post. Lintel. Note: Roof construction depends on permanence of structure. Slope against weather. Square lashing. Post. Strut. Square lashing. Strut. Diagonal lashing. Diagonal bracing (one diagonal used if post is securely driven into ground).

DIAGONAL BRACING  
(ONE DIAGONAL USED IF POST IS SECURELY DRIVEN INTO GROUND)

You're the architect! Your project shed need not be constructed as illustrated above. Follow good lashing methods and practices.

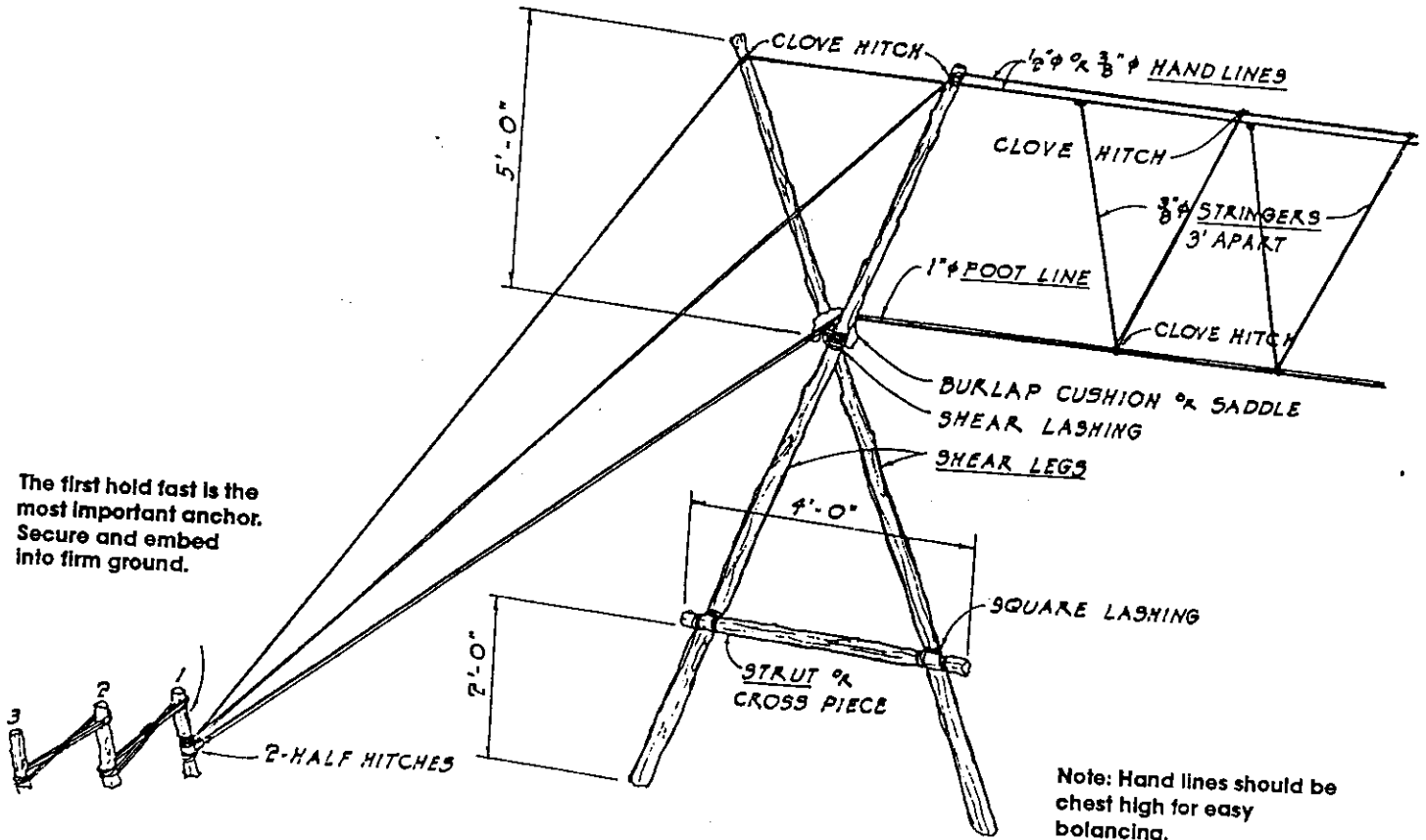


## TRESTLE TOWER

# MONKEY BRIDGE CONSTRUCTION

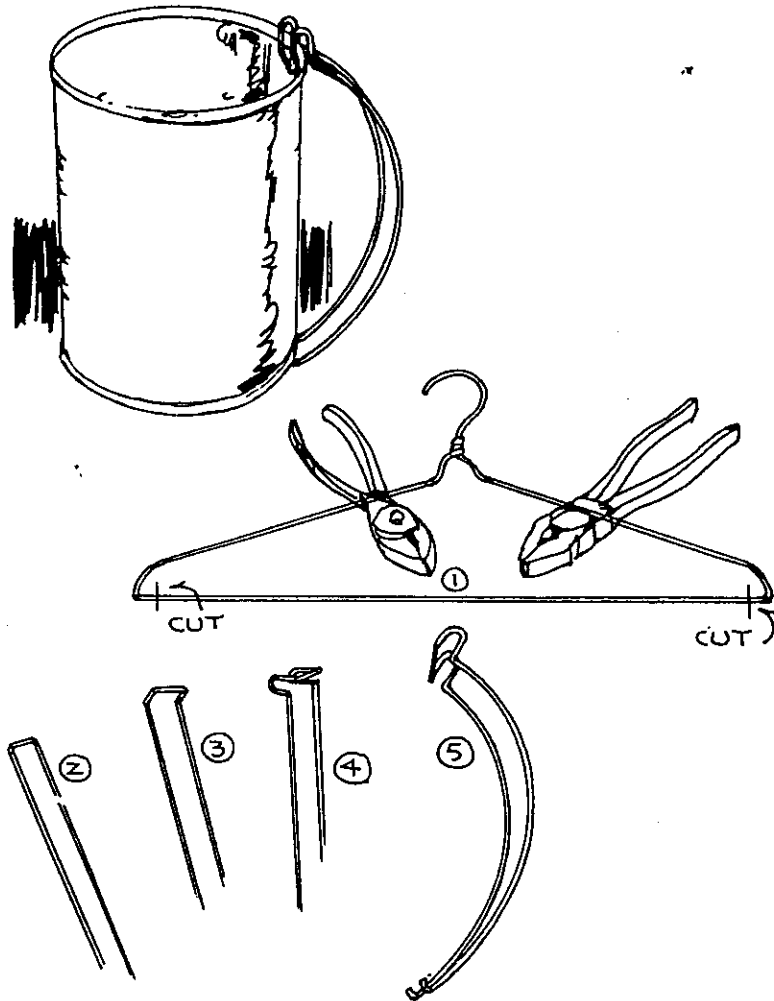
Logs required:

- 4-12' long, approximately 4" butt shear legs
- 2-4' long, approximately 2"—struts hand lines
- 6-3' long, approximately 2"—hold fasts Clove Hitch.
- Rope and lashing as required  $\frac{1}{2}$ " stringers, 3' apart.



# CAMPING

## Camp Gadgets



## Camp Cup

Are you impatiently awaiting the day you leave for the national jamboree or your council's summer camp? Why not make a souvenir drinking cup to take with you? When you return home, you'll have a trophy to remind you of a memorable summer.

A clean tin can  $3\frac{1}{8}$ -inch in diameter and  $3\frac{1}{8}$ -inch high and a lightweight wire clothes hanger are all the materials you need. Use the wire to make a removable handle that clips on the top rim and snaps on the bottom.

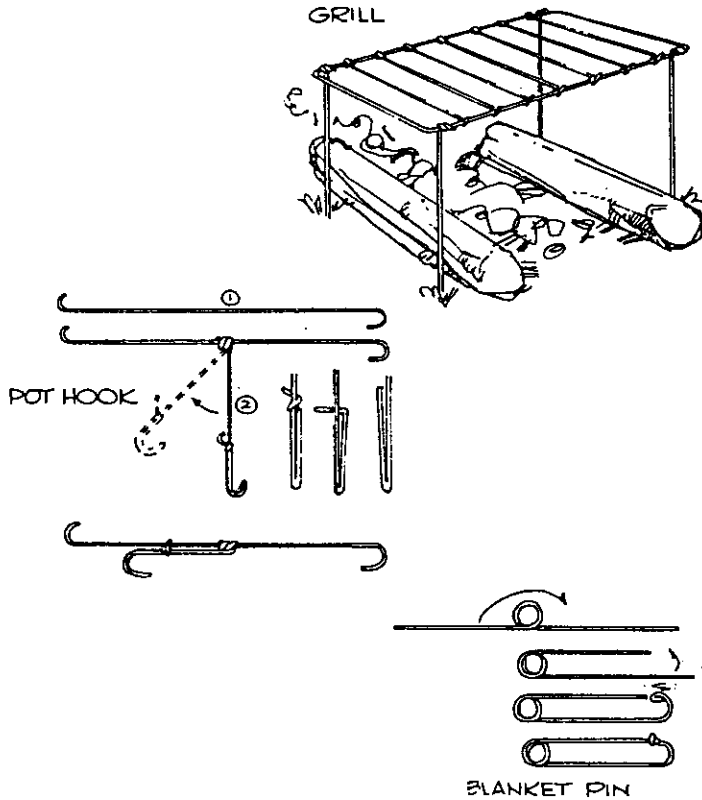
To make the handle, follow these directions:

1. With pliers, cut off the straight length of wire at the bottom of the hanger.
2. Centering the wire in the jaws of the pliers, bend down each side at a right angle.
3. Now, grasping the center portion with pliers, about  $\frac{1}{8}$ -inch from the first bend, bend down each leg separately, again at a right angle.
4. Using the combination pliers, continue bending each side until a U is formed to hook over the top rim of the can.
5. Now, holding the wire just below the U bend, and starting with another right-angle bend, carefully shape the wire into a smooth curve to form the handle. Test it on the can to determine where the bottom bend should be and make a sharp bend upward at that point. Do each leg separately, being careful to bend both legs to match.

You can leave the natural finish of bright tin or lacquer the can outside, using spray paint. Clean the metal before painting by immersing the can in a solution of vinegar and water, then rinse in clean water. Allow to dry before painting.

# New Twists with Old Wire

Wire work is one of the most practical and at the same time, least expensive, of camp handicrafts. Few tools and little material are needed. Just a pair of pliers, round-nosed pinchers with wire cutter, maybe a flat file and several pieces of wire of various sizes depending on what is to be made. Wire coat hangers, wire barrel hoops, hay wire, or wire salvaged from crates, bundles of shingles, or an old radio aerial, provide the raw materials.



You might start on big blanket pins. They are always needed in camp and they are hard to find in the stores now.

To make a 3-inch blanket pin take a piece of stiff wire about 10-inches long and proceed as shown.

File the end to a point. Carefully bend the catch so the point is guarded. Smooth the point on a pocket whet stone.

Here's a pot hook that everybody will admire. Take two straight pieces of stiff wire, one about 30-inches long, the other 12 inches. Make a large hook on one end of the long piece (No. 1) and a small hook on the other.

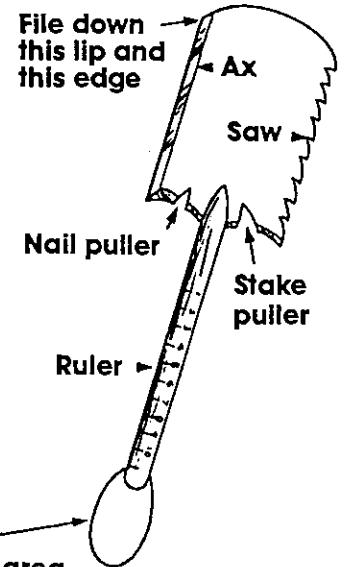
Coil one end of the shorter wire (No.2) twice around the center of No. 1. Ten inches from the coil bend the second wire sharply back on itself. Three inches from the loose end bend at right angles, and wind once around the main shaft and finish with a short hook as illustrated. Then make a large hook of the doubled wire end.

Adjust the angle of part two so that friction will hold it from slipping when the last made hook is hooked over part one, and will slide when hook is released.

The patrol shovel is a handy tool. But with a little Boy Scout ingenuity, and these simple modifications, any Boy Scout can come up with a multipurpose shovel.

Use it as a mini-ax, saw, nail puller, or tent-stake puller, and the handle becomes a handy ruler.

## MULTIPURPOSE PATROL SHOVEL



Make sheath for metal area  
Drill hole in handle  
Insert leather thong for hanging

## A Simple Camp Chair

Make this simple camp chair out of a couple pieces of scrap wood and some old remnants of canvas or carpet.

Cut and assemble the pieces of wood as shown in the illustrations and tack or nail the carpet to the top edge of each piece of wood. These may then be painted, stained, or otherwise decorated.

They make great stools for use in a patrol den or at troop meetings as well as on camping trips where you'd rather not have to sit on the ground. Position one in front of a tree and you'll even have a handy backrest.

