

ROPE CRAFT

3



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- Notes -

In 1793, as William Carey, considered the Father of the Modern Mission Movement, was making preparations to board a ship to India, he used the analogy that he felt he was being lowered into a dark well by a rope. He was not afraid as long as he knew that his faithful friend, Andrew Fuller, would hold onto the rope by praying and giving to support the mission work. This is not a task that can be accomplished alone. Will you remain faithful and hold onto the rope of missionaries by praying for and giving to missions? Have you ever sensed that God has been calling you to tie the rope around yourself and be on mission with Him? Pray and ask God to reveal to you how you are to respond to His invitation to join Him in accomplishing His mission.

Know the Ropes

Rope is made of animal, vegetable or mineral fibers. The fibers are twisted in one direction into strands and then the strands are twisted the opposite direction to make the rope. Sometimes fibers will be woven or braided into ropes of small diameter. Most of the time, rope is measured by the diameter in fractions or in millimeters. Marine applications will generally measure a rope by circumference.

Care of Rope

Store ropes in a cool, dry place. Keep the ropes clean and free of mud, grease, etc., as possible. Coil and uncoil ropes carefully to avoid kinks. Whip the ends of natural ropes or burn the ends of synthetic ropes to prevent the ends from unraveling. Be sure to inspect your rope periodically. Replace worn spots in ropes by splicing. Carefully evaluate replacing your ropes when signs of wear, such as broken fibers, are apparent.



Selection of Rope

There are several important considerations to keep in mind when selecting a rope. The material it is constructed from determines the properties and application of a rope. The construction of the rope is a key factor when selecting a rope. Working loads are generally 10% (between 8% and 14%) of tensile strength of a rope. A knot will reduce the working load of a rope up to 50%. Misuse of ropes could result in loss of load and possible serious injury. Be sure to know the capabilities and usages of your ropes. Consult the rope manufacturer concerning characteristics and working conditions for the ropes that you will be using.



Rope Materials

- Notes -

Natural Fibers



Manila Rope

Manila comes from the Abaca tree, is yellowish with a silky feel and is considered the strongest and best natural rope material.

Ropes have different strengths and uses. Christians also have different strengths and uses. Strands of fibers together make the rope strong. Christians serving together makes strength.

Sisal comes from the leaf of Agava plants and is often used as a substitute for Manila. The fibers are stiff and rough with no silky feel and break easily.



Sisal Rope



Jute Rope

Jute is from the Jute plant, is dark in color, very soft, frays easily and is mainly used in crafts.

Cotton is the best natural teaching rope because it is soft and pliable. But it frays and breaks easily and will also shrink.



Cotton Rope

- Notes -

Rope is tight, unfrayed, and straight when new. Rope gets frayed with use - just as we do with problems and sin in life. Can you think of ways to keep your life from becoming frayed?

Synthetic Materials



Nylon Rope

Nylon rope is soft and easy to handle. It stretches easily and knots will slip out of the rope. It does not rot, is resistance to abrasion and will last much longer than natural ropes.

Polyester is a very strong synthetic rope that is resistant to abrasion and does not stretch like nylon. Polyester ropes have a tendency to feel stiff to the touch.



Polyester Rope



Polypropylene Rope

Polypropylene is a lightweight rope that can float on water and is resistant to most chemicals. Polypropylene ropes are affected by prolonged exposure to direct sunlight.

Polyethylene is the lightest synthetic fiber rope. It is resistant to chemicals and can float on water. A polyethylene rope is not as strong as a polypropylene rope of the same size.



Polyethylene Rope

Rope Construction

- Notes -

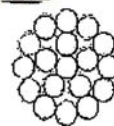
Laid Construction.

Also known as a twisted rope and is usually constructed with 3 strands. It is spliceable and is available in virtually every type of rope fiber. This is the most common rope construction for general-purpose use.



Solid Braid Construction.

A firm, round rope that works well on blocks and pulleys. Its name refers to the special lock-stitch construction of the rope. Solid braid rope does not unravel when cut, unlike other types of rope construction. It is available in various synthetic fibers.



Diamond Braid Construction.

Also known as hollow braid and maypole braid. This rope is constructed with a hollow center. This rope can be spliced in just seconds and is available in various synthetic fibers.



