

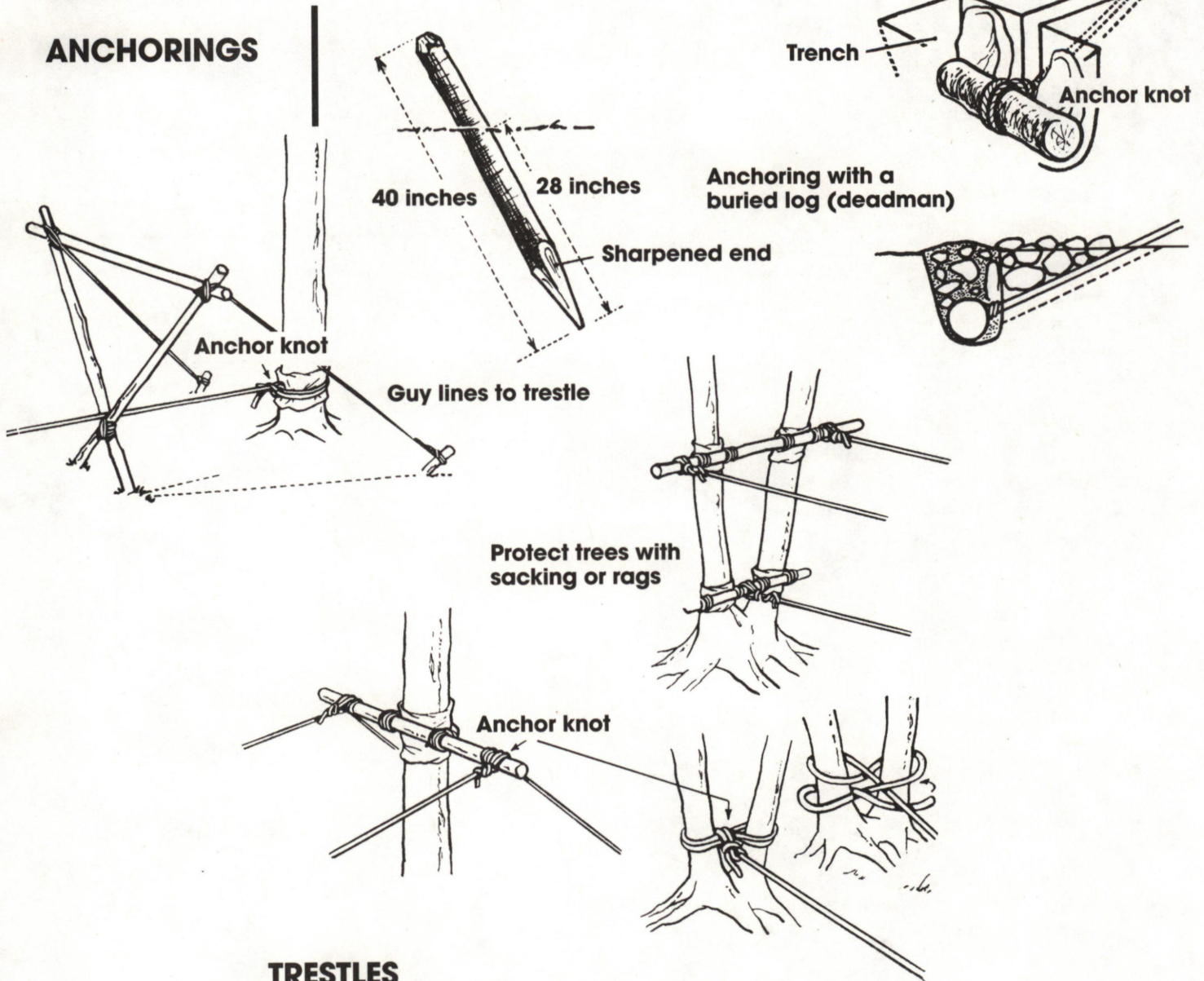
**ROPE**



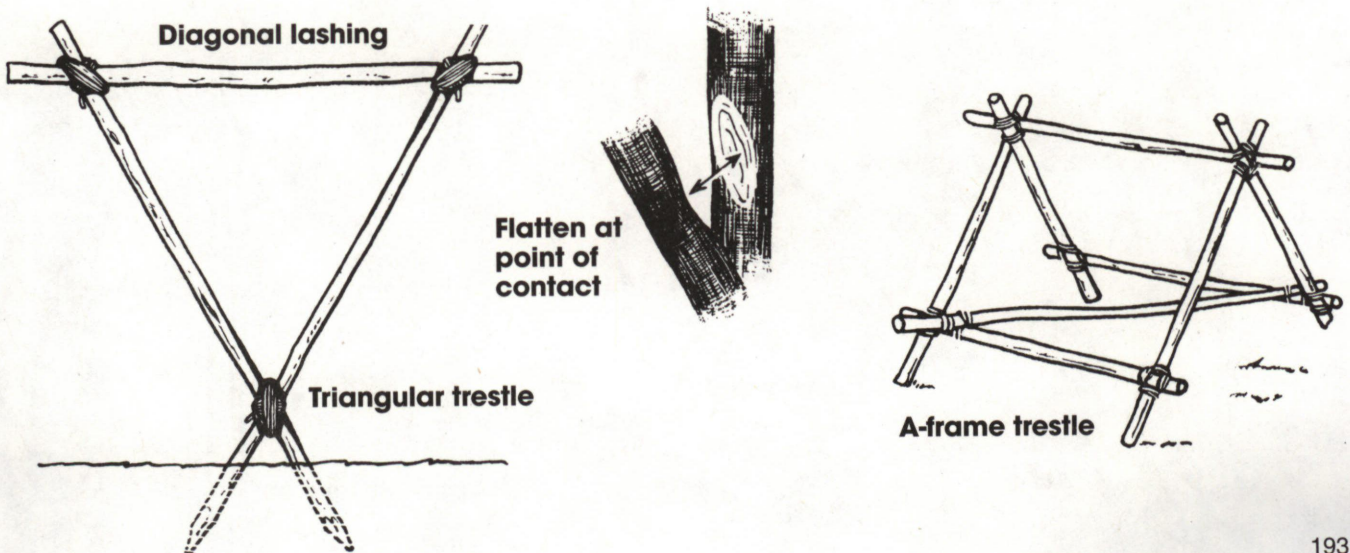
# ROPE

## 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.)

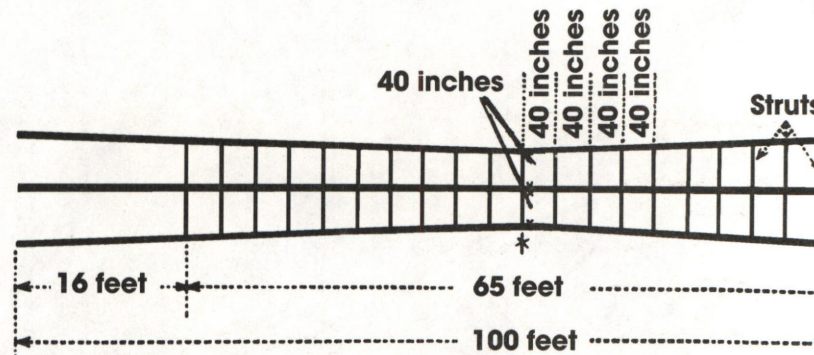
The trestles can be replaced by anchoring to trees. (This is quite common.) In this case, two poles lashed to trees will do nicely. Don't forget to protect the trees. Be careful of the elevation of the main support. This should be at least 5 feet above the water. (If not, you'll get wet feet.) This will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

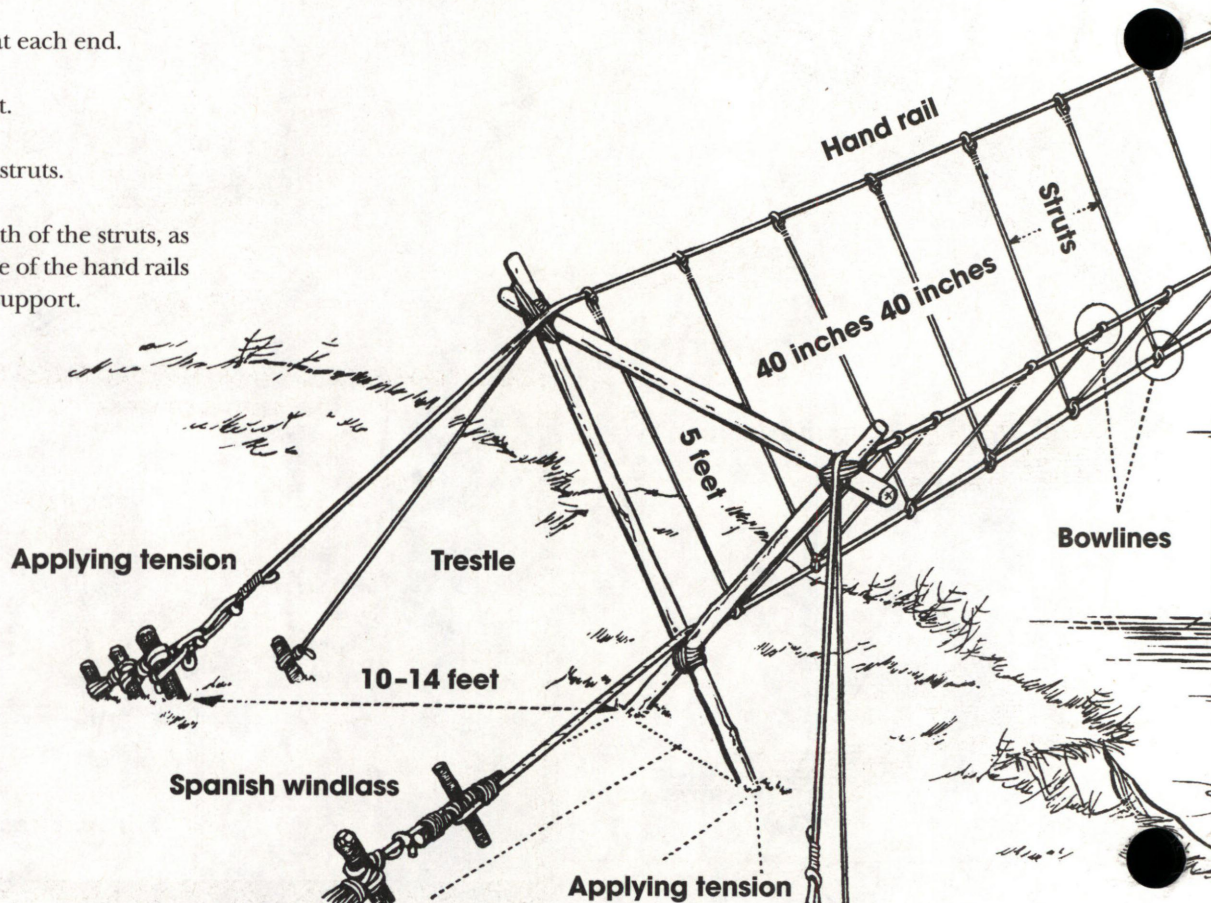
1. Place the two struts at each end.
2. Place the center strut.
3. Place the remaining struts.