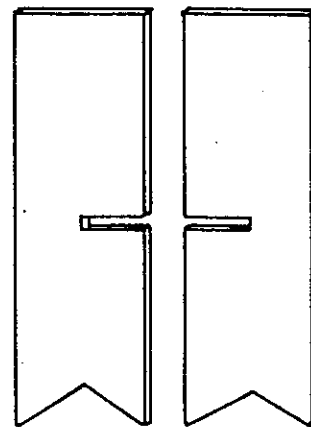


Figure 1

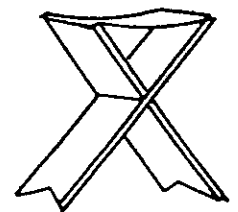
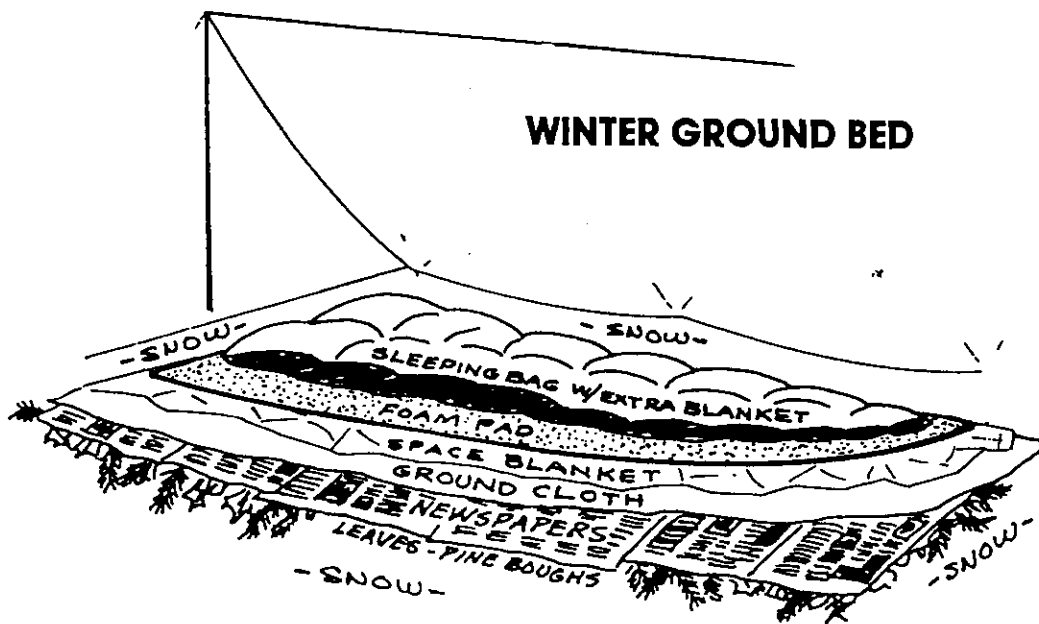


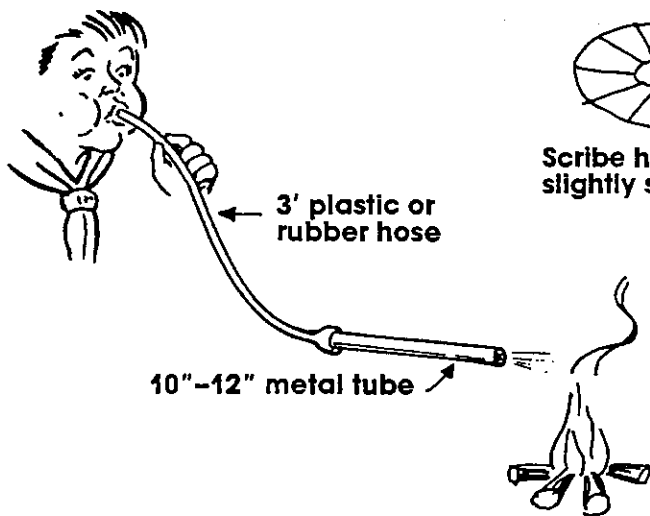
Figure 2



## Building a Winter Ground Bed

To build a winter ground bed, first either clear away or pack down any snow that may cover the ground. Then build several layers of insulation between you and the ground. Remember in real cold weather snow itself can be an insulation against severe cold. The illustration depicts several suggested layers of insulation that form a ground bed.

Extra blankets inside a sleeping bag can help, as can fresh long underwear donned just before climbing into the sack. A stocking cap or a hooded sweatshirt will help keep heat from escaping from your body, through the top of your head.



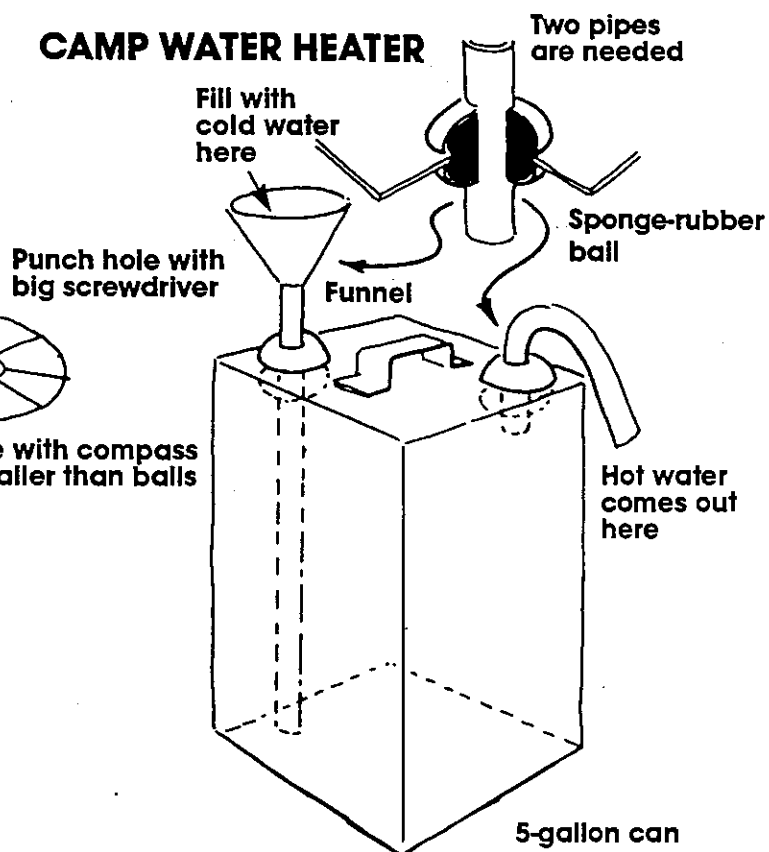
## Left-Handed Smoke Shifter

This is a great little gadget to have in a patrol chuck box. It'll help you get that ornery fire started by letting you put the wind right where you want it. Begin with 3 feet of plastic

hose,  $\frac{1}{4}$ - $\frac{1}{2}$  inch in diameter. Insert a 10- to 12-inch length of metal tubing into one end.

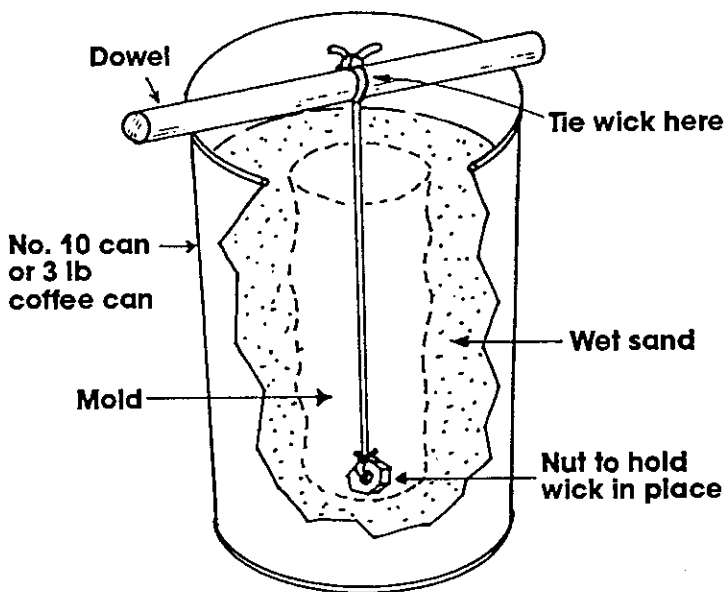
Now simply point where you want the "wind" and blow. While this may hurt the old gag about sending a young Scout to get a left-handed smoke shifter, it can be used to backfire on a wisecracker older Scout.

## CAMP WATER HEATER



Build a practical yet simple camp water heater. This particular design is inexpensive and a hit with most campers. When a cup of cold water is poured into the funnel, a cup of hot water comes out the hose.

## SAND CANDLE



To make sand candles, you'll need:

- String or wick
- Sand
- A ladle
- Newspaper
- A dowel
- A pail
- Paraffin
- Hotplate
- Extension cord
- Double boiler
- Paper towels
- Screw, bolt, or nut

Fill the pail with wet sand. Make a mold in the sand by moving the sand around with your fingers, a spoon, or a knife. Make any design you would like from a simple circle or square to a more intricate design like a paw print. Be sure the edges of the mold are clean and smooth.

If you are using string for a wick, soak it thoroughly in melted paraffin.

Weight one end of the string or wick with a screw, bolt or nut and hold it so the weight just misses the bottom of the mold. Pour in melted paraffin. (Be sure to melt paraffin in a double boiler to avoid the danger of fire.)

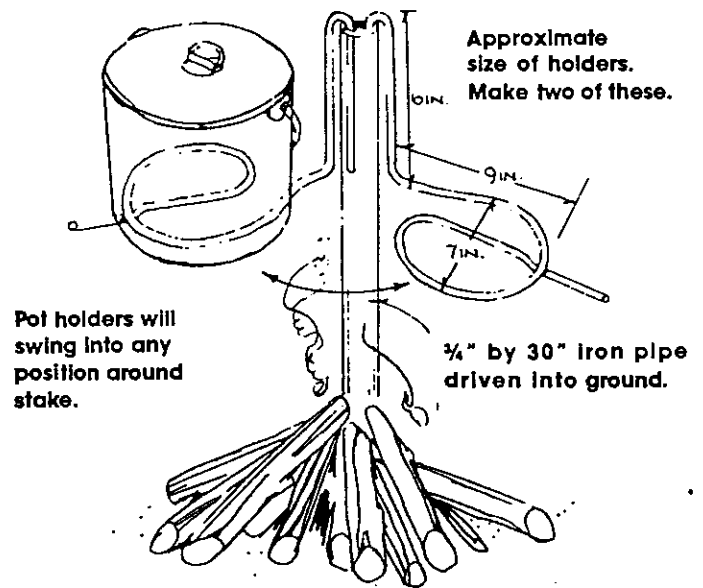
In a few hours you can remove the candle from the sand. It may need a little cleaning, but you'll have a candle.

## Grub Stake

This simple camp kitchen gadget can make the cooking chore much easier. Illustrated is a "Grub Stake" with two pot holders. Actually several may be installed around the iron pipe.

Pot holders are made of  $\frac{3}{4}$ " iron rod bent as shown.

A rod 40" long is needed for each holder.



Build fire at one side of stake.

## Star-Gazing Box

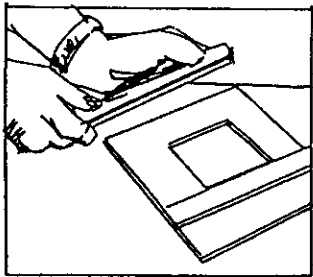
Here is a simplified version of a planetarium which will enable you to study astronomy right in your own room. The box itself consists of two  $7" \times 12"$  sides which are laid over and screwed to two  $6\frac{1}{2}" \times 12"$  sides so that the overall assembled measurement of the box is  $6\frac{1}{2}" \times 12"$  (inside dimensions at the ends).

The top, into which your star map slides are inserted, should be made  $6\frac{1}{2}$ -inch square to fit inside one end of the box snugly. Use screws to fasten it. The top has a 3-inch square opening cut into it. Dado grooved sticks at opposite sides allow your card slides to slip in smoothly. A stop block keeps cards from sliding right through.

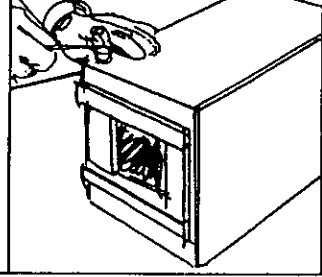
With a test card in the opening, beam your flashlight into the box to find the best angle for reflecting light through the holes. In general, the best results seem to be obtained if the beams of the light strike the side of the box just below the corner of side and top. Now you can screw in your two holders so that the flashlight will be at the right angle.

The top holder is cut out in a U-shape to fit your particular flashlight, the bottom one has a hole or inverted U big enough to allow the flashlight to slip in easily.

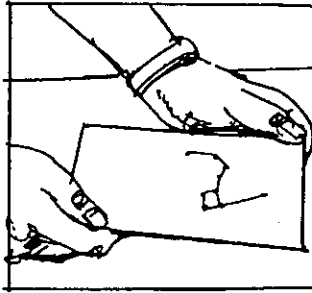




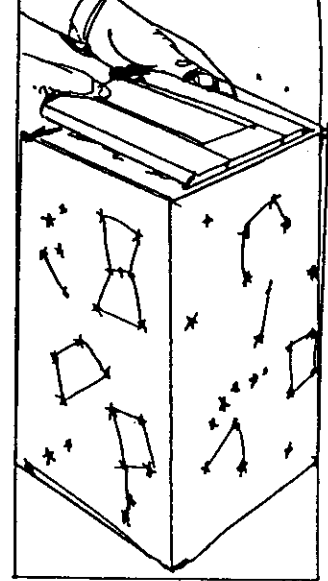
1. Cut a 3"x3" opening in the box top, slides fit grooves in sideboards.



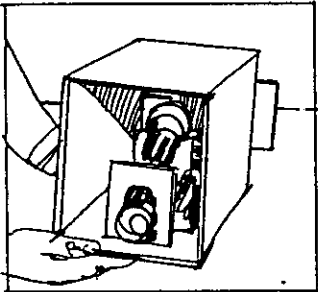
2. Assembled box is 12" long, 6 1/2" square inside ends. Top fits snugly.



3. Make star cards on heavy paper by punching out all the constellations.



4. Slip star card in place. Experiment to get best angle for the flashlight.



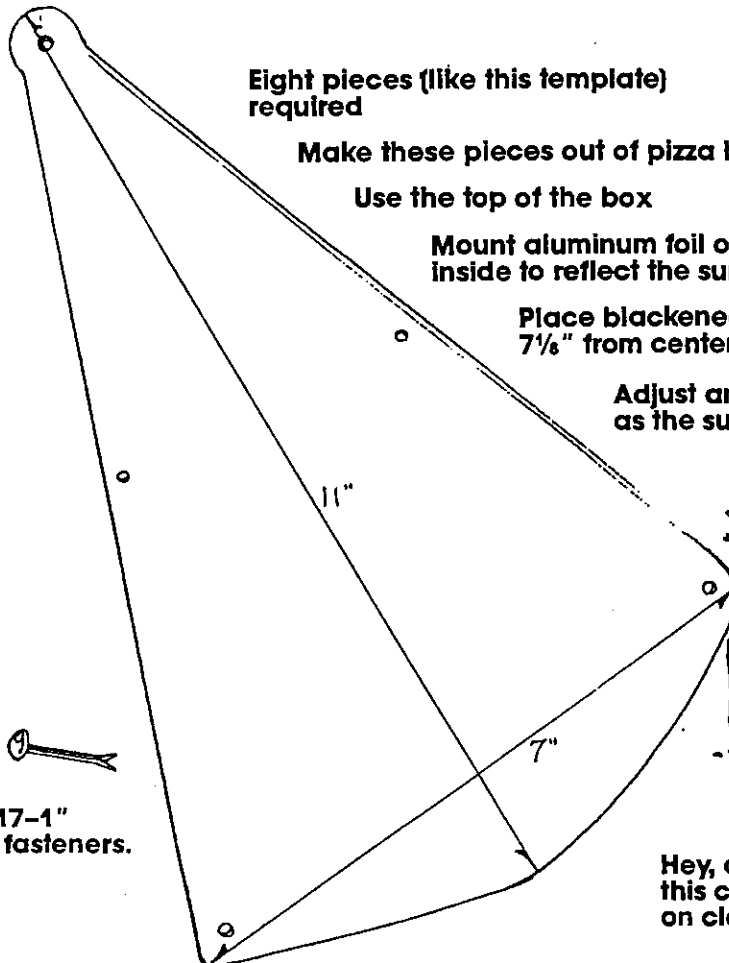
5. Two flashlight holders keep light source steady for projecting the stars.

Each constellation is laid out on heavy paper in accordance with the diagram given in any book on astronomy. Punch a hole at each star location, trying to make holes larger or smaller as indicated on the relative brightness charts in your source book. The edges of the holes should be smooth so that the light beam can go through evenly. A

high-speed drill with a 1/8" bit helps to make clean holes in thick paper.

The completed star-gazing box can be decorated by covering it with heavy wrapping paper on which you have drawn a variety of constellations or horoscope signs with India ink.

## Sunpowered Portable Parabolic Reflector



Eight pieces (like this template) required

Make these pieces out of pizza boxes

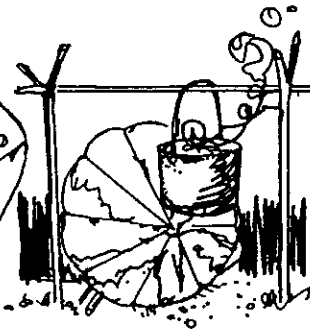
Use the top of the box

Mount aluminum foil on inside to reflect the sun

Place blackened can/pot approximately 7 1/8" from center of reflector

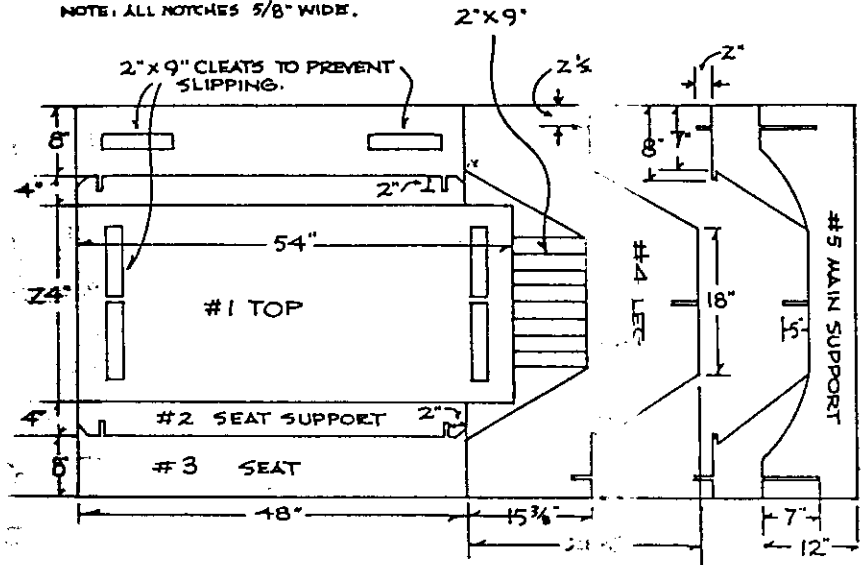
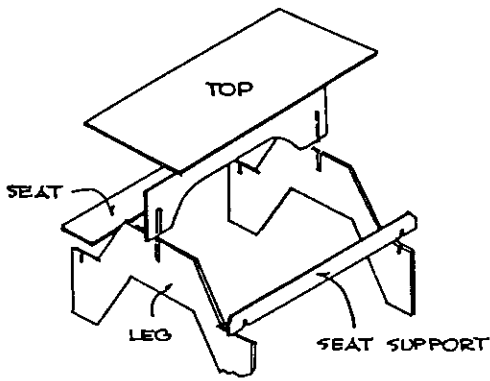
Adjust angle of the reflector as the sun moves

Needs 17-1" spread fasteners.



Hey, don't forget this cannot be used on cloudy days!

MATERIAL: 5/8 PLYWOOD 4'x8' SHEET  
 NOTE: ALL NOTCHES 5/8" WIDE.



## Handy Table

This table is ideal for a patrol corner, or for the Scoutmaster's corner. This is especially true if you are using limited space or space that must be shared by other groups during the week. The table can easily be disassembled for storage and reassembled when needed.

## Plastic Bag Mattress

Two plastic bags tied together with rubber bands or twine, and filled with 60-80 sheets of newspaper, proves to be great insulation as well as to add a certain amount of comfort to the hard ground.

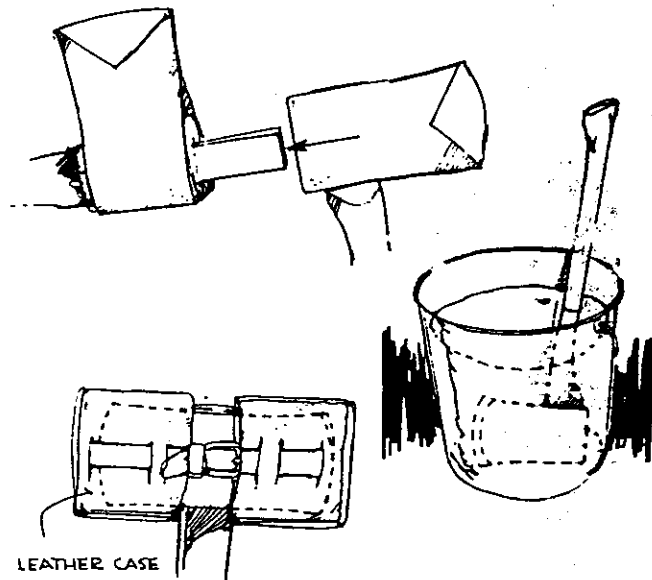
### Materials:

- Two standard size plastic garbage bags
- Four heavy rubber bands
- 60-80 sheets of newspaper

### Procedure

1. Crumple each sheet of newspaper into a ball.
2. Put half the balls into each bag.
3. Fasten bags with rubber bands (A).
4. Join bags with rubber bands (B).

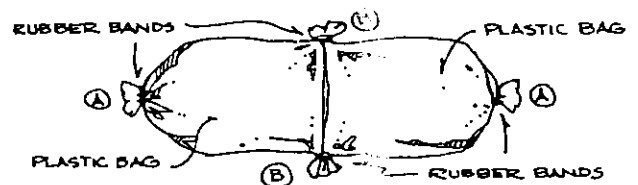
This camping mattress is good for winter camping.



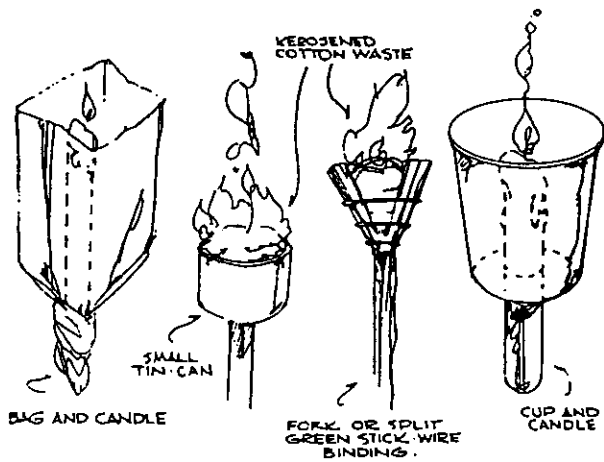
LEATHER CASE

## Ax Repair

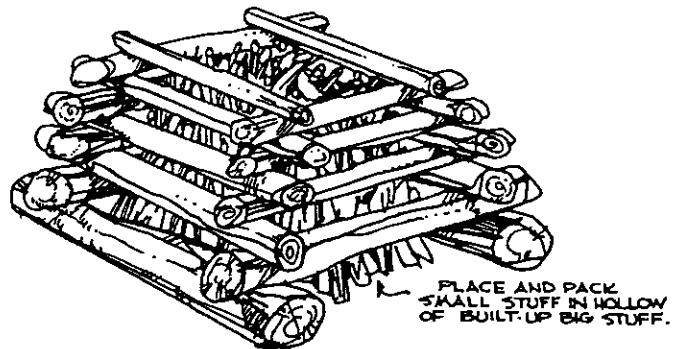
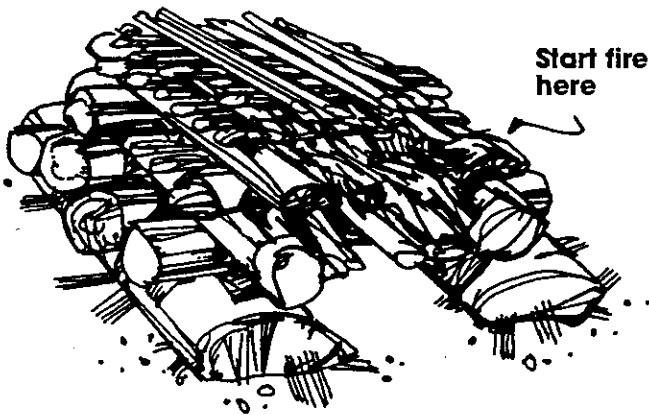
Keep ax heads tight. Drive a new wedge alongside the older one if handle is loose. In an emergency, soak in water for half an hour.



# Torches



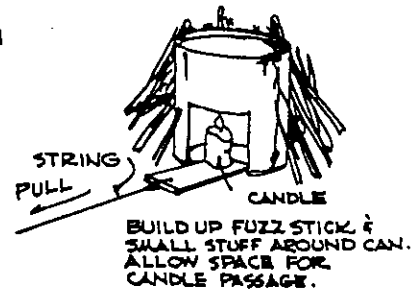
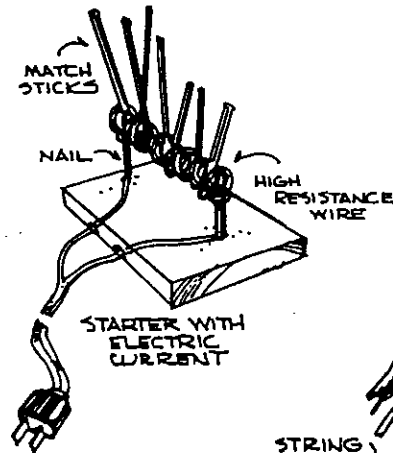
# Campfires and Lighting



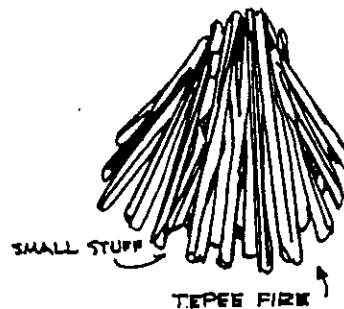
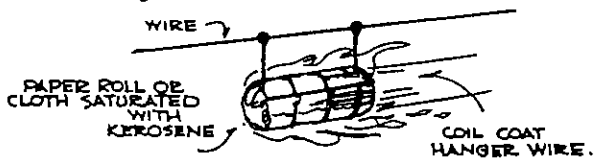
## TOP LIGHTER FIRE

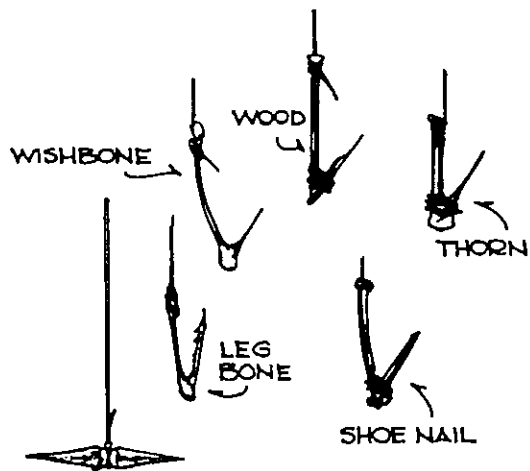
This is built up, course by course, in log-cabin style, but with no tinder at the bottom of the fire. Instead, the tinder course is laid on a solid bed of split hardwood at about the fifth course, as shown in illustration. Several courses of split hardwood are laid, log-cabin style, upon the tinder.

This creates a hot fire on the top of the stack. As the hardwood burns to embers, the fire burns downward instead of burning the whole layout from the bottom in a few minutes. It doesn't need a lot of wood to keep things going. This plan is very helpful where the supply of wood is limited; it is good conservation anywhere—try it!



## FIRE STARTERS



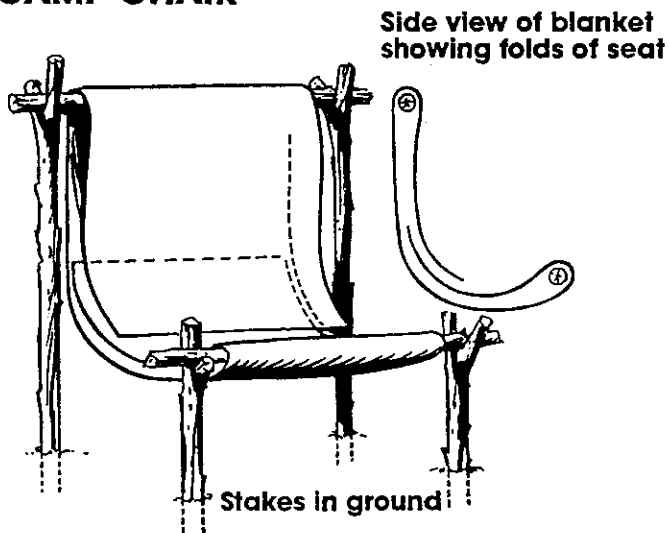


**PRIMITIVE HOOKS**  
USE WOOD, BONES, THORNS. USE STONE  
FOR SINKER.

## Primitive Fish Hooks

Veteran anglers among your Scouts may want to "tie one behind their backs" on your fishing campout by making and using hooks from natural sources.

## CAMP CHAIR



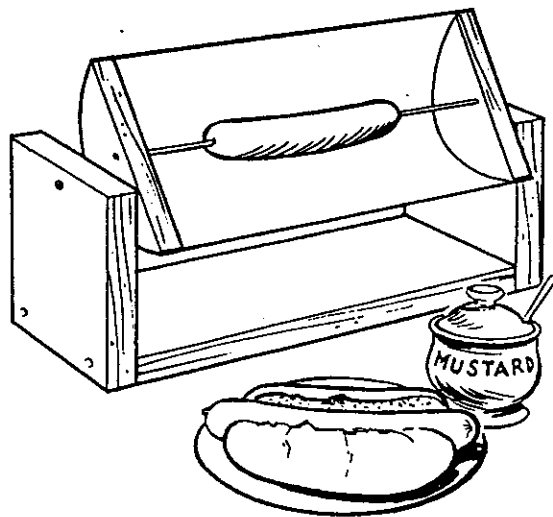
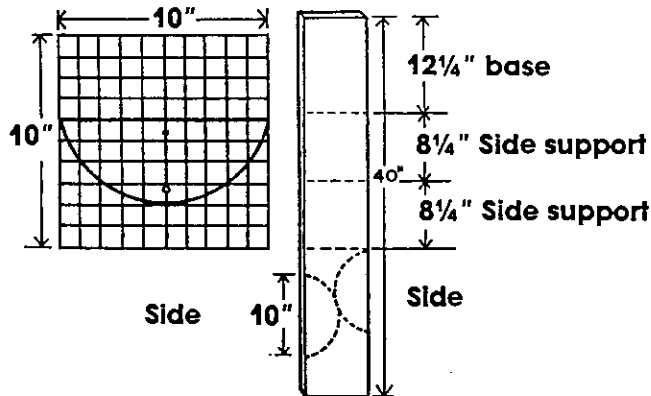
**A handy camp seat**

An interesting idea from the third edition of the *Boy Scout Handbook*, which was in use during the 1920s and 1930s. Unless the legs are driven deep into the ground, it would seem advisable to lash braces from the top of the front legs to the top of the rear legs.

## Solar Hot Dog Cooker.

The first Saturday in October is Scouting Energy Day, and perhaps your troop will want to try an energy conservation project such as collecting newspapers for recycling. Or maybe some of the Scouts would prefer to make a Solar Hot Dog Cooker to harness the sun's power.

On heavy paper, draw grid as shown and duplicate the arc. Cut out the pattern and trace on wood. With jigsaw or coping saw, cut out two side panels and the base and side support pieces. In each of the side panels, drill two holes as shown. The hole at the top of the arc should be slightly



smaller than the diameter of the wood screws. The hole at the bottom should be slightly smaller than the 4-inch nails.

Nail base and side supports together. Then nail the sheet of aluminum to the side panels to make a "canoe." Polish the inner surface of the aluminum with steel wool and wipe it clean. Apply household cement to this aluminum surface and cover it with aluminum foil, shiny side out.

Push the long nails through the holes and fasten with a dab of cement. Clean the nails with steel wool and rinse with water. Mount the canoe on the support stand with the wood screws and washers.

To cook, skewer a hot dog or other food on the nails and aim the cooker toward the sun. In a few minutes, you'll have a well-done treat.

## MATERIALS

40-inch-long piece of 1"x8" wood

1- x 2-foot piece of sheet aluminum, from hardware store

Two 4-inch nails

Assorted short nails

Two 2-inch wood screws

Two metal washers to fit screws

Steel wool

Household cement

Aluminum foil

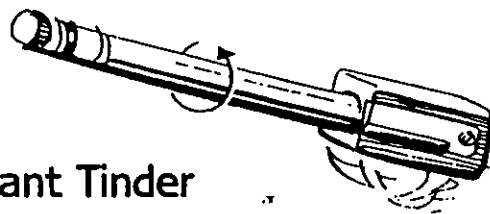
## Foil Boot Liners

On a really cold day, you can keep your feet warm for a short time by wrapping aluminum foil over your socks and then putting on shoes or boots. Because the foil doesn't "breathe," this should be a short-time thing.



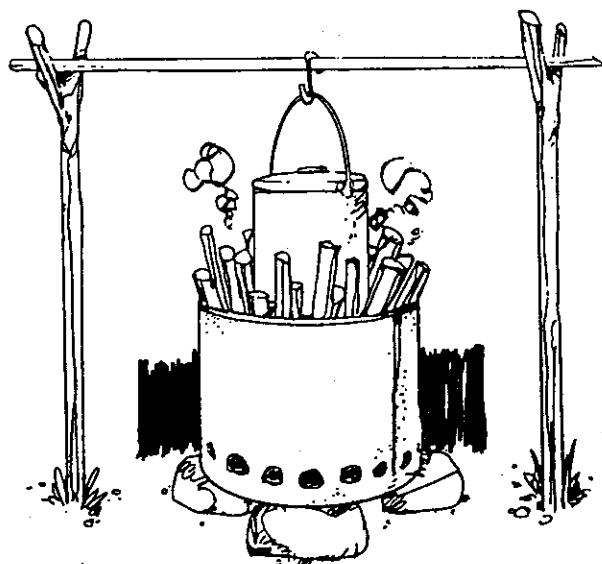
## Sleeping Bag Tips

The BSA's medium-weight sleeping bags are designed to keep Scouts warm at temperatures of 25F to 30F. Heavier bags will be effective at much lower temperatures. Use a flannel sack inside your bag to keep it clean and extend comfort temperature. Wear stocking cap, long underwear, and wool socks for additional warmth.



## Instant Tinder

You'll never be without tinder if you carry a couple of wooden pencils and a pocket sharpener.



Automatic Fire

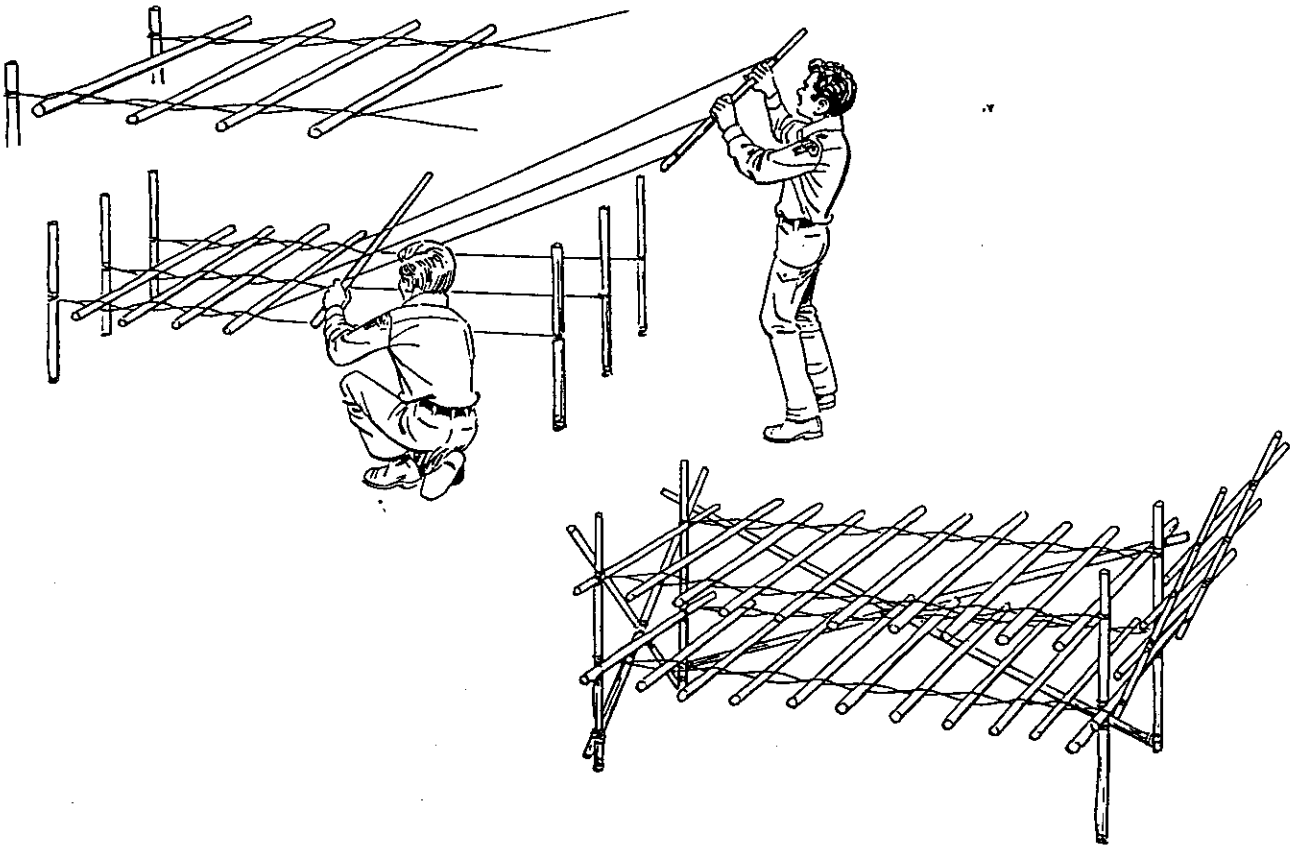
## Automatic Fire

Punch ventilation holes around the bottoms of a large metal drum or bucket. Place it on three flat rocks to protect the soil. The fire is started in the usual way at the bottom of the drum and fed by standing small branches and large twigs on their ends. As the fire burns, the wood sinks into it, and more wood is added.

## Camp Loom

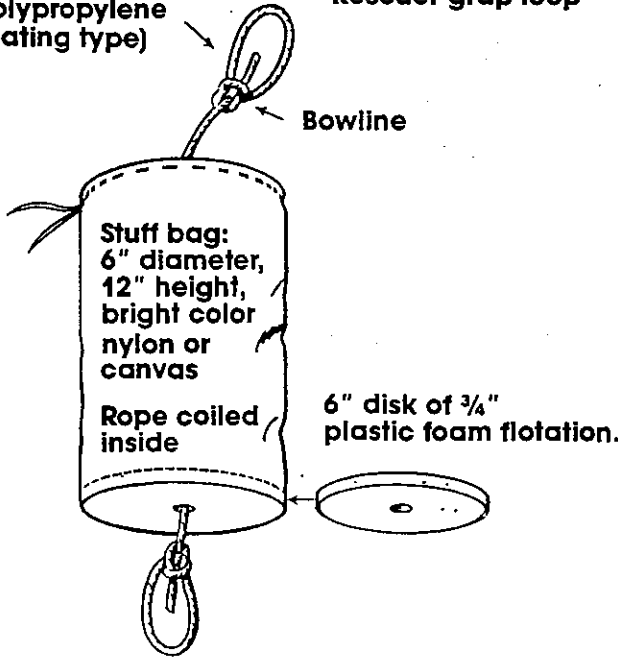
Devices of this type have been used in camp since the earliest days of Scouting. A loom can be used to make table tops and shelving with sticks or to weave primitive mattresses

and lean-to roofs out of grass thatch, palm leaves, or similar materials.



Fifty feet of  $\frac{3}{8}$ " rope  
(polypropylene  
floating type)

Rescuer grab loop



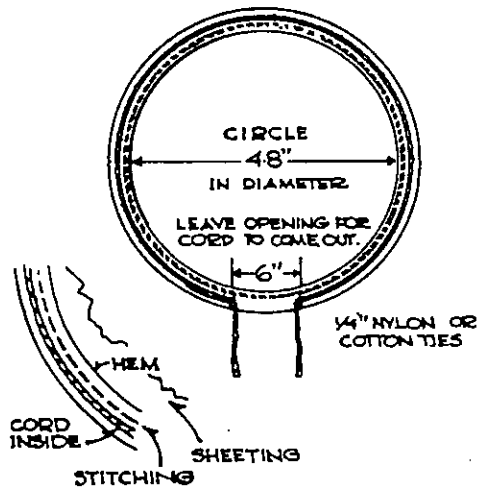
## Stuff-Bag Rescue Rope

Conceived by the Navy during World War II, this device keeps 50 feet of line ready for rescues, is easily carried, and can be thrown successfully with little practice. Polypropylene  $\frac{3}{8}$ -inch rope is best because it floats. Pass one end through the holes in the bottom of the bag and the flotation disk and tie an overhand knot inside the bag. Tie bowlines in both ends for use as grab loops. Stuff the rope into the bag from the open end, permitting the rope to coil naturally inside the bag. Close the bag loosely with the drawstring to keep the rope from spilling out. Now you're ready for practice casts. It's best to throw onto water to get the feel. It also helps for second tries because water adds weight for better throws.



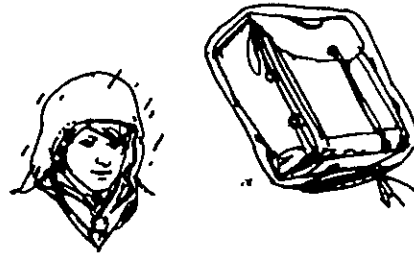
## Blanket Roll Pack

New Scouts who don't have a pack can improvise one with a blanket as the earliest Boy Scouts did. Spread ground cloth and blanket on ground. Lay extra clothes and personal gear along the center line and roll ground cloth and blanket as tight as possible. Tie with cords. Then bend into horseshoe shape, tie ends together and sling over shoulder.



## Backpack Cover

Use clear or colored polyethylene plastic sheeting four to six mils thick. Cut a circle about 48 inches in diameter. Lay strong, 14-foot cord around the edge and fold a 1- or 2-inch



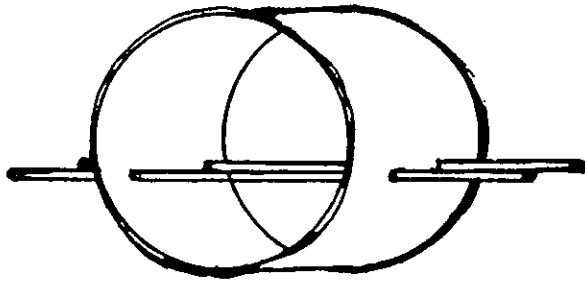
hem over cord. Stitch to sheeting. Be sure the cord will run freely through hem.

To use it, cover pack, pull cord fairly tightly, and tie ends. The cover also makes a usable wash basin, poncho, cover for firewood, and tablecloth.

## Tumpline

A tumpline eases the load of a heavy pack. Make from an old belt or leather strip and some rope: Set grommets in holes

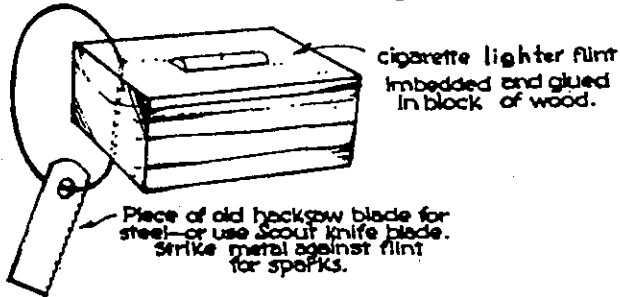




## World's Simplest Reflector Oven

You need a large, clean tin can with shiny interior walls. (To find a suitable can, try restaurants and cafeterias.) Drill holes as shown to accommodate the rack, which is made of iron rods or very stiff wire. Put the oven in front of a small, hot fire and bake away.

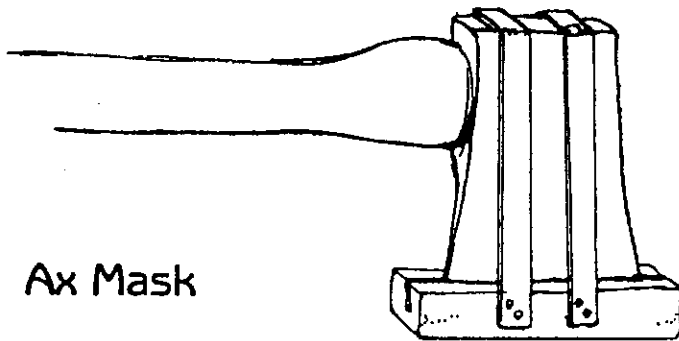
### Flint-and-Steel Firelighter



## Flint and Steel Firelighter

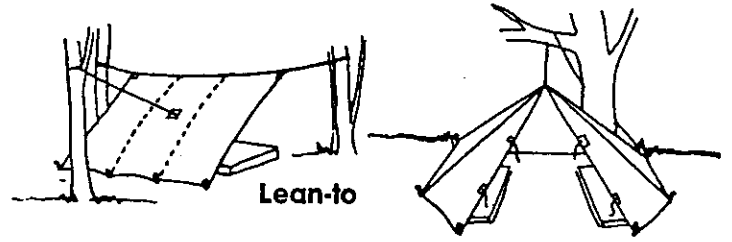
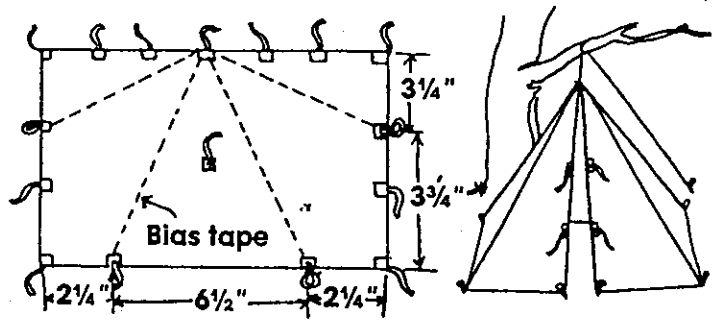
Cigarette lighter flint embedded and glued in block of wood. Piece of old hacksaw blade for steel—or use Scout knife blade. Strike metal against flint for sparks.