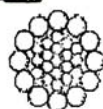
Braid-On-Braid Construction.

Also known as double braid. Actually two braided ropes combined into one rope. A braided core is covered with a braided jacket to produce a strong, easy handling rope. This rope is spliceable and is available in various synthetic fibers.



Kernmantle Construction.

It is a generic term of German derivation where mantle refers to the cover and kern the core. Specially designed ropes for use in mountain climbing, rescue, rappelling and certain safety applications. These ropes are designed for specific uses and should be used only after proper training.



"And if somebody overpowers one person, two can resist him. A cord of three strands is not easily broken."
(Ecclesiastes 4:12)

Properties of Rope

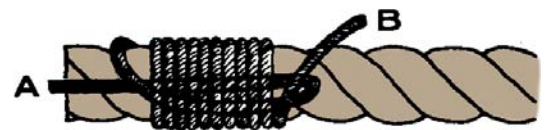
**** = BEST TYPE

	COTTON	SISAL	MANILA	NYLON	POLYESTER	POLYPROPYLENE POLYETHYLENE
Shock Load	*	*	**	****	**	***
Rot Resistance	*	*	*	****	****	****
Mildew Resistance	*	*	*	****	****	****
Sunlight Resistance	****	****	****	**	****	*
Heat	no affect	no affect	no affect	weakens at 350°F.	weakens at 350°F.	weakens at 150°F.
Storage	must store dry	must store dry	must store dry	can store wet or dry	can store wet or dry	can store wet or dry
Oil & Gas Resistant	**	**	**	****	****	****
Acid Resistance	*	*	*	***	****	****
Abrasion Resistant	*	**	***	****	****	**
Durability	*	*	***	****	****	***
Handling	****	*	**	****	***	***
Floats	no	no	no	no	no	yes

Whipping the Ropes

A good rope deserves good care.

One way to keep your rope in good condition is to “whip” the ends to keep them from unraveling. To whip the rope, use a fine cord or thread. Place the end of the cord at the end of the rope and lay a loop along the rope and lay a loop along the rope. Then wind the cord tightly around the loop and rope, thus binding them together. Wind to a distance roughly equal to the thickness of the rope. Finish the whipping by putting the winding end (B) through the loop and pull end (A) tight until the loop is drawn back out of sight. Cut both ends of the cord short to make a neat finish.



Binding or whipping the ends of a rope makes it more useful, last longer and easier to use. Christ binds our life together, makes us useful, and keeps us from getting “frayed.”

Knot Tying

- Notes -

Three things to know about a knot:

- Its name
- Its use
- How it is tied

In knot tying a rope has three parts:

- The **end** is the end of the rope with which you are working when you tie a knot.
- The **standing part** is the length of the rope not being used.
- The **bight** is the central part of the rope between the working end and the standing part of the rope.



An **overhand loop** is made by crossing the end over the standing part.



An **underhand loop** is made by crossing the end under the standing part.

A **turn** is made by looping the rope around any object – often another section of itself.



A **round turn** is taken by looping the rope twice around an object.

Always tighten a knot slowly and evenly to avoid kinking the rope. Quick, careless tightening may mean a tangle.

*“And whatever you do, in word or deed, do everything in the name of the Lord Jesus, giving thanks to God the Father through Him.”
(Colossians 3:17)*

- Notes -

*"For the body is one and has many parts, and all the parts of that body, though many, are one body – so also is Christ."
(1 Corinthians 12:12)*

Just as there are different types of knots for different uses, so also Christ gives different talents to His disciples to accomplish the tasks He assigns us.

Types of Knots

Stopper Knots

Stopper knots are used to prevent a rope from sliding or being pulled through an object. Stopper knots are generally tied in the end of a rope.

Overhand Knot

The Overhand Knot is the simplest and smallest stopper knot. It is generally used on small cord or twine, since it jams and is hard to untie. To tie: make an overhand loop, pass the end under and up through the loop. Draw tight.



Figure Eight Knot

The Figure Eight Knot is a stopper knot that is easier to untie than the overhand knot. To tie: make an underhand loop, bring the end around and over the standing part, pass the end under and then up through the loop. Draw