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

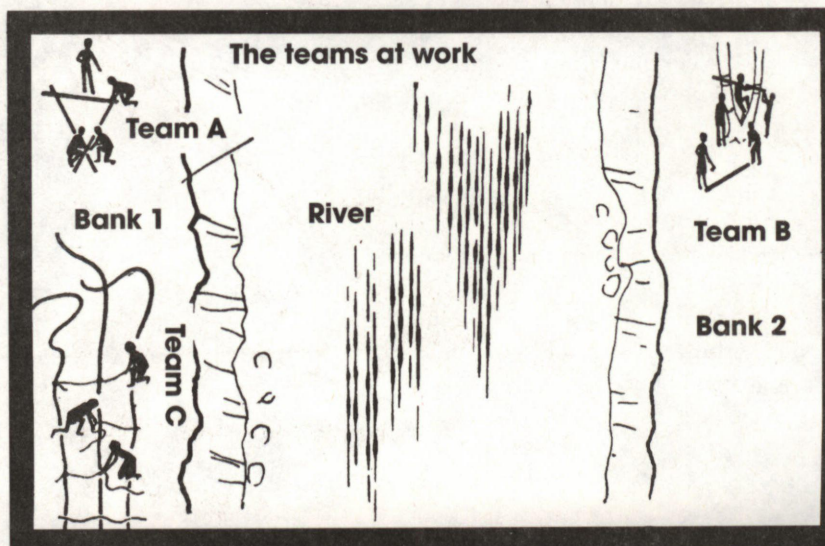
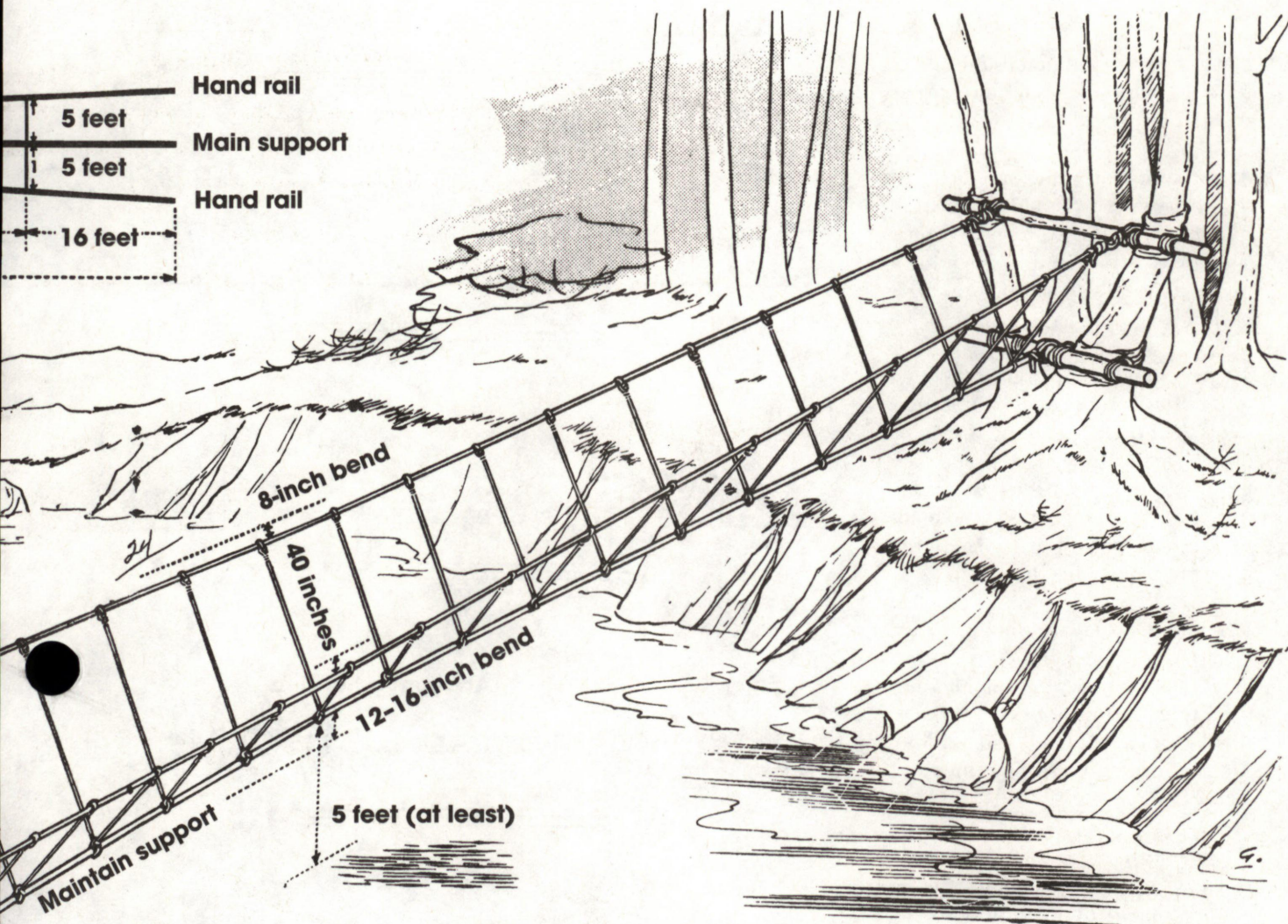
## CONSTRUCTION



## THE FINISHED BRIDGE









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.

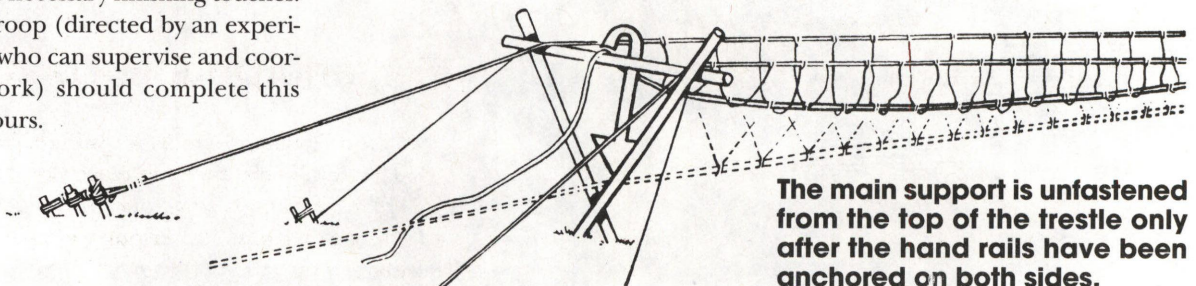
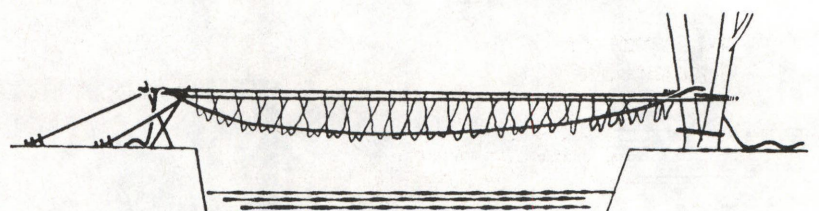
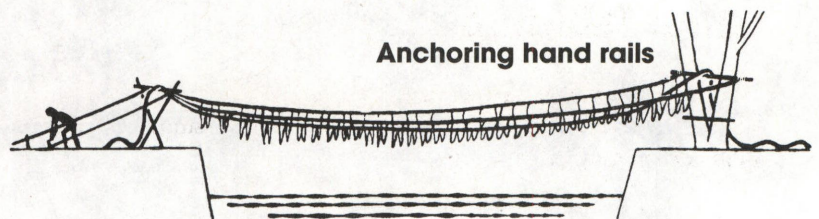
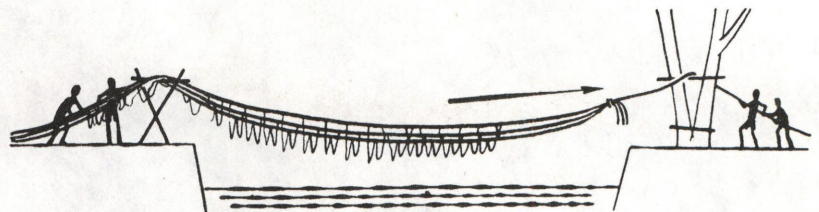
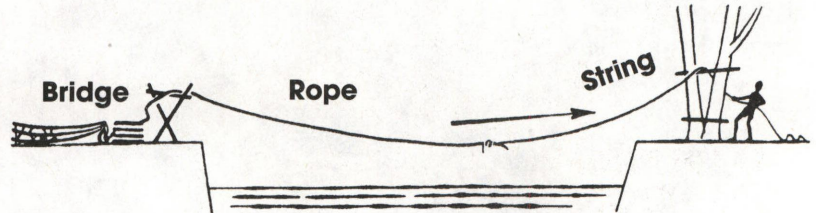
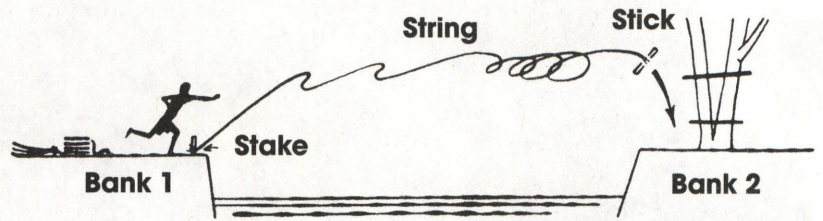
**Attention:** Watch the wind direction and throw with it. Should the stick fall into the water, the team on the opposite side can fish it out by throwing a weighted string across it and drawing it to shore.

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 (sheep-shank) 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, 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.

## LAUNCHING

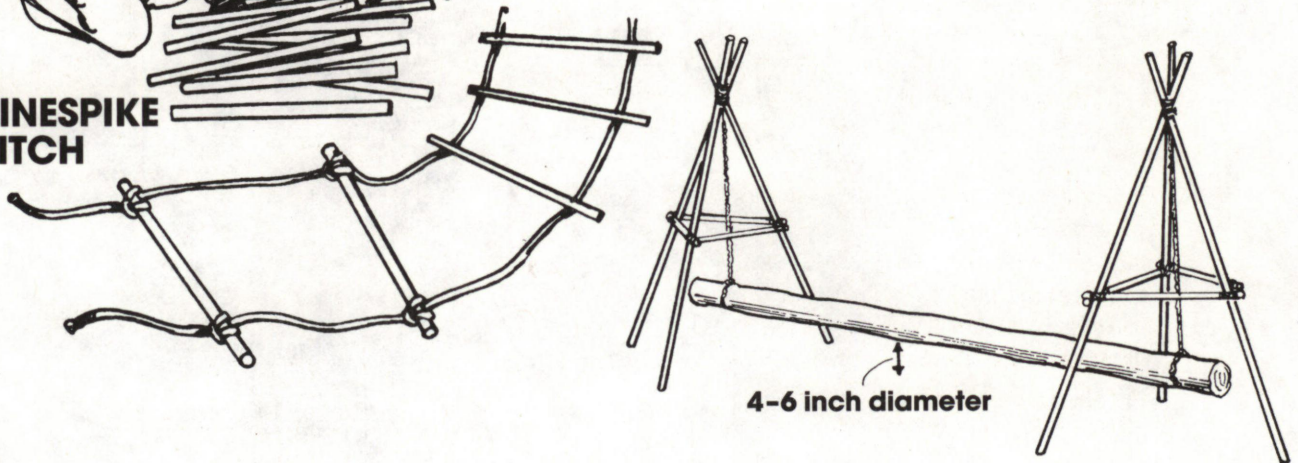




## Log Walk Challenge

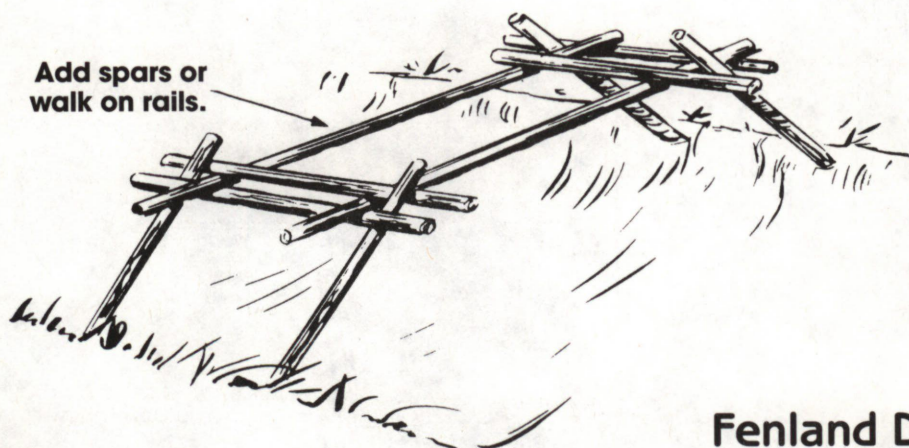
Construct the "Log Walk Challenge" illustrated here. To do so, one Scouter, perhaps from your staff, will be asked to cut the spars you have provided to specific lengths. Others can then build two tripods. Be sure the bottom of the tripod legs are braced well. Next, suspend the log, at least 4-6 inches 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.

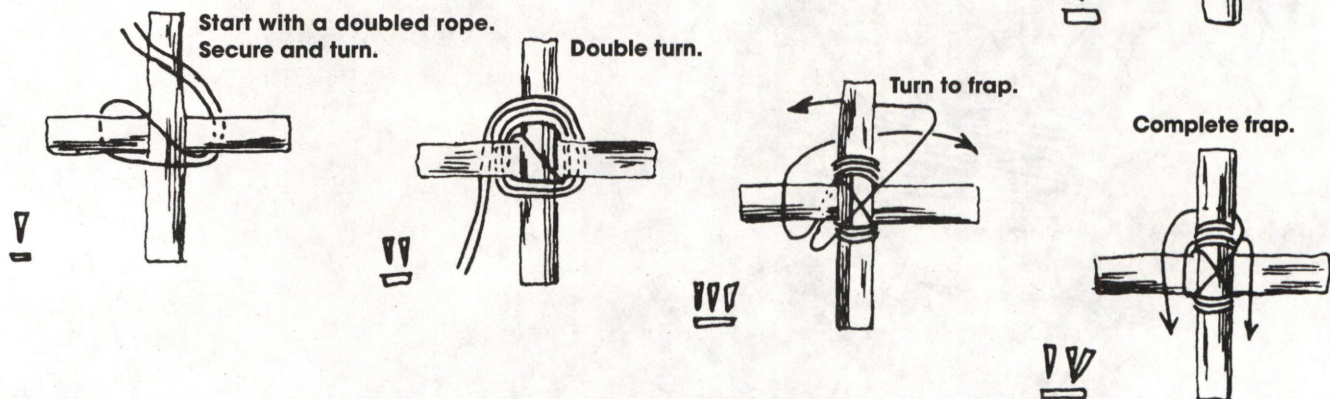


# Japanese/Norwegian Square Lashing

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.

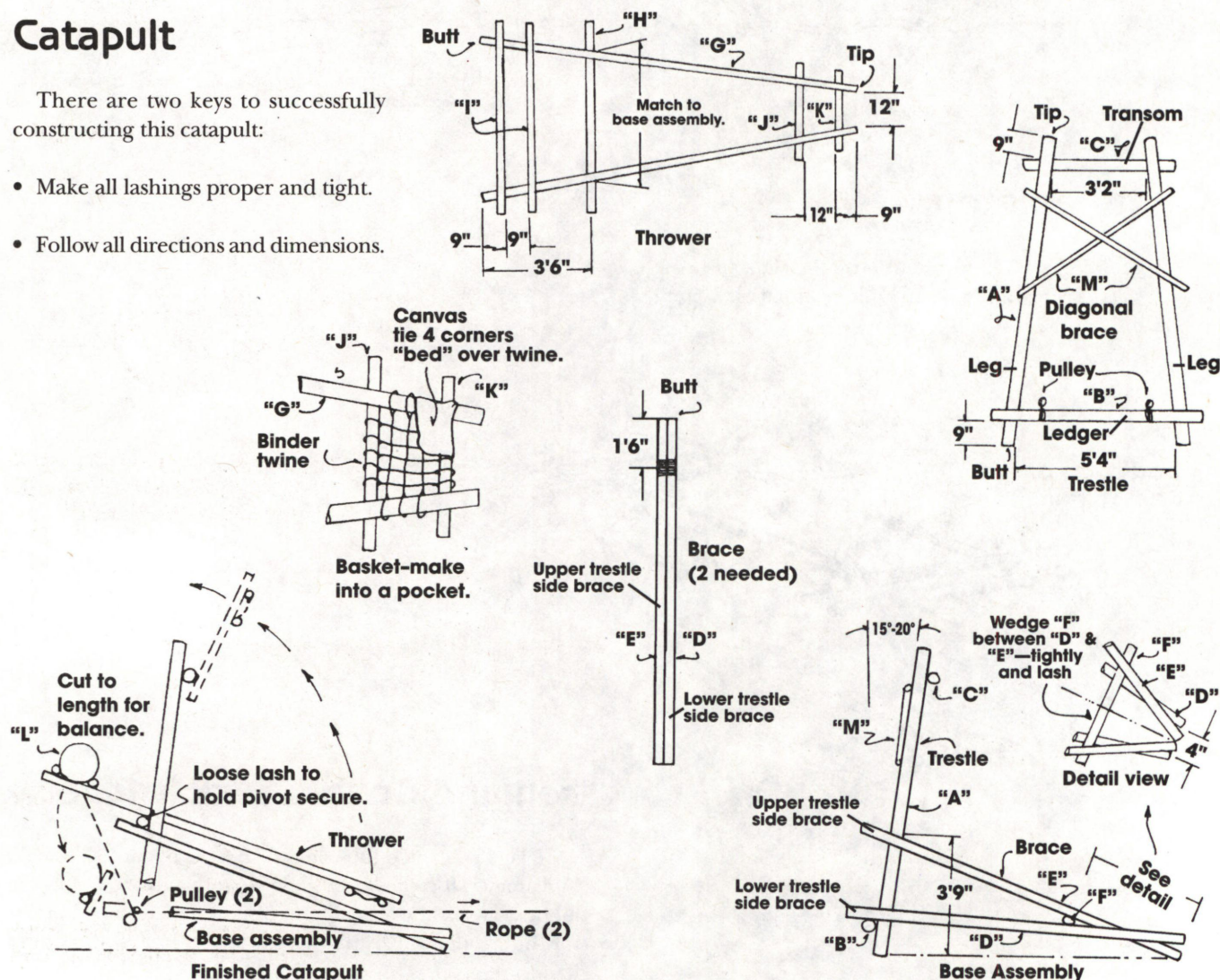
Finish with a clove hitch.



## Catapult

There are two keys to successfully constructing this catapult:

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





## Catapult Parts List

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

## Learn to Tie Knots

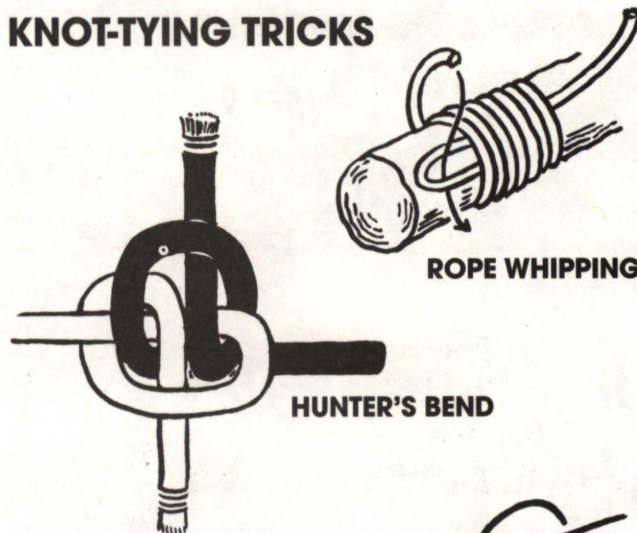
Learning to tie knots doesn't have to be dull. Demonstrate the following knot-tying games or others you are comfortable with.

- 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 the 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 go of the rope until the hitch is secure.

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

## KNOT-TYING TRICKS

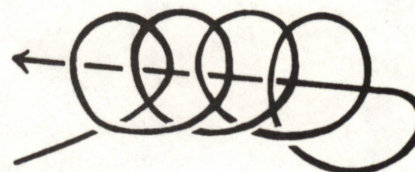


ROPE WHIPPING



EASY BOWLINE

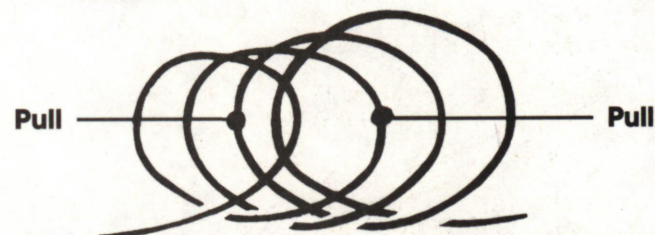
Pass bend up through hoop and over loose end. Pull tight.



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.

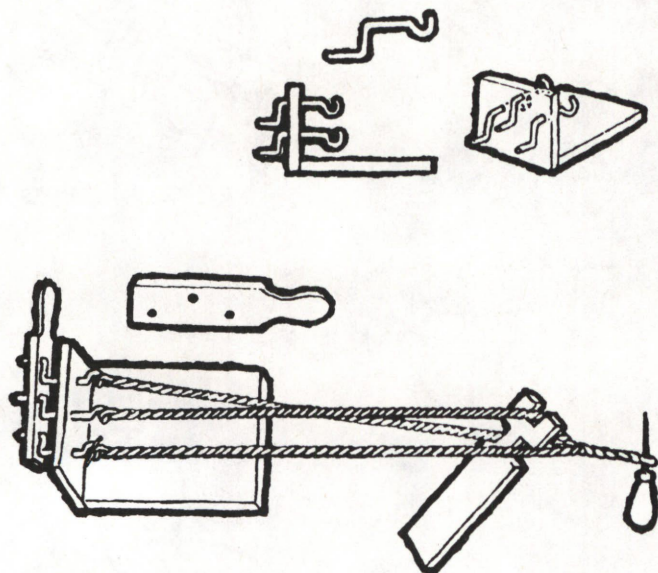
## SHEEPSHANK WITH A SQUARE KNOT IN THE MIDDLE



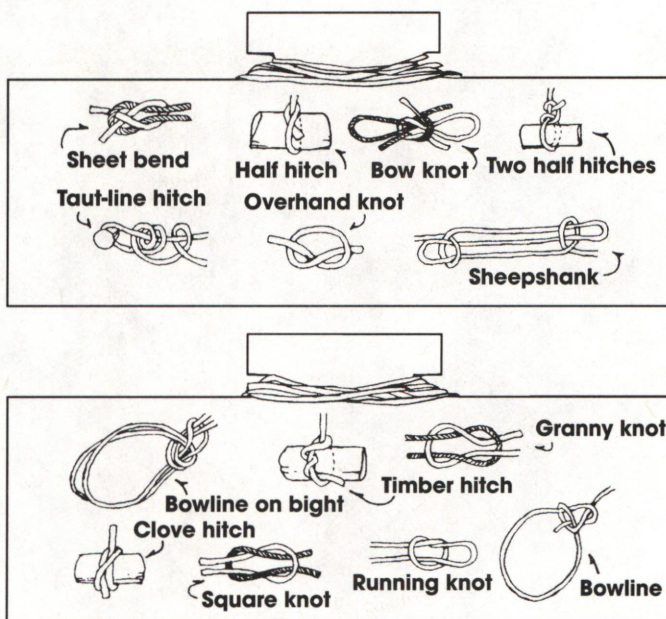
One overhand loop, followed by three underhand loops, each overlapping the first. Count three strands from left and right and pull through in both directions.



## ROPE-MAKING MACHINE



## PRACTICE KNOT BOARD



Demonstrate a "Tucked Eye Splice." If possible, have enough lengths of rope for each Scouter to 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

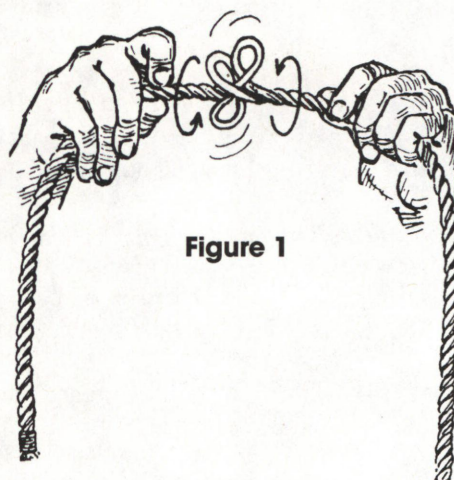


Figure 1



Figure 2



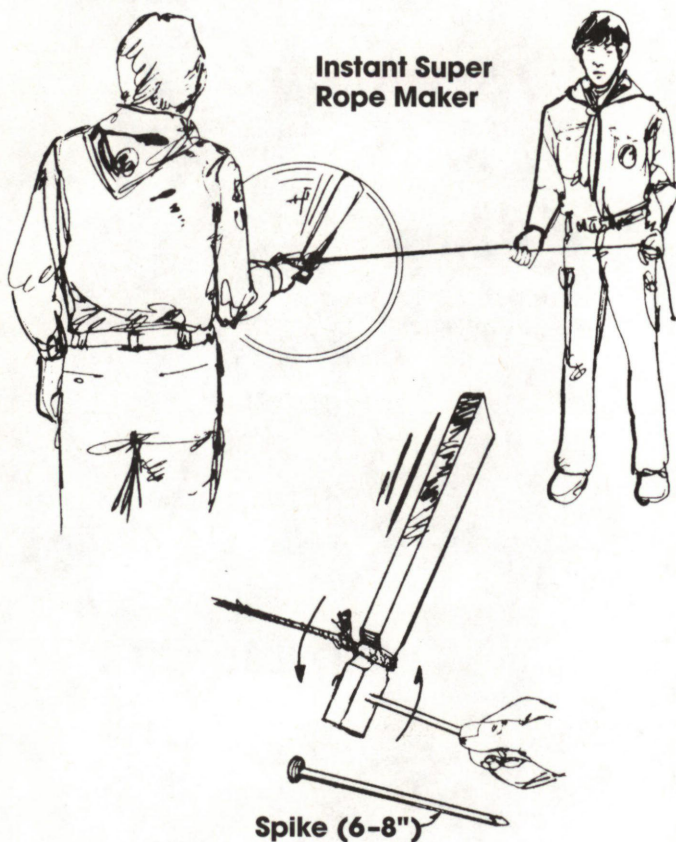
Figure 3



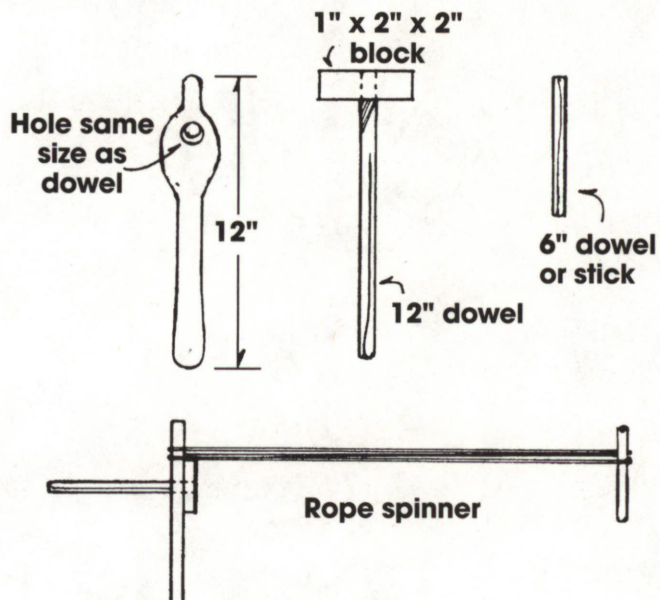
Figure 4



## ROPE GADGETS



## ROPE SPINNER



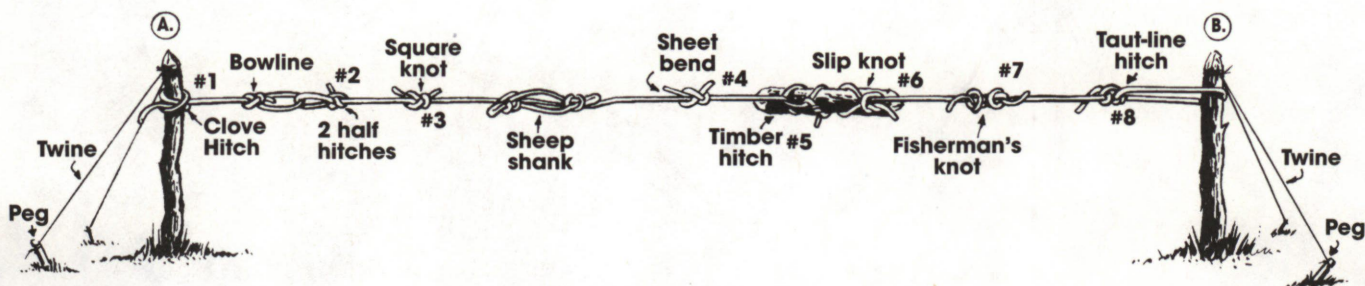
Tie a loop on each end of a long piece of binder twine or heavy cord. Attach the twine to the spinner as shown in the diagram so that you have three strands. Spin the spinner in a clockwise direction. When the twine is wound tight, triple it again. A third person should do this so that the line can be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

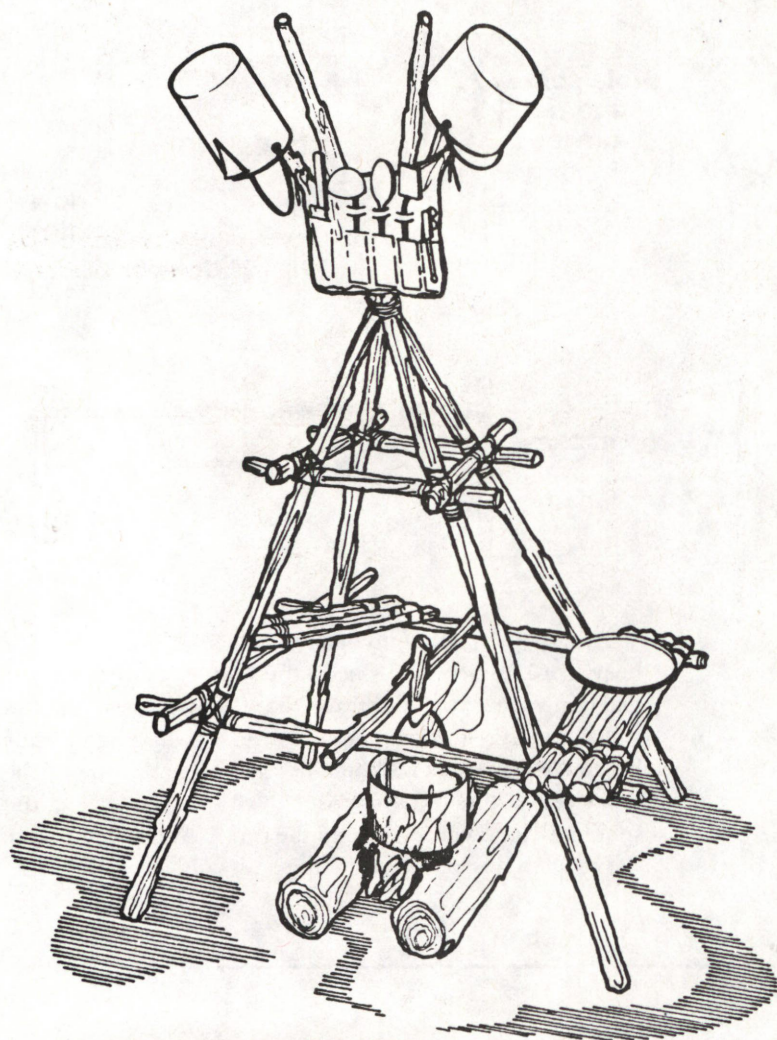
hitch. Scout No. 6 ties the fifth rope to the other end of the log with a slip knot. Scout No. 7 ties the fifth and sixth ropes together with a fisherman's knot. Scout No. 8 ties the sixth rope to the other stake using taut-line hitch, leaving it loose. The patrol leader then shortens the third rope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

## KNOT-TYING RELAY

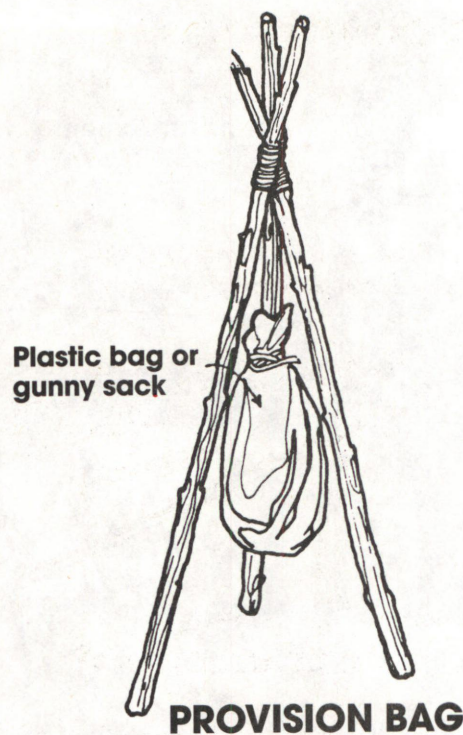




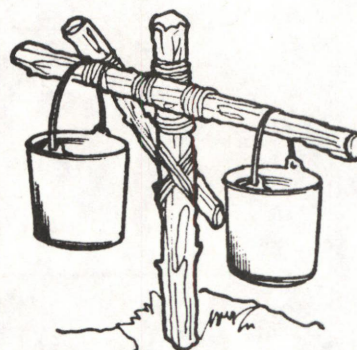
# Constructing Camp Projects



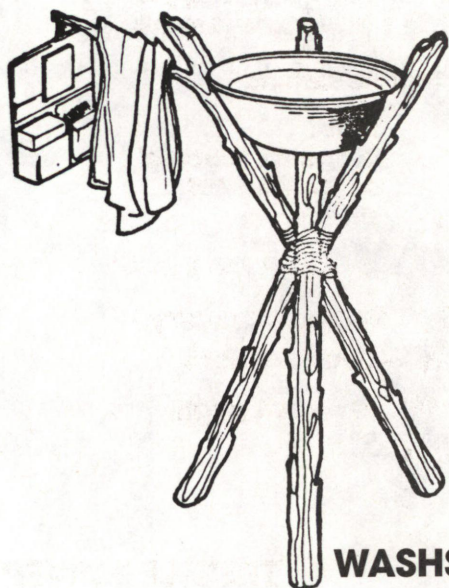
**CHIPPEWA KITCHEN**



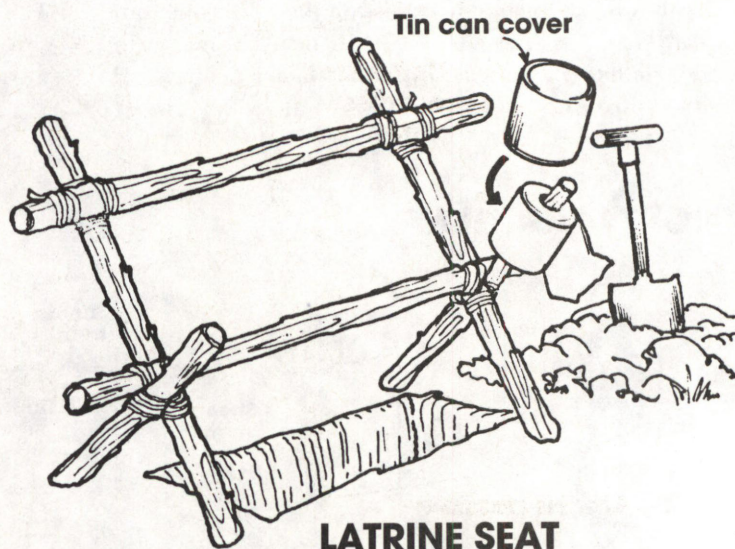
**PROVISION BAG**



**FIRE BUCKET RACK**



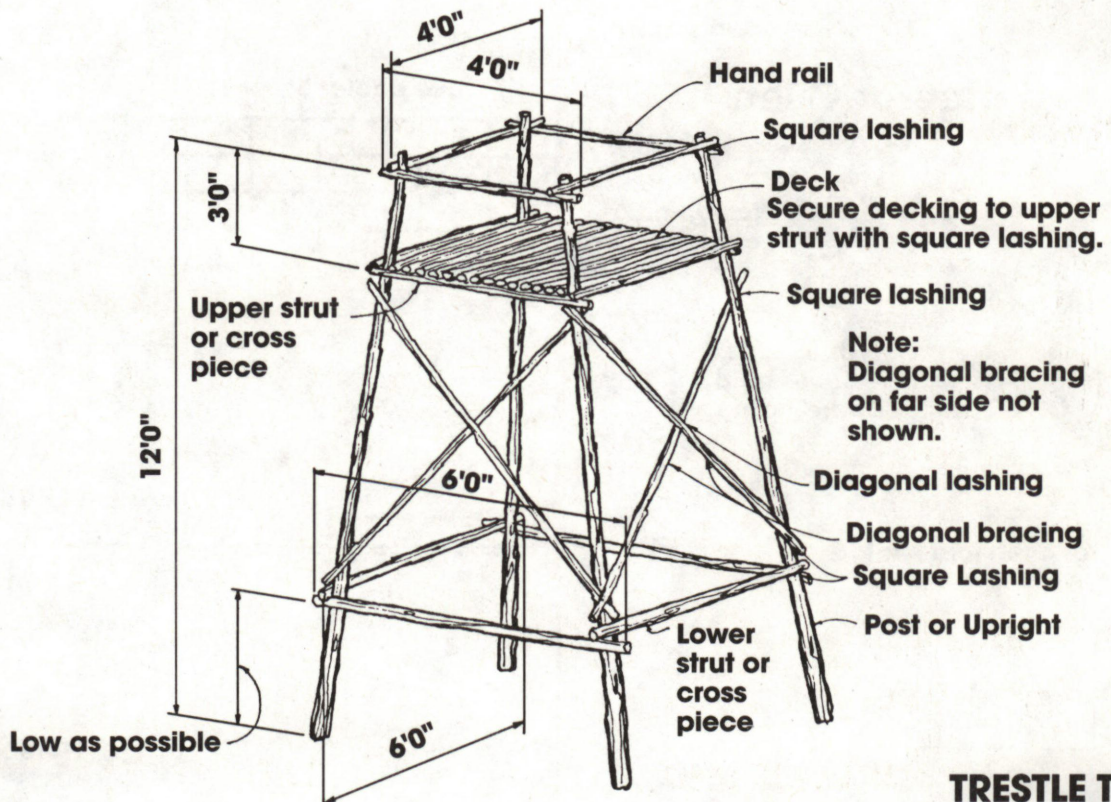
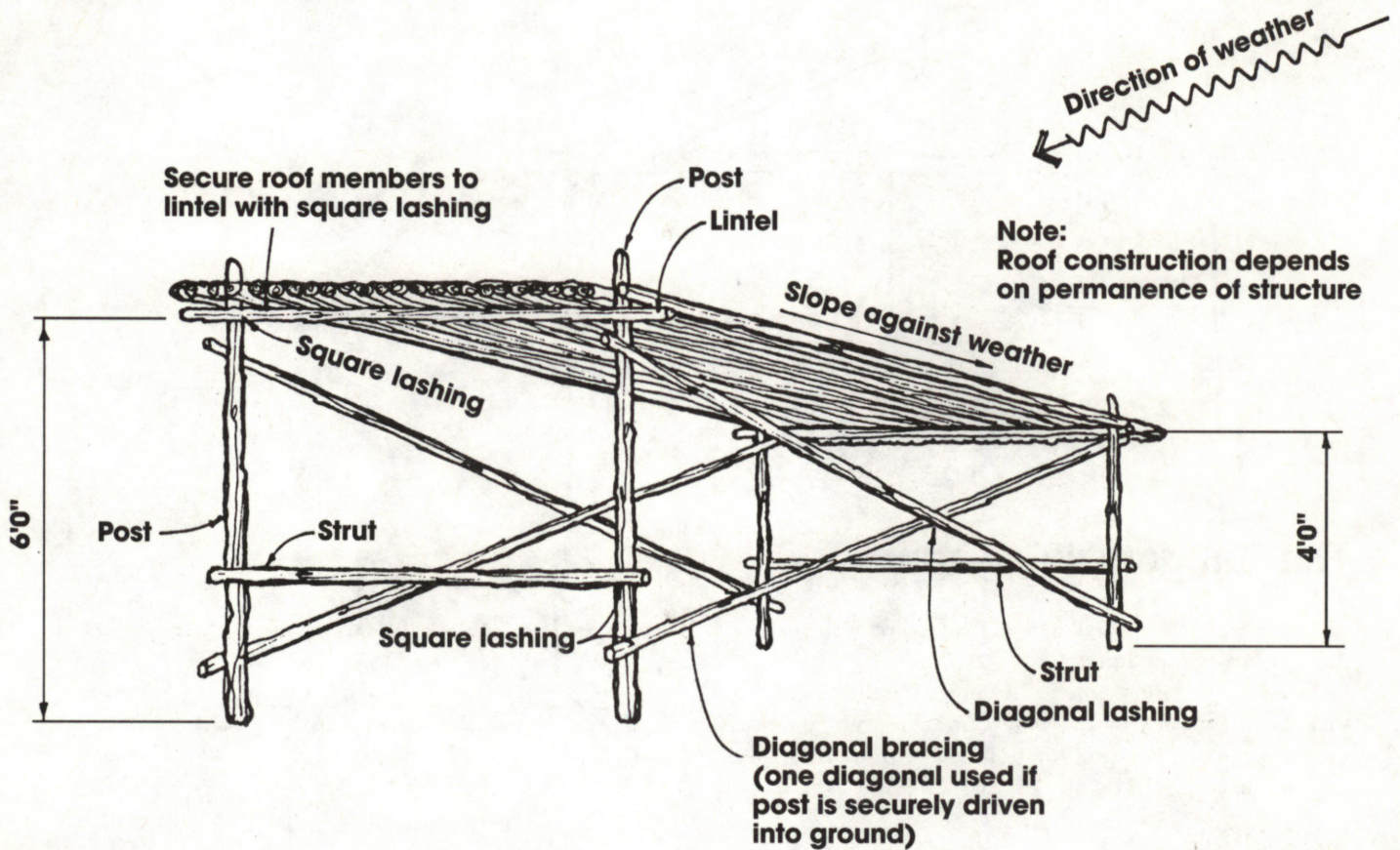
**WASHSTAND**



**LATRINE SEAT**



## SHED CONSTRUCTION



## TRESTLE TOWER