This flint and steel firelighter is a handy little sparker a Scout can carry to make a fire without matches.



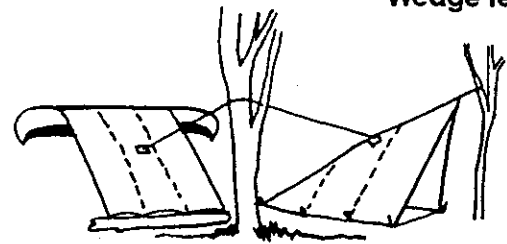
## Ax Mask

Cut a groove in a wooden block and tack on two strips of inner tube as shown.



Lean-to

Wedge tent



Canoe shelter

Modified forrester

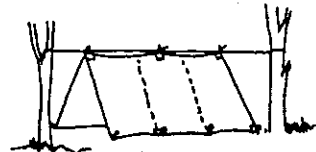


Dining shelter

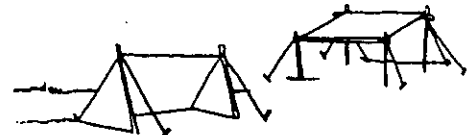
Wigwam/gypsy tent over framework of lashed saplings



Hooded lean-to



"A" tent

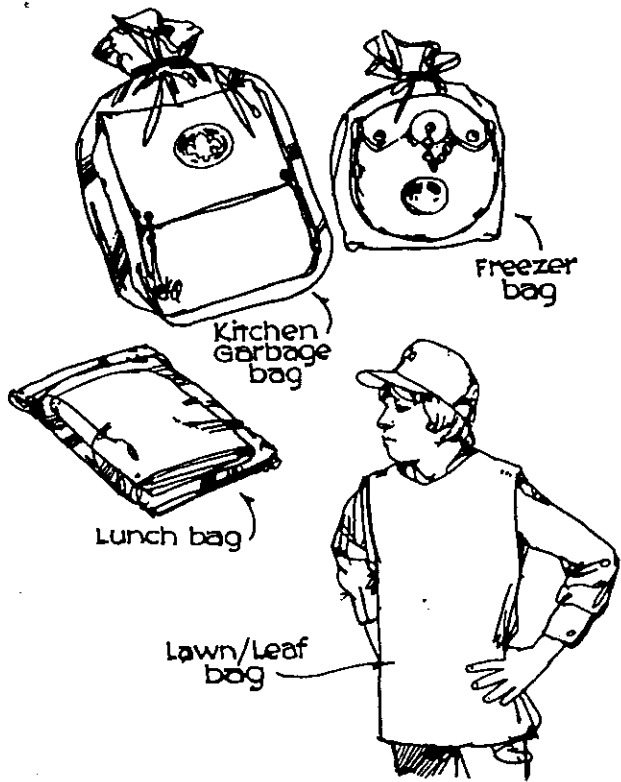


Baker tent

## Versatile Tarp

With a 7- by 11-inch piece of canvas, patrols can make this versatile tarp. Stitch ties and tabs between canvas and reinforcing squares. For waterproofing, use sprays sold in most home-furnishings, hardware, and variety stores.





## Film Can Shakers

Punch holes in the top of 35mm film cans and you have serviceable salt and pepper shakers. Cover the holes with tape when not in use; stick tape on the side when you're using the shaker. Film cans can also be used to carry wooden matches, if you cut them to fit.

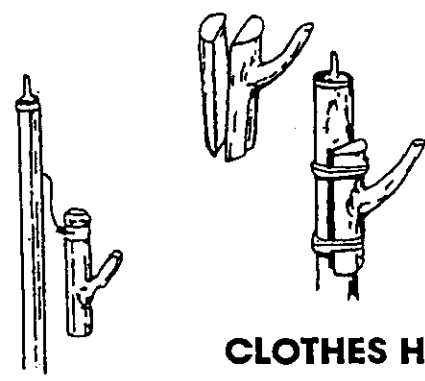


## Plastic Bags in Camp

Bag Size	Use
Lunch bag	<ul style="list-style-type: none"> <li>• Keep wallet or watch dry</li> <li>• Emergency cup</li> </ul>
Freezer bag	<ul style="list-style-type: none"> <li>• Store handbook, socks, underwear</li> <li>• Emergency canteen</li> <li>• Pillow (with stuffing)</li> </ul>
Kitchen garbage bag	<ul style="list-style-type: none"> <li>• Store dirty clothes and shoes</li> <li>• Tote litter bag</li> <li>• Pack</li> <li>• Bedroll</li> </ul>
Lawn or leaf bag	<ul style="list-style-type: none"> <li>• Ground cloth</li> <li>• Lean-to</li> <li>• Cover firewood, pack, bedroll</li> <li>• Make temporary poncho</li> </ul>

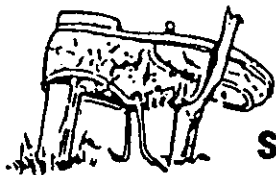
## SCOUTMASTER'S CHAIR

Make a comfortable "Scoutmaster's chair" from a piece of heavy canvas or a canvas hammock.



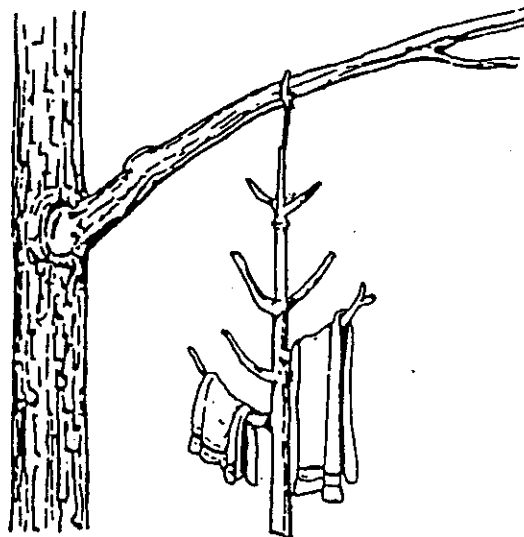
## CLOTHES HOOKS

It is easy to make clothes hooks to lash to the tent pole.



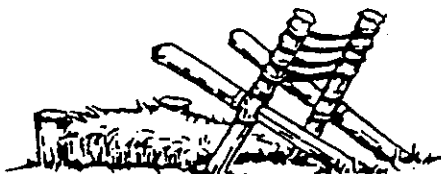
### SHOE RACK

Keep shoes dry and off the ground on a simple shoe holder.



### HANDY HANGER

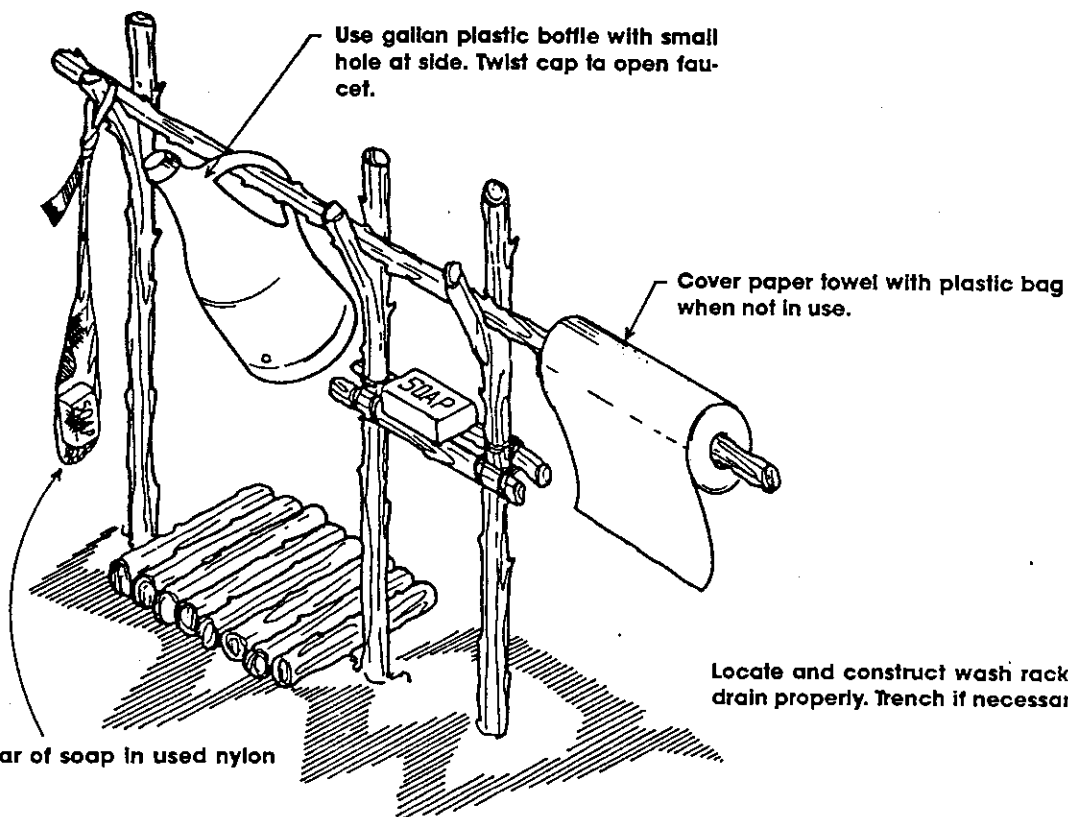
Branch with short side branches solves problem of where to hang things.



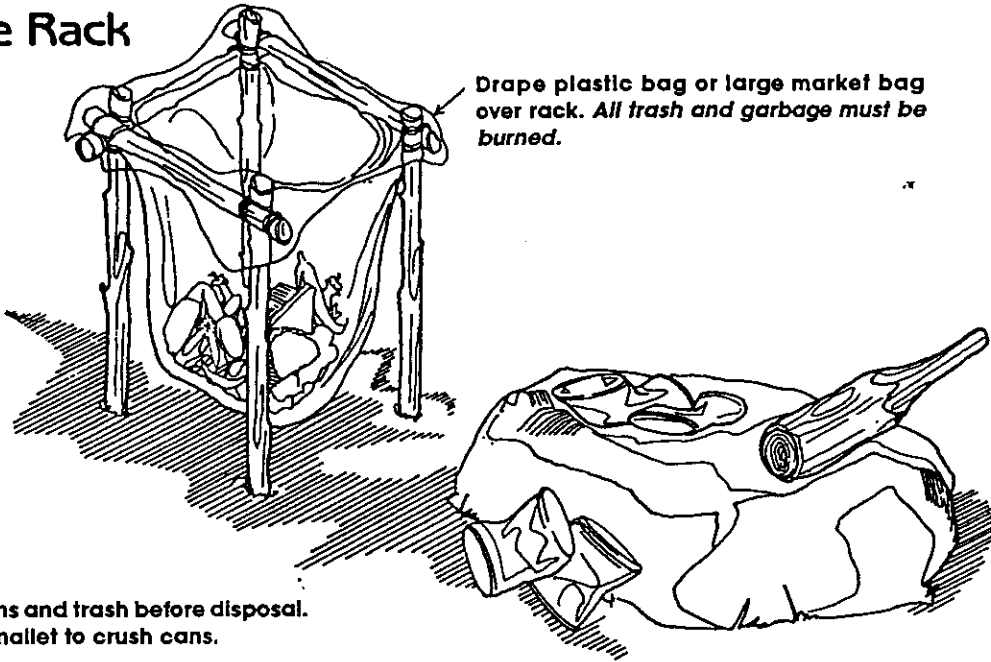
### CAMP CHAIR

No rocking chair in camp but this Scouts chair will give you loads of comfort.

## Hand Washing Rack



# Garbage Rack

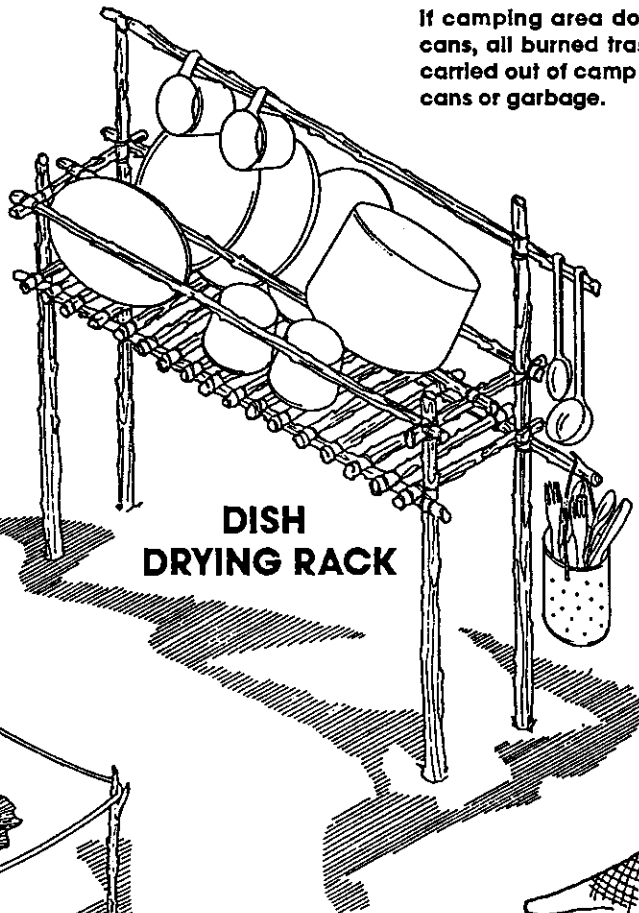


Drape plastic bag or large market bag over rack. All trash and garbage must be burned.

Burn all tin cans and trash before disposal. Use wooden mallet to crush cans.

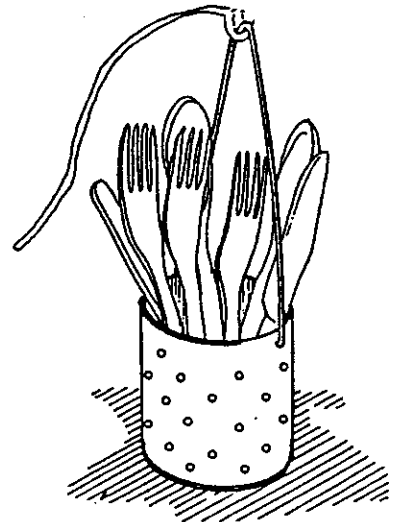
If camping area does not provide trash cans, all burned trash and cans must be carried out of camp grounds. Do not bury cans or garbage.

# Dishwashing

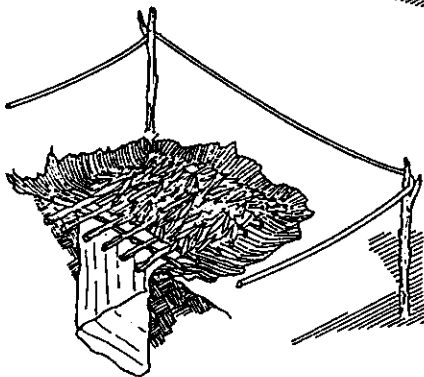


**DISH DRYING RACK**

Rope off pit for safety.

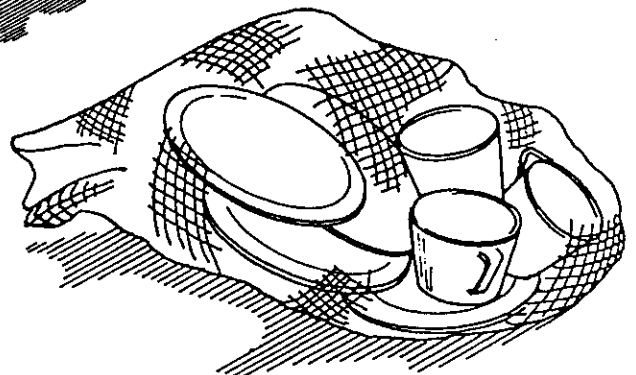


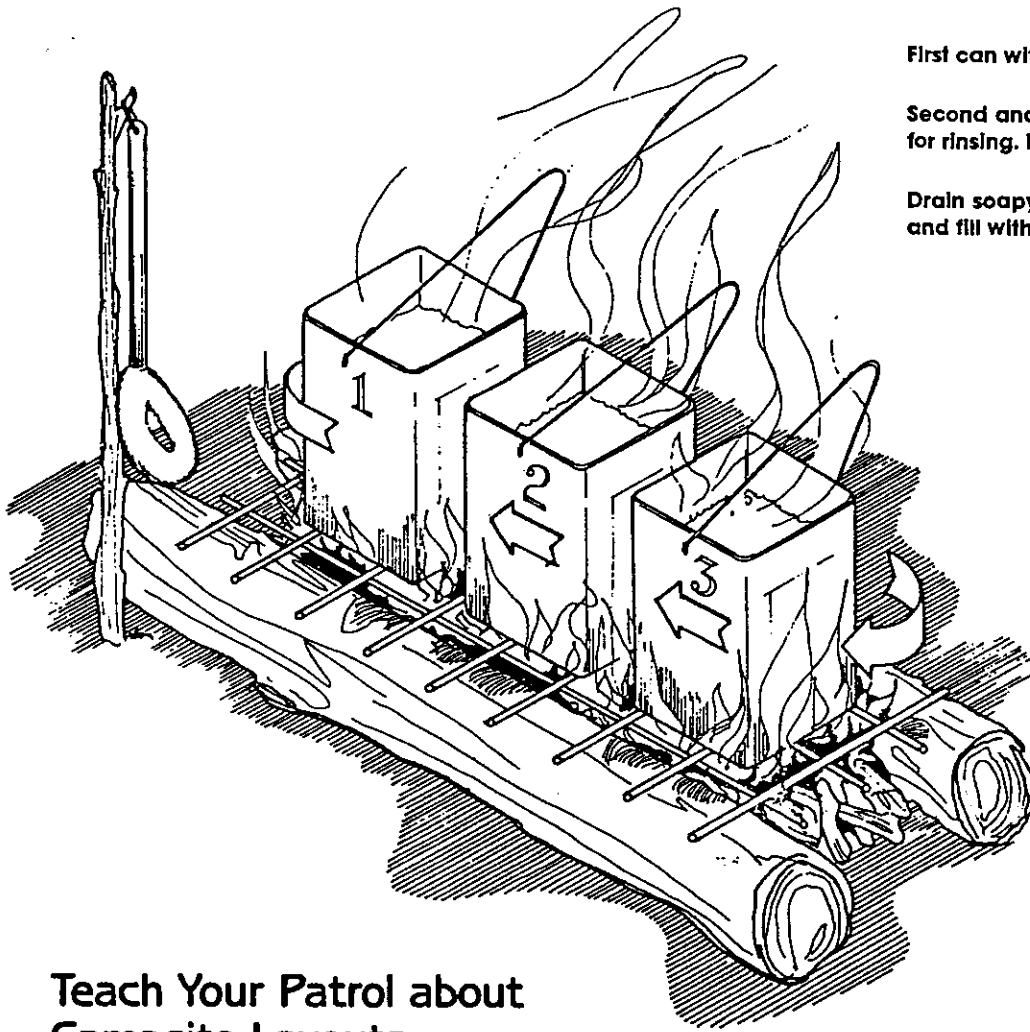
Nylon mesh bag for rinsing. Perforated can utensil rinse.



**GREASE PIT**

Dig approximately 12-inches deep and 8-inches square in width. Place twigs as shown and place pine needles or grass over to trap grease.





First can with hot water and detergent.

Second and third cans with boiling water for rinsing. Rotate cans after each meal.

Drain soapy water from first can, cleanse and fill with water and rotate as shown

## Teach Your Patrol about Campsite Layouts

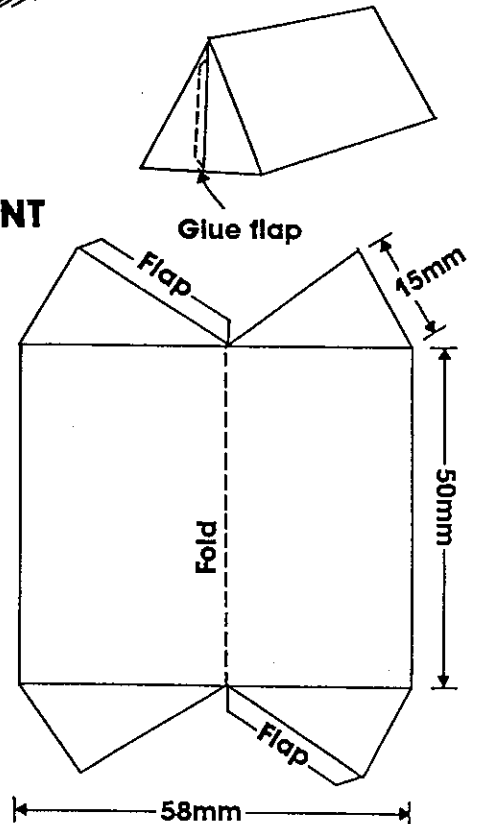
This is much more realistic and interesting if you can set up a model campsite. You can use a large tray with sand or soil to represent the ground, or better still, use the models and materials from a model railway such as model trees and people. If your site can have hedges and rocks and so on, this will enable you to discuss making use of shelter. Model brick or stone walls can also be useful. Use a strip of plastic for a river.

Below we have suggested some models you can make. We have only given the dimensions for the tent because you need to be able to get the shape of the ends right. The others you can make to an appropriate scale.

If you have time you can make model gadgets (such as a dresser)—and if you have the time and inclination you could make this part of your patrol/troop meeting. Give each patrol some dowl and string and spend part of the evening making gadgets for your model campsite.

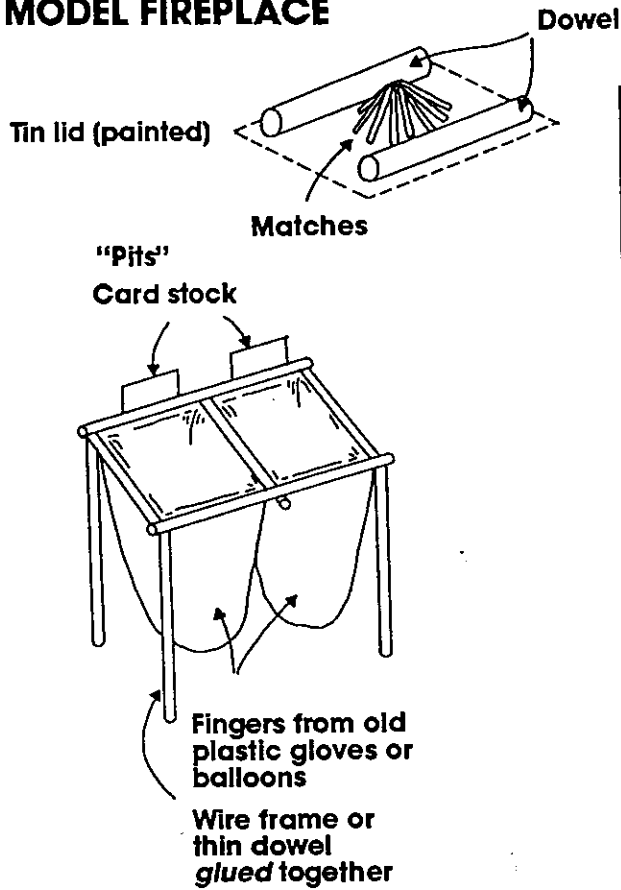
You will find it helpful preparation to read pages 24-25 (simple two-man campsite) in 'The Scout Badge and The Scout Standard', and pages 9-12 (what to look for in a site, choosing a site and camp kitchen layout) in 'The Advanced Scout Standard'" (both books by Steve Scholes and published by The Scout Association).

### MODEL TENT

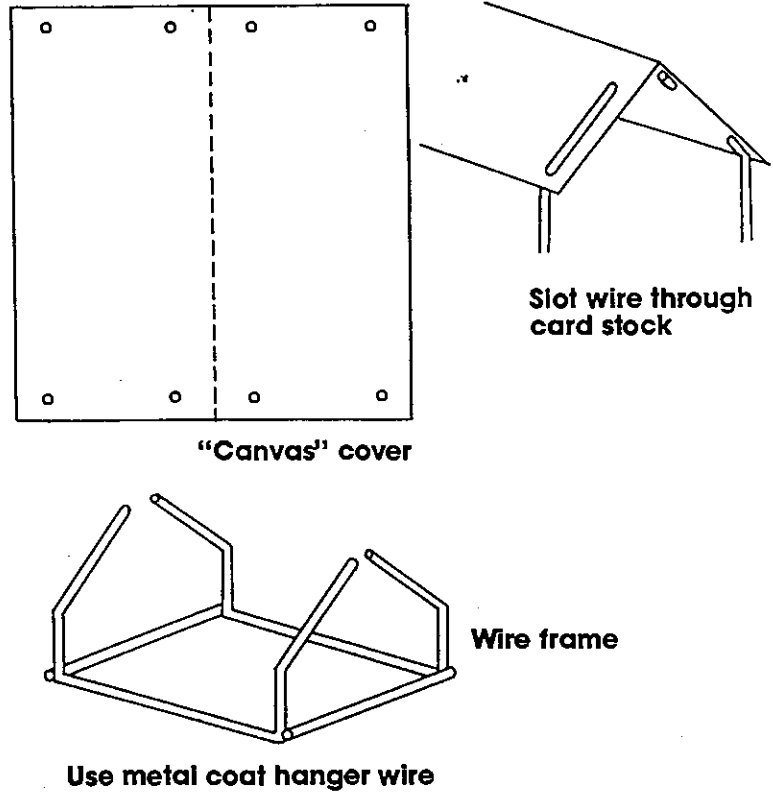


Make this out of light card stock. Alternative—Make one with the above measurements for a store tent and another with doubled measurements as a sleeping tent.

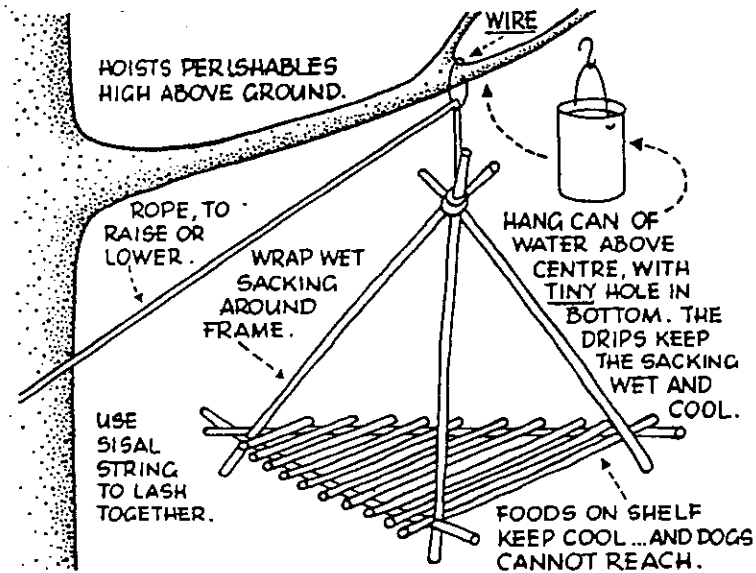
## MODEL FIREPLACE



## DINING SHELTER

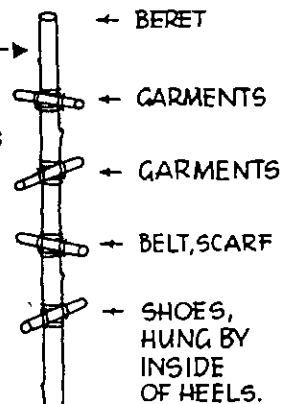


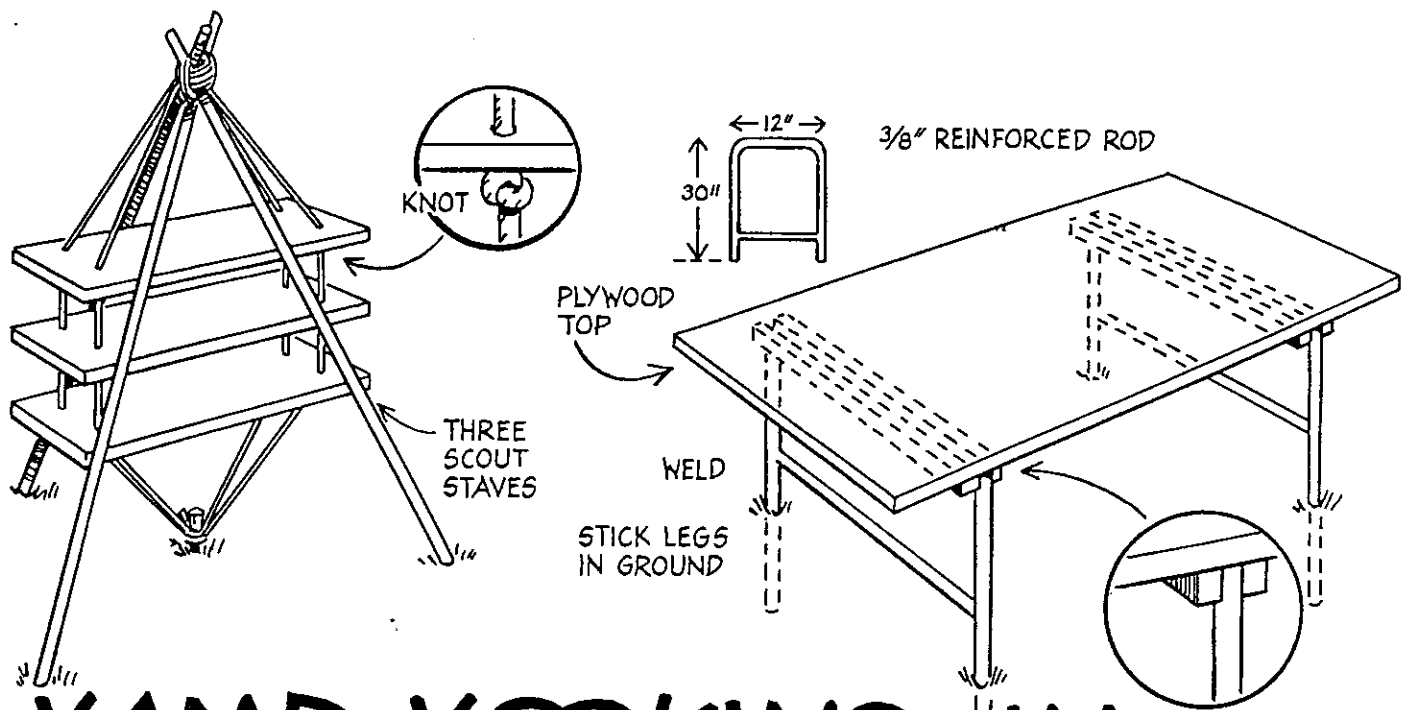
## Tree "Fridge"



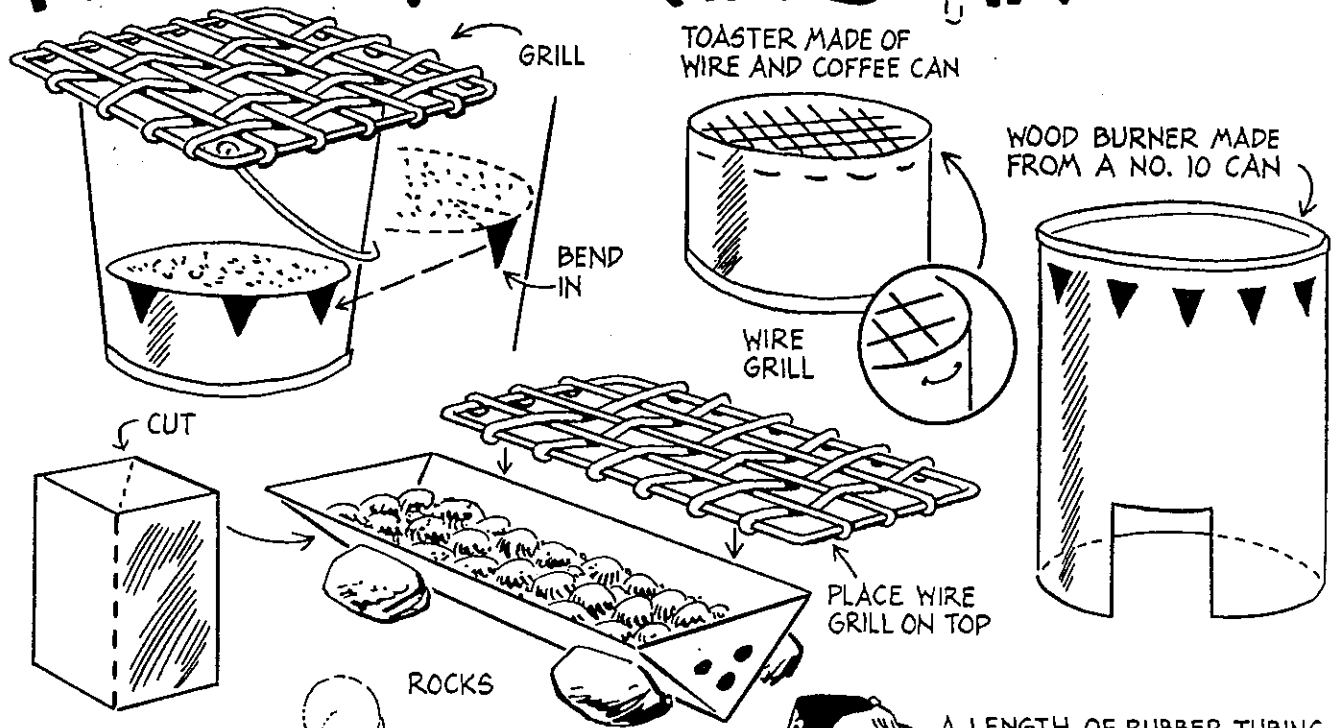
## TOGS RACK

ALSO USEFUL IN ABLUTIONS AREA, AND IN CAMP KITCHEN.

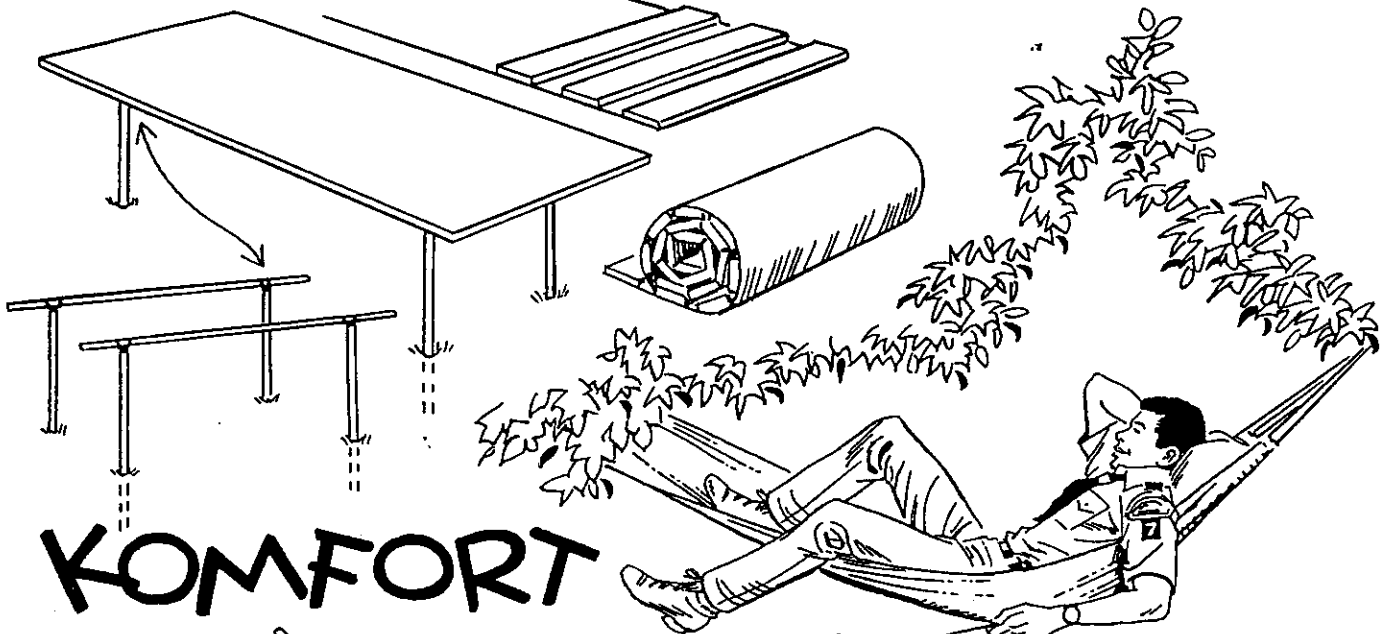




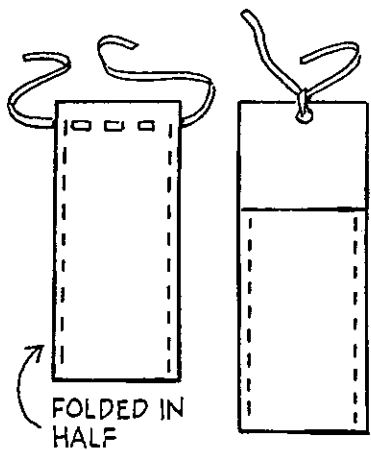
# KAMP KOOKING IN



LATHING STAPLED TO OILCLOTH



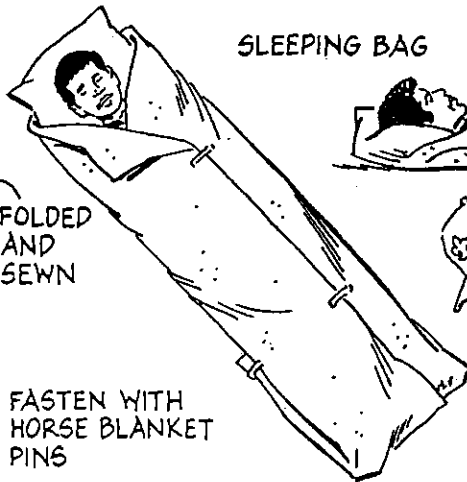
# KOMFORT



FOLDED IN HALF



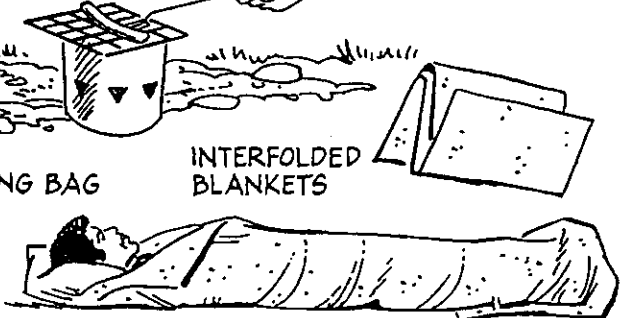
CANVAS



FOLDED AND SEWN

FASTEN WITH HORSE BLANKET PINS

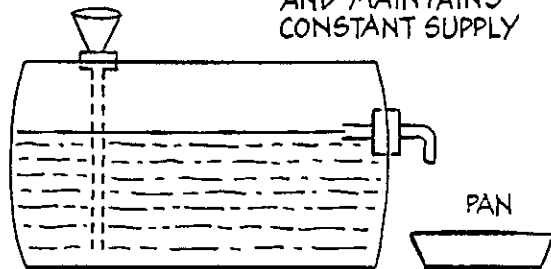
SLEEPING BAG



INTERFOLDED BLANKETS

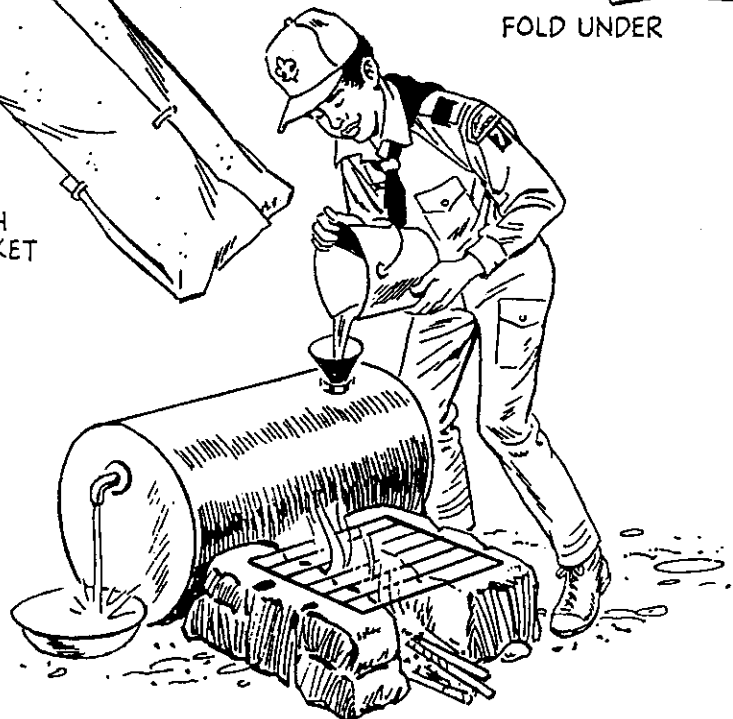
FOLD UNDER

TO DRAW HOT WATER, POUR IN COLD - THIS FORCES OUT HOT WATER AND MAINTAINS CONSTANT SUPPLY



PAN

DIAGRAM OF HOT WATER SUPPLY TANK



# Your Clothing Is Your Key to Winter Comfort

**Headgear.** This is personal preference but it is always a good idea to have at least one stocking or knit cap for use under a parka hood or in the sleeping bag. Soft, insulated caps with ear flaps are good, but should be loose-fitting.

**Eye protection.** Goggles are best but sunglasses and homemade snow shields will reduce glare from sun off the snow, a situation which can cause painful problems, even "snow blindness."

**Scarf.** Wool or synthetic fiber makes an excellent cold weather protector, but make sure it is plenty long.

**Parka.** The anorak or pullover should be windproof, should reach almost to the knees, and be large enough to fit over all the other garments. It should have a hood.

**Hand covering.** This is a personal preference. Use any loose-fitting combination of the following: wool gloves, wristlets, wool mittens, foam mittens, dacron mittens, leather oven mitts, wind and waterproof expedition mitts.

**Jacket.** A lightweight jacket used in combination with other outer garments makes a better "layering" system than one thick, heavy jacket. A hood for extreme cold is a welcome addition.

**Vest.** This insulated garment keeps the vital organs—heart and lungs—warm. Best style has a flap in back to protect the kidneys. Detachable sleeves convert a vest to an insulated jacket.

**Sweater.** Use a wool or wool synthetic sweater to layer.

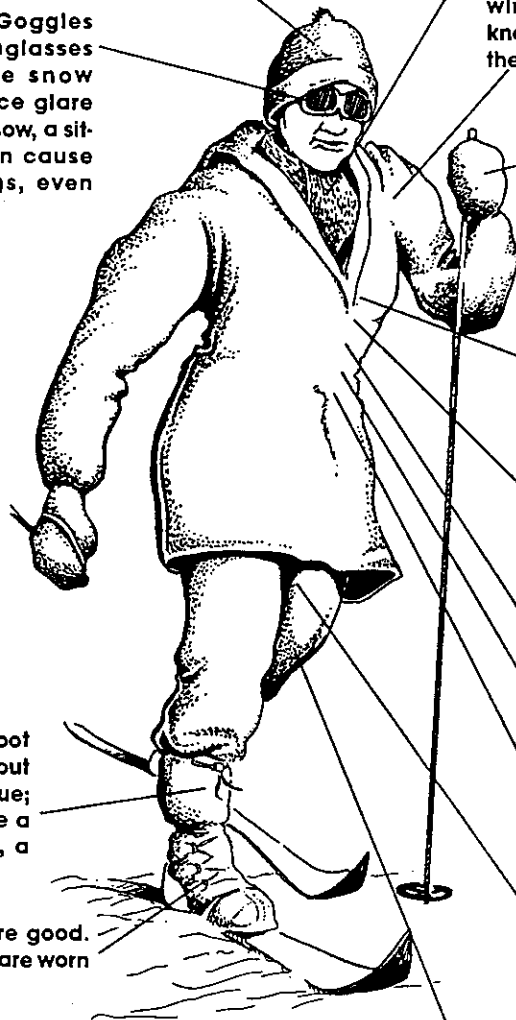
**Shirts.** Wear full-cut, loose wool, or wool-and-synthetic fiber shirts.

**Long underwear.** May be wool, wool and cotton, wool and synthetic fiber, and synthetic fiber. Keep a spare set for emergencies and to sleep in.

**Pants.** Wear full-cut, preferably with suspenders. In extreme cold, lightweight, windproof pants may be worn over everything.

**Insulated chaps.** Equipped with snaps down the inseam, they may be put on or taken off without removing the boots. Taken off, the legs may be zipped together to form a half-bag inside the sleeping bag.

**Boot liner.** A specially cut piece of 1-inch foam can be wrapped around the foot, held in place with a nylon "sock" and used with the mukluk in very cold weather. Also, quilted, synthetic liners are used and, sometimes, felt liners.



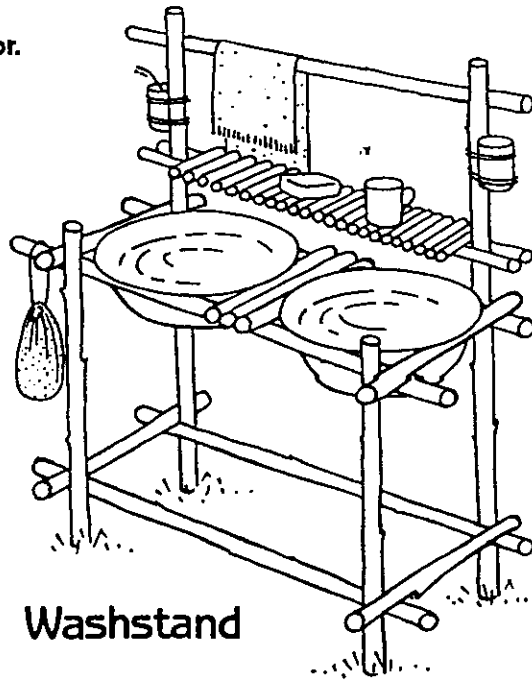
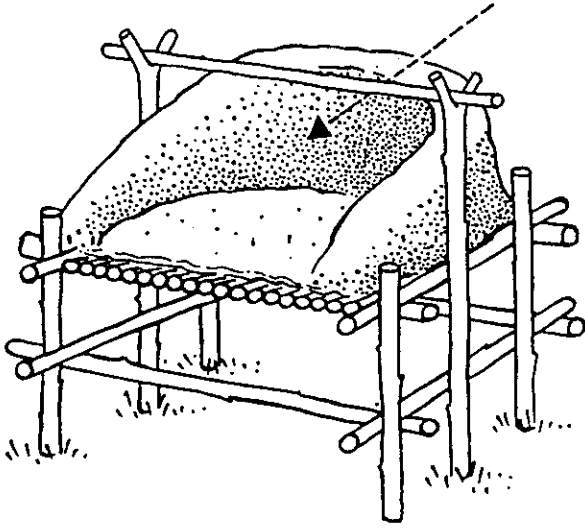
**Boots.** Proper footgear is essential. A boot should fit somewhat loose for warmth, but the adage "cool is comfortable" is true; the feet should not sweat profusely. Use a combination of a light boot for travel, a thickly insulated boot for camp.

**Socks.** Wool, or wool and synthetic are good. Sometimes synthetic fiber stretch socks are worn next to the skin for added warmth.



# Altar Fireplace

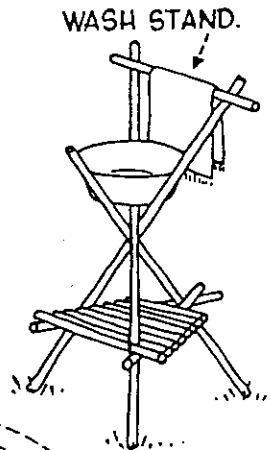
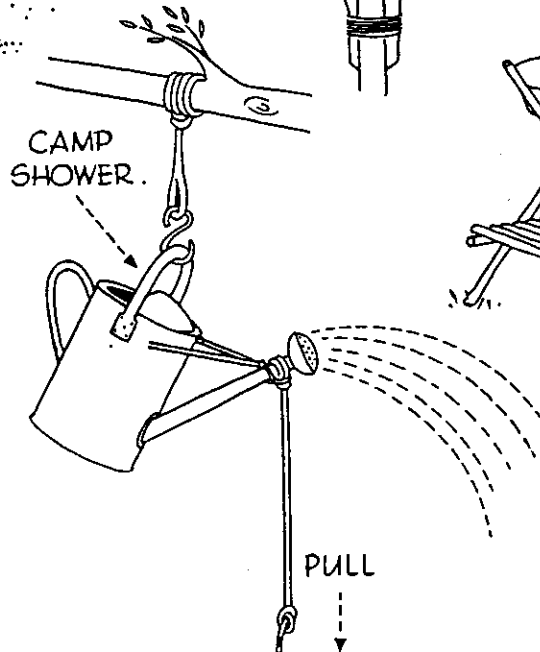
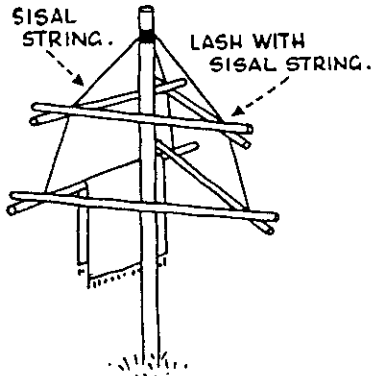
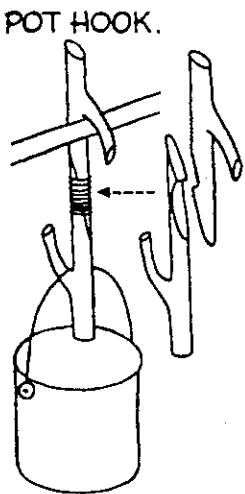
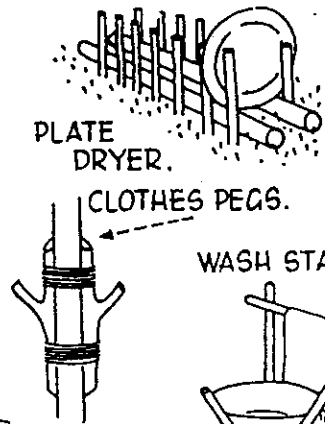
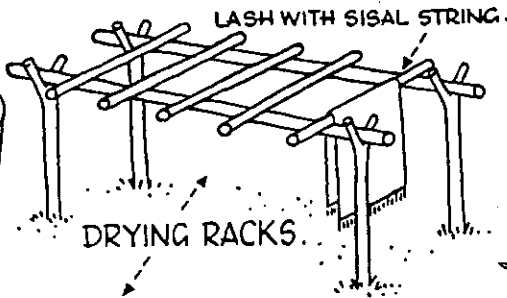
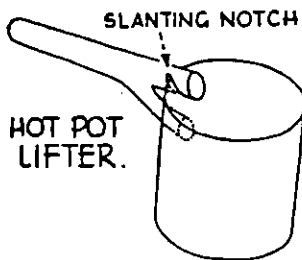
Make mud heat reflector.  
Intensify heat further  
by lining with foil.



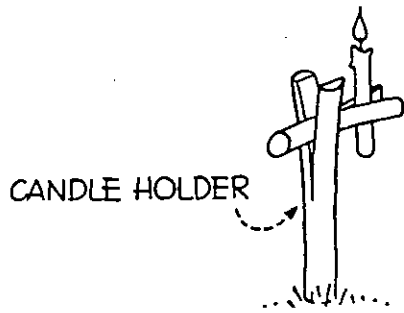
Washstand

Lash with sisal string.

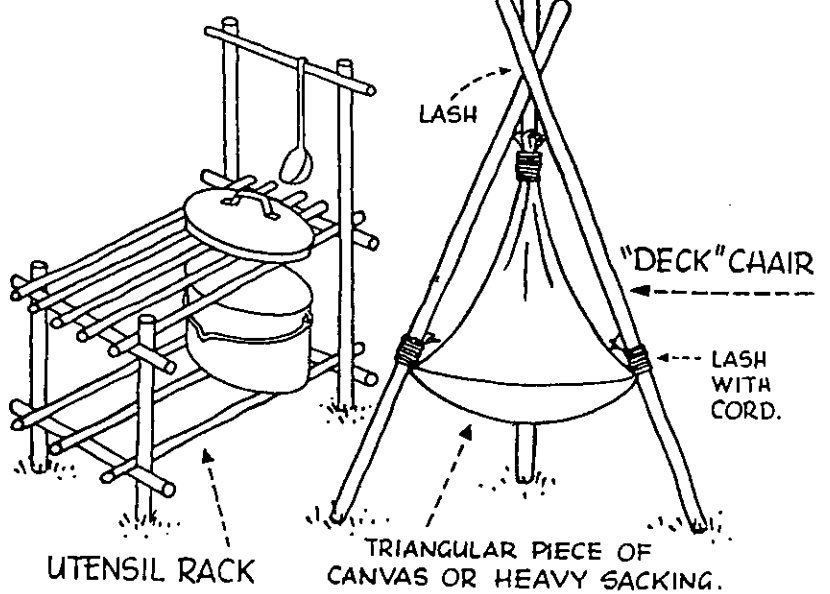
# Some Traditional Camp Gadgets



# Gadgets Old and New



CANDLE HOLDER



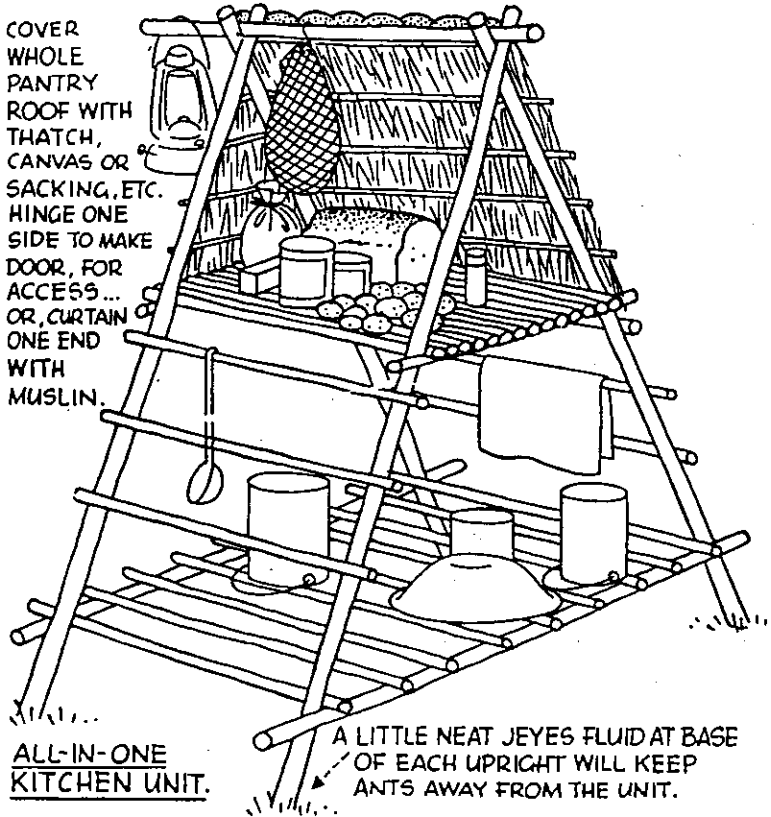
UTENSIL RACK

LASH

"DECK" CHAIR

LASH WITH CORD.

TRIANGULAR PIECE OF CANVAS OR HEAVY SACKING.



COVER WHOLE PANTRY ROOF WITH THATCH, CANVAS OR SACKING, ETC. HINGE ONE SIDE TO MAKE DOOR, FOR ACCESS... OR, CURTAIN ONE END WITH MUSLIN.

ALL-IN-ONE KITCHEN UNIT.

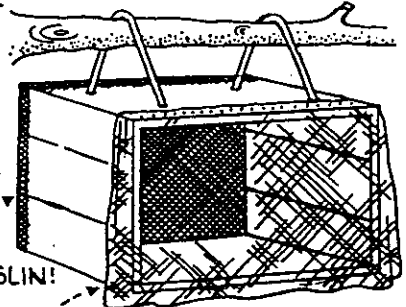
A LITTLE NEAT JEYES FLUID AT BASE OF EACH UPRIGHT WILL KEEP ANTS AWAY FROM THE UNIT.

## SUSPENDED BOX LARDER

WOODEN BOX, OPEN BACK AND FRONT, AND SUSPENDED BY TWO ROPE'S PASSED THROUGH 4 HOLES BORED IN TOP, AND HELD BY KNOTS INSIDE BOX.

WIRE GAUZE TACKED OVER THE OPEN BACK.

OR, USE MUSLIN!



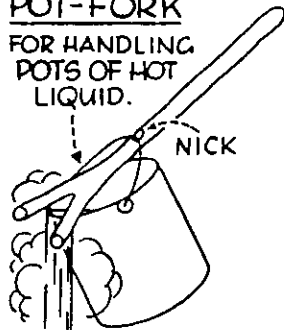
MUSLIN CURTAIN, TACKED AT TOP. HOLD CURTAIN TAUT WITH ELASTIC BAND AROUND BOX FRONT. REMOVE BAND FOR ACCESS TO LARDER. KEEP THE MUSLIN WET, FOR COOLNESS.

## FUZZ-STICK

FOR STARTING A FIRE IN DAMP CONDITIONS.



POT-FORK FOR HANDLING POTS OF HOT LIQUID.



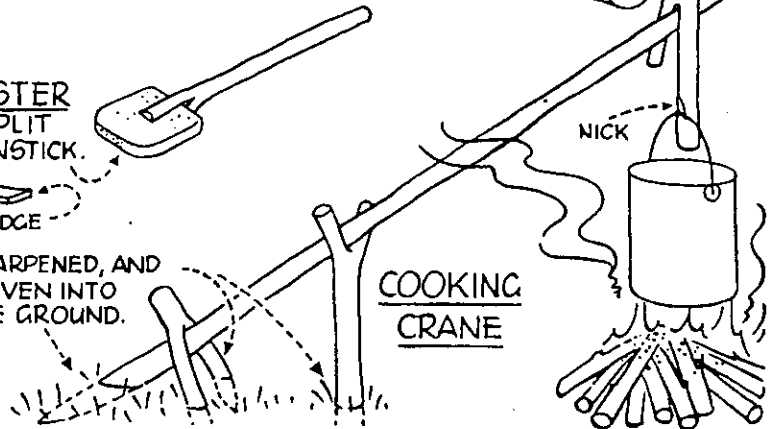
NICK

TOASTER - A SPLIT GREENSTICK.

POT SCRAPER

CHISEL EDGE

SHARPENED, AND DRIVEN INTO THE GROUND.



NICK

COOKING CRANE