

KNOW YOUR KNOTS

AND HOW TO USE THEM

YOU CAN TELL AN OUTDOORSMAN BY HIS ABILITY TO TIE THE RIGHT KNOT AT THE RIGHT TIME. A SCOUT KNOWS SEVERAL KNOTS AND THE PURPOSE OF EACH. HE CAN TIE THEM IN THE DARK OR IN THE DAYLIGHT... HERE ARE THE TESTS OF A GOOD KNOT: 1. SERVES ITS PURPOSE. 2. HOLDS UNTIL UNTIED. 3. EASILY TIED. 4. EASILY UNTIED... TIPS ON KNOT-TYING: USE A SIX-FOOT PIECE OF 1/4 OR 1/2 INCH ROPE - NOT TWINE OR STRING! PRACTICE TYING EACH KNOT IN THE SITUATION IN WHICH IT WILL BE USED.



BEFORE TYING KNOTS
LEARN HOW TO

WHIP

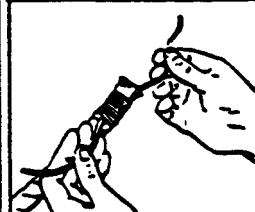
A ROPE TO KEEP IT
FROM UNRAVELING



MAKE A LOOP OF TWINE AND PLACE AT END OF ROPE.



WRAP TWINE TIGHTLY AROUND ROPE STARTING 1/4 INCH FROM ROPE END.

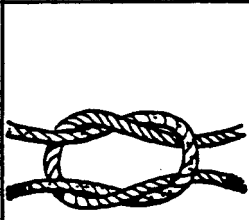


WHEN WHIPPING IS AS WIDE AS ROPE IS THICK, PULL OUT ENDS HARD. TRIM OFF TWINE CLOSE TO WHIPPING.



THESE ARE SOME USEFUL KNOTS

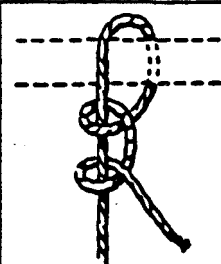
FOR OTHERS, SEE THE SCOUT FIELD BOOK AND HANDBOOK FOR BOYS



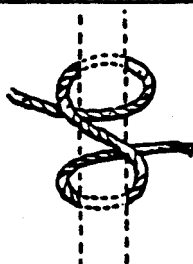
SQUARE KNOT
FOR TYING ROPES OF EQUAL THICKNESS. VERY USEFUL IN FIRST AID.



SHEET BEND
FOR JOINING TWO ROPES TOGETHER OF DIFFERENT THICKNESS.



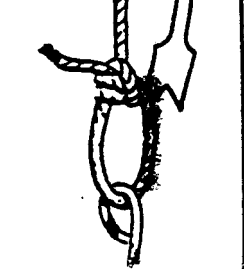
TWO HALF HITCHES
FOR TYING A ROPE TO A POLE OR RING.



CLOVE HITCH
FOR SECURING BOATS - FOR LASHINGS.



BOWLINE
FOR FORMING A LOOP THAT WON'T SLIP UNDER STRAIN. EASILY UNTIED.



TAUTLINE HITCH
FORMS A LOOP WHICH WILL NOT SLIP WHEN ROPE IS TIGHT.

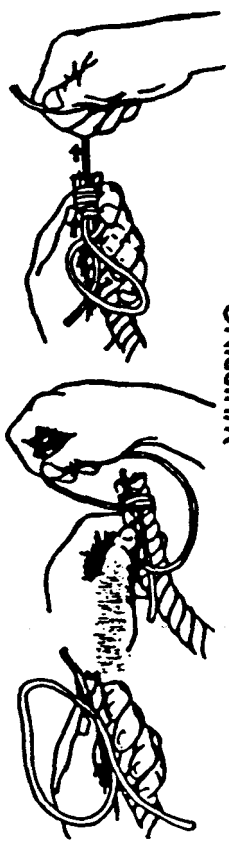
HERE'S HOW TO TIE THEM

SQUARE KNOT	SHEET BEND	TWO HALF HITCHES	CLOVE HITCH	BOWLINE	TAUTLINE HITCH
<p>Twist left hand rope end over, behind, under right hand rope.</p>	<p>Form a right (loop) on the heavier rope. Bring other rope end through loop, twist it over and under loop!</p>	<p>Pass rope around pole, carry rope end over and under and through loop thus formed.</p>	<p>Bring rope end around pole, lay it over the rope itself.</p>	<p>Holding rope with fingers on top, place end on standing part. Twist your hand, carrying end around to form loop.</p>	<p>Pass rope through ring.</p>
<p>Again twist same end as before... over, behind, under, left over right - right over left!</p>	<p>Then bring small line in under itself.</p>	<p>Repeat process.</p>	<p>Bring end once more around pole, carry end under the rope itself.</p>	<p>Bring end around rope down through loop.</p>	<p>Carry rope end around standing part twice and through loop thus formed.</p>
					<p>Repeat process once and pull tight.</p>

KNOW YOUR KNOTS

An essential Scouting skill! Learn to tie 39 useful knots with speed and accuracy with this handy chart.

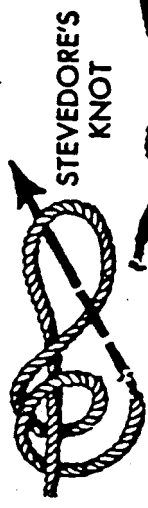
★ **BOY SCOUTS OF AMERICA NATIONAL SUPPLY SERVICE**
 NEW BRUNSWICK (NEW YORK) CHICAGO SAN FRANCISCO



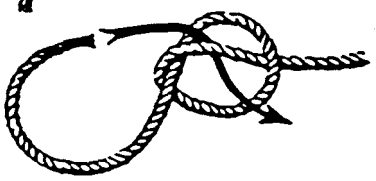
WHIPPING



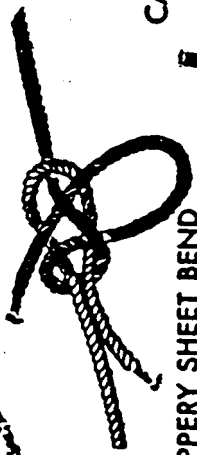
MARLING



STEVEDORE'S KNOT



LARIAT LOOP



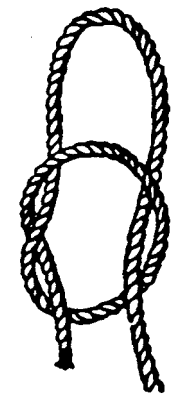
SLIPPERY SHEET BEND



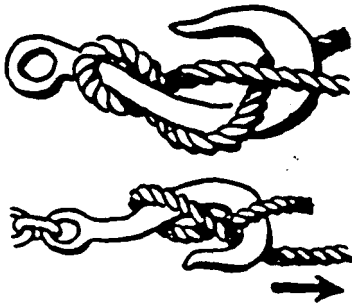
SHEET BEND



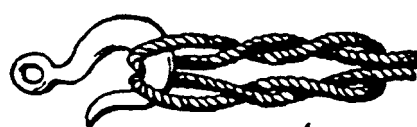
BINDER-TWINE BEND



SLIPKNOT



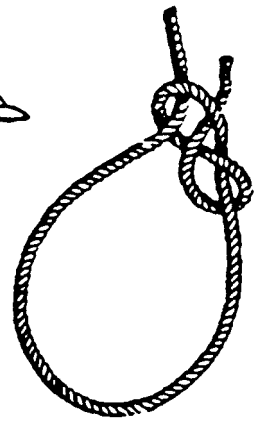
SINGLE DOUBLE
BLACKWALL HITCHES



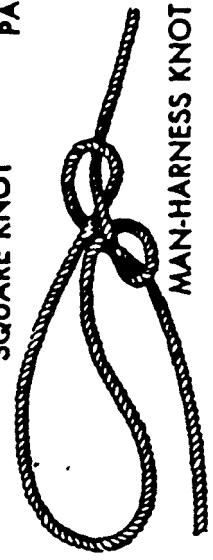
CAT'S PAW



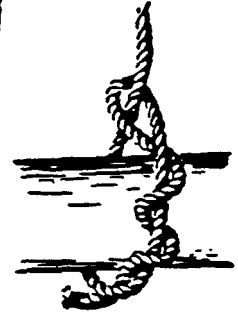
SQUARE KNOT



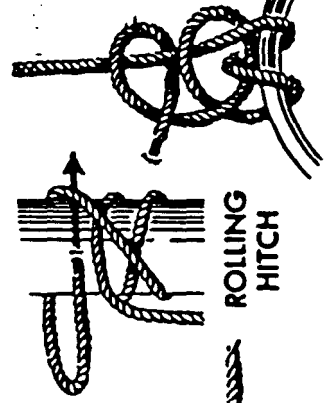
PACKER'S KNOT



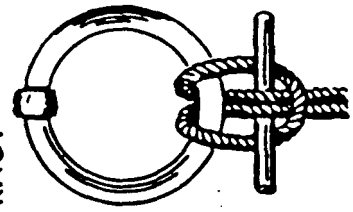
MAN-HARNESS KNOT



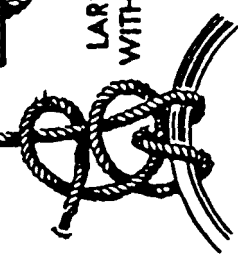
TIMBER HITCH



ROLLING HITCH



LARK'S-HEAD WITH TOGGLE



FISHERMAN'S BEND

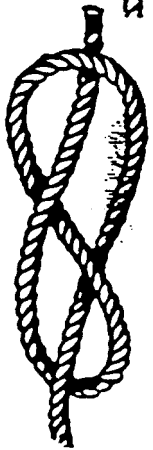
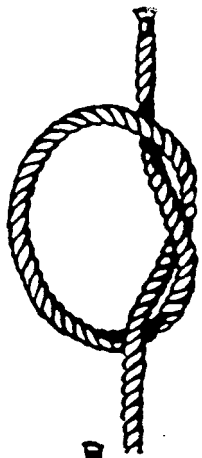
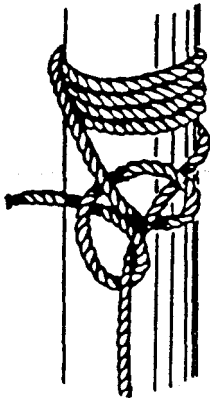


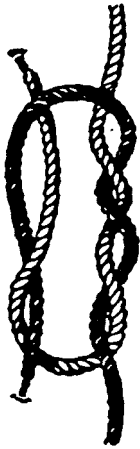
FIGURE-OF-EIGHT KNOT



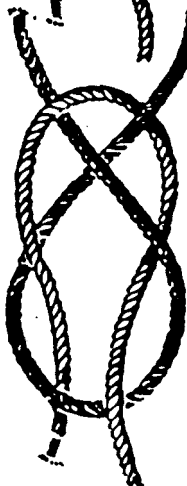
OVERHAND KNOT



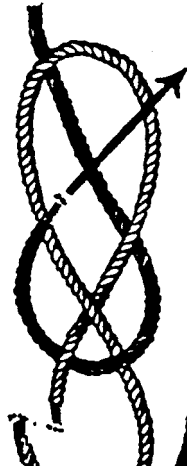
PIPE HITCH



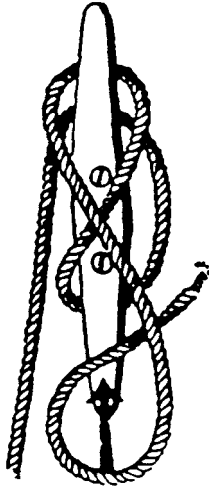
SURGEON'S KNOT



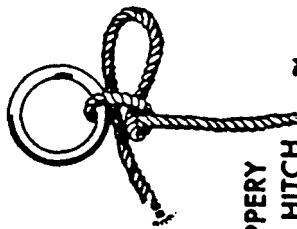
SINGLE CARRICK BEND



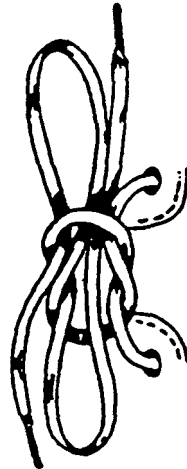
DOUBLE CARRICK BEND



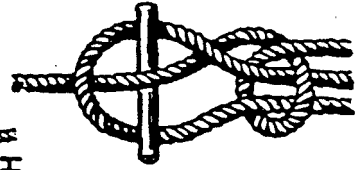
BELAYING



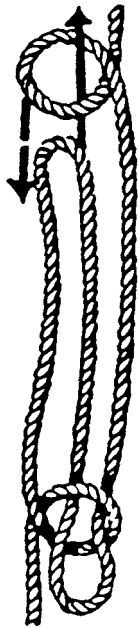
SLIPPERY HALF HITCH



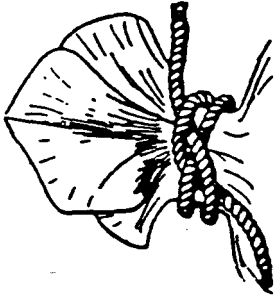
SHOESTRING TIE



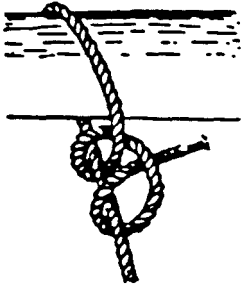
SHEEPSHANK END WITH TOGGLE



SHEEPSHANK



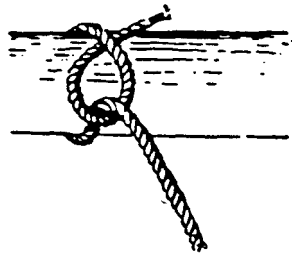
MILLER'S KNOT



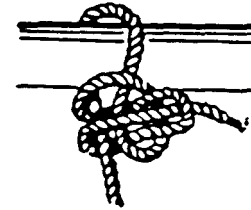
TWO HALF HITCHES



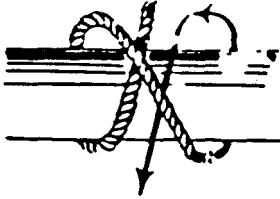
TAUT-LINE HITCH



HALF HITCH



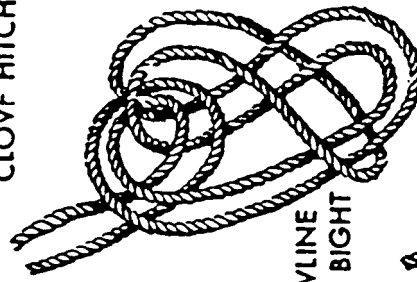
HITCHING TIE



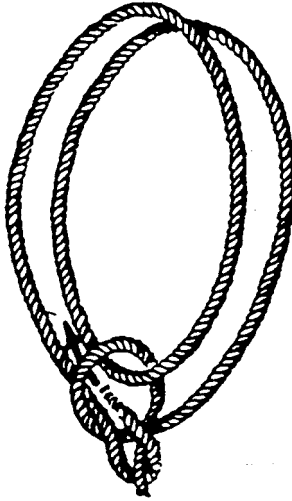
CLOVE HITCH



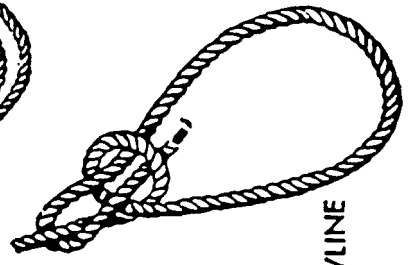
FISHERMAN'S KNOT



BOWLINE ON A BIGHT



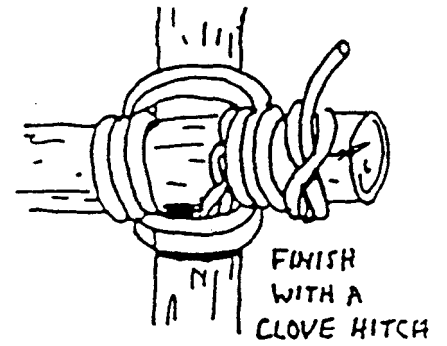
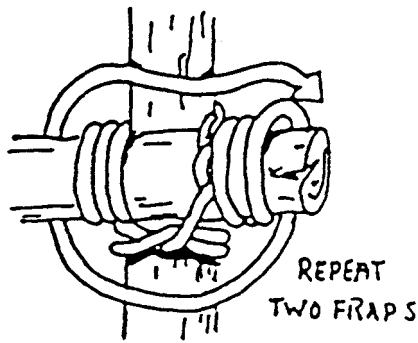
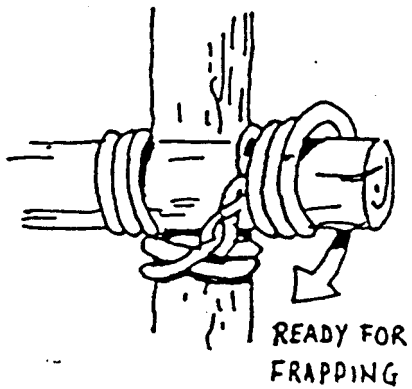
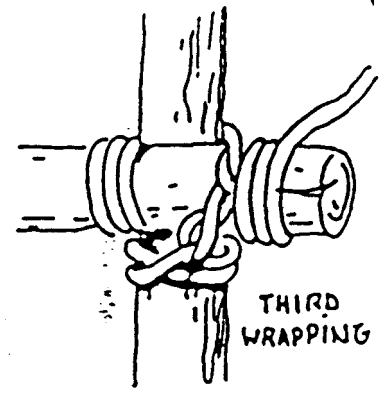
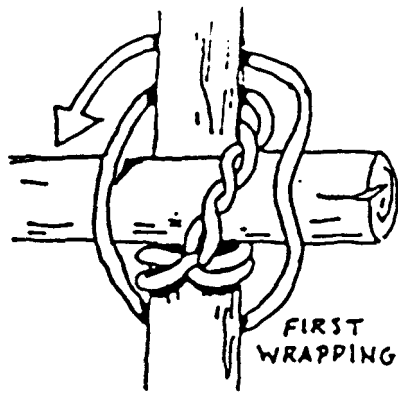
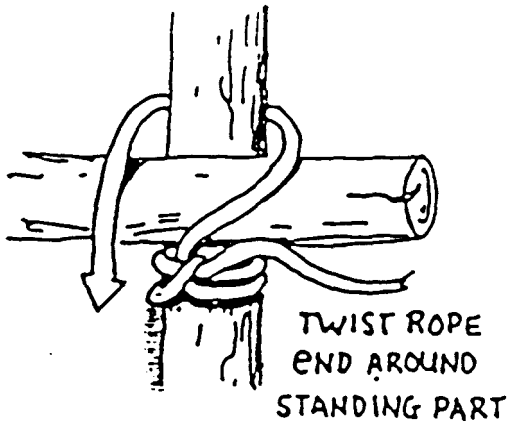
FRENCH BOWLINE



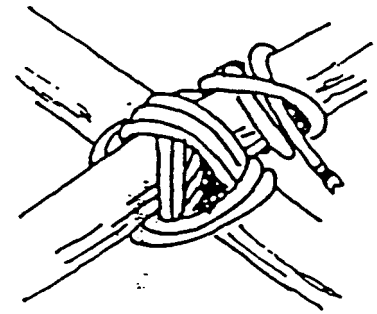
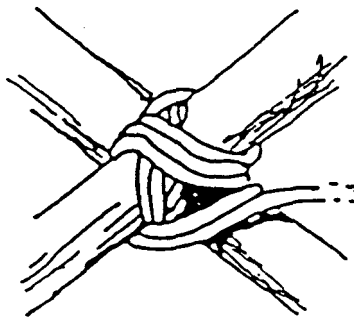
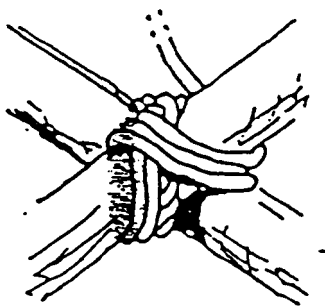
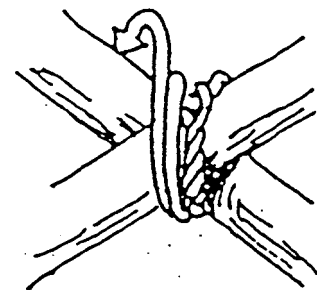
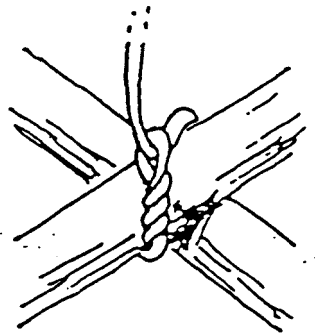
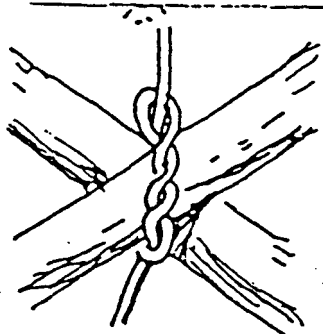
BOWLINE



RUNNING BOWLINE



SQUARE LASHING



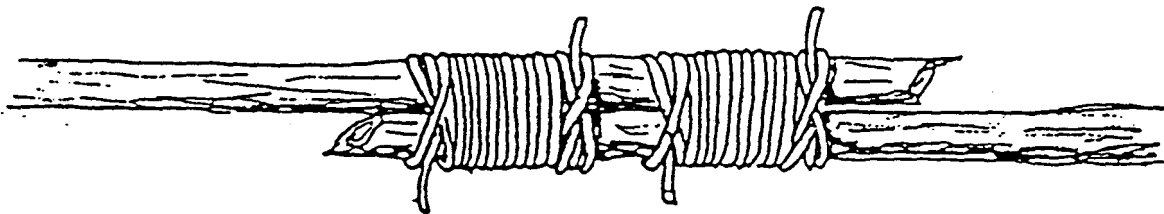
DIAGONAL LASHING



SHEER LASHING

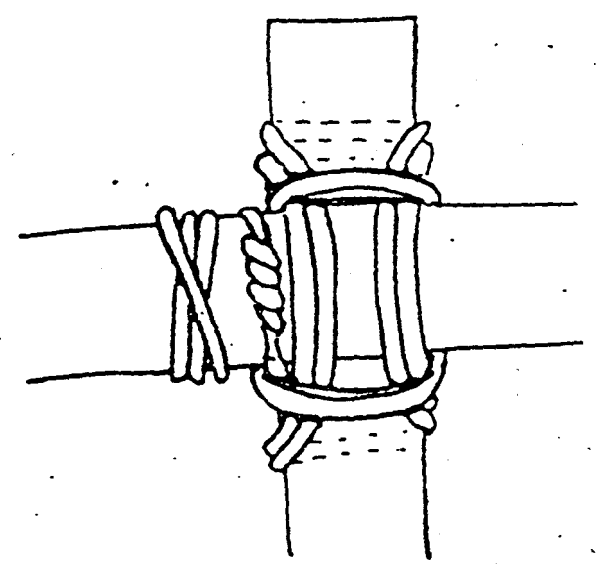
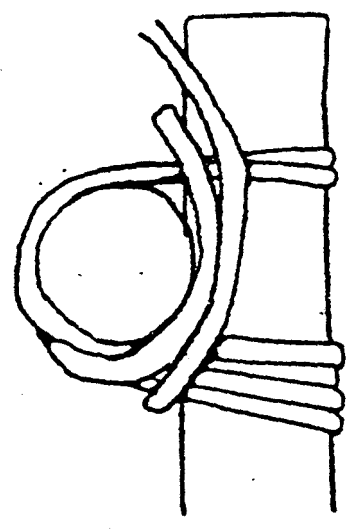
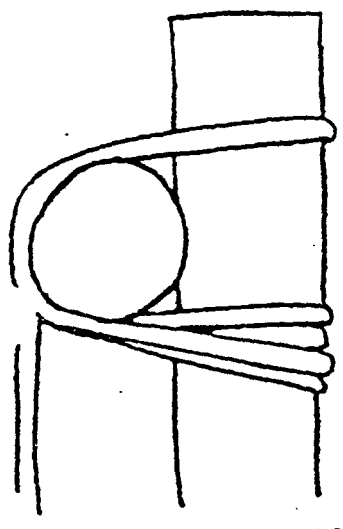
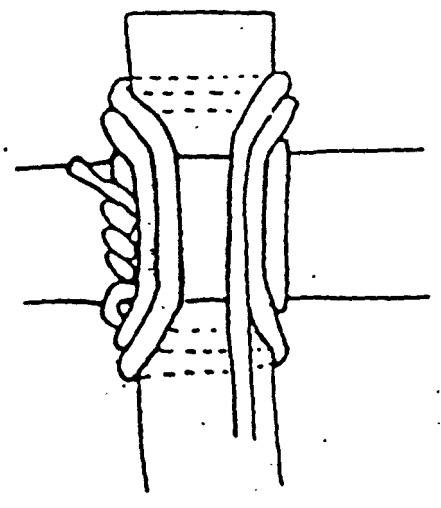
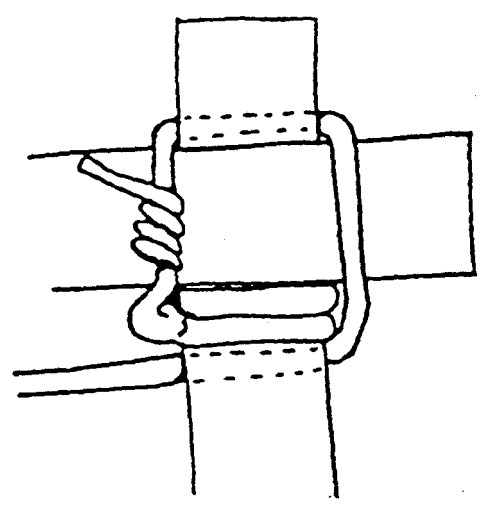
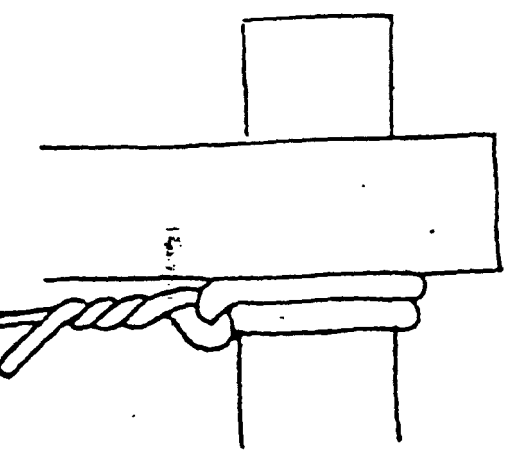


TRIPOD LASHING



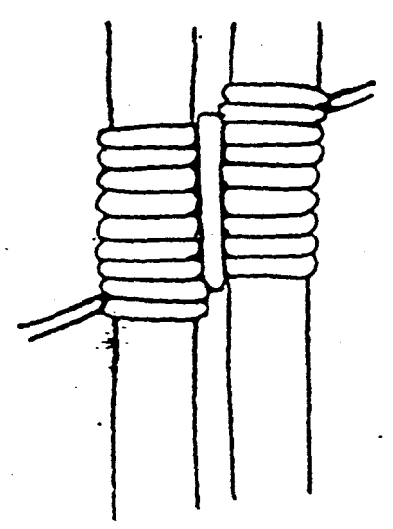
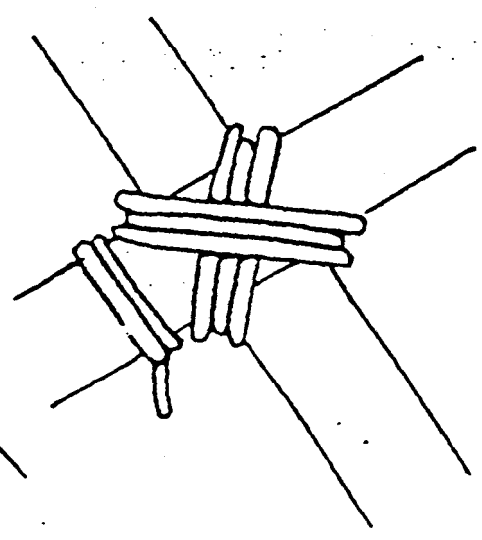
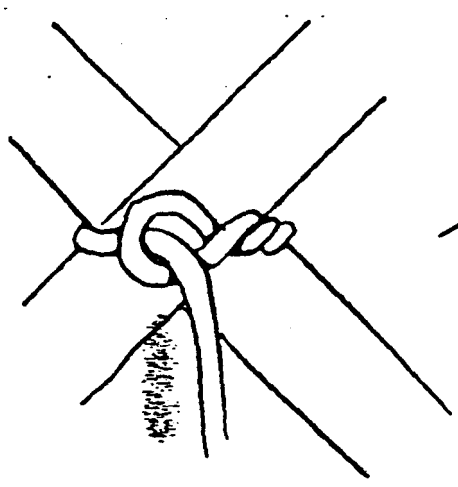
ROUND LASHING

SQUARE LASHING



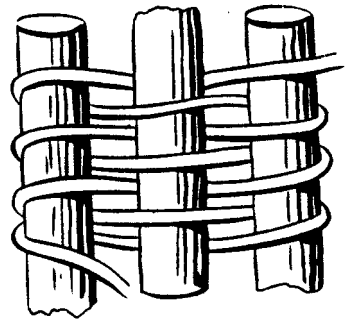
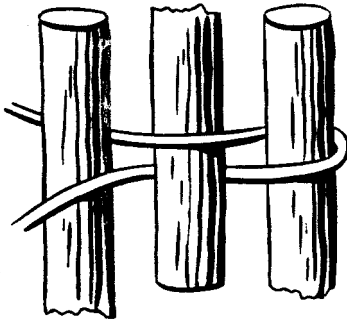
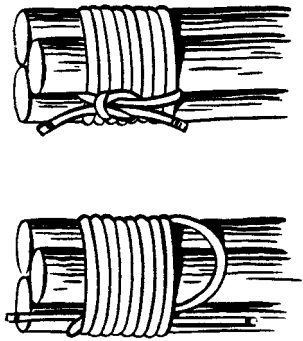
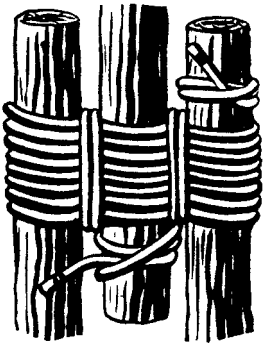
DIAGONAL LASHING

SHEAR LASHING



TRIPOD LASHING

The method for forming a tripod is similar to shear lashing. Begin by laying the three spars on the ground pointing in alternate directions. Make a clove hitch or timber hitch around one of the outside spars. Now take seven or eight loose lashing turns around all three spars and two frapping turns in the spaces between. Finish with a clove hitch on the center spar and hoist the tripod into place.



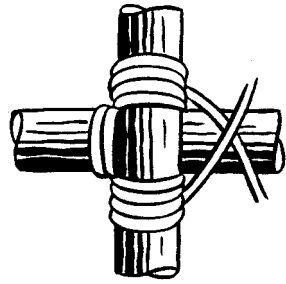
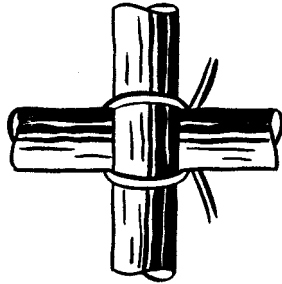
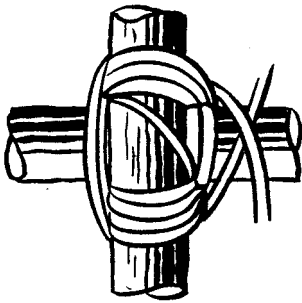
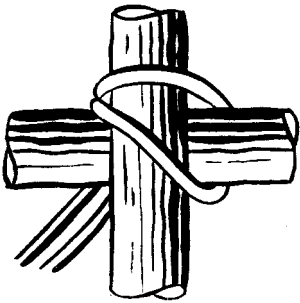
TRIPOD LASHING FOR LIGHT STRUCTURES

Hold spars as in drawing. Place rope end in groove between spars. Wrap lightly a few times around spars and bring rope end up in groove. Finish with square knot and open tripod.

TRIPOD LASHING FOR LARGE STRUCTURES

Lay the three spars on the ground pointing in alternate directions. Starting at the middle of the rope, weave around the spars a few times with each rope end. Tighten with two frapping turns in the spaces between spars. Finish with square knot and swing middle spar over.

It may take a little practice to judge how tight the wraps should be made and still allow for the tripod to set up.



JAPANESE SQUARE LASHING

Begin by using the rope doubled. Loop the bight around one spar and wrap just like the regular square lash with rope doubled. When frapping, split the ropes apart and frap in opposite direction with each. Finish with square knot.

JAPANESE SQUARE LASHING MARK II

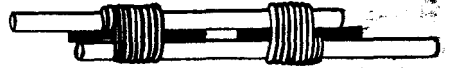
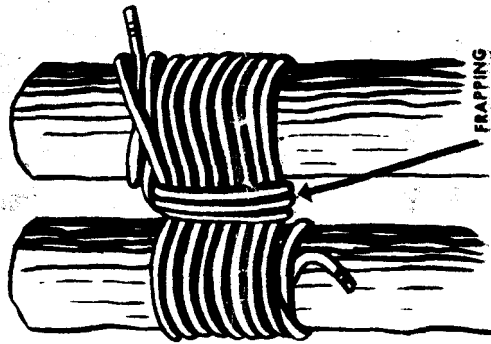
Begin as with the Japanese lashing, but instead of using two ropes together, use each one separately and wrap in opposite directions. Frap using ropes in opposite directions and finish with a square knot.

LASHINGS

For lashing, or binding together timbers with rope, it's important to use ropes of correct thickness and length. For staves or spars up to 1 1/4 inches in diameter, use tough twisted or braided line. For spars up to 3 inches in diameter, you need 1/4-inch rope. For spars over 3 inches in diameter, use 3/8-inch rope. As to

length, figure 1 yard of rope for each inch of the combined diameter of the spars. For example, when you are lashing 3-inch and 4-inch timbers together, you will need 7 yards of rope.

Frapping turns are used to draw the lashing tight.



SHEAR LASHING

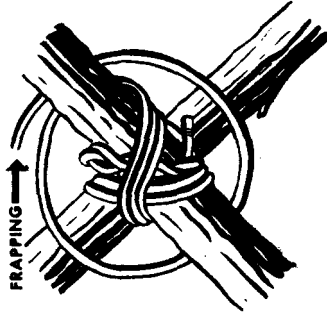
The shear lashing is used for forming shear legs of timbers in pioneering bridges. Begin by laying the spars parallel to one another. Tie a clove hitch around one spar. Then bind the two timbers together by laying seven or eight turns around them, loosely, one turn beside the other. Then make two frapping turns around the lashing between the spars. Fasten the rope end with a clove hitch around the second timber. Open out the two timbers to form shear legs.

Sometimes shear lashings are used to lash two spars together to keep them parallel (to extend a flagpole, for example). In that case, do not use frapping turns.

Sometimes, in this type of lashing it is necessary to put a long, tapered wedge behind the lashing to tighten it.

DIAGONAL LASHING

A diagonal lashing is used to "spring" two spars together; that is, to lash together two spars that do not touch where they cross. Begin with a timber hitch around both spars. Tighten it to draw the two close together. Three or four turns are then taken around one fork; three or four more, around the other. The turns should be beside each other, not on top of each other. Then take two frapping turns about the lashing at the point where the spars cross. Finish with a clove hitch around either spar.



SQUARE LASHING

A square lashing is used whenever spars cross at an angle, touching each other where they cross. Start with a clove hitch around the upright, directly below where the crosspiece will be. After tightening it, twist the free rope end and the standing part around each other to hold the loose end. Now wrap the rope behind the upright, down in front of the crosspiece, and around behind the upright. Do this three times, keeping outside the previous turns on the crosspiece and inside them on the upright. Then make two frapping turns between the timbers and strain them tightly. The lashing is then finished with a clove hitch on the crosspiece. Make all turns as tight and secure as possible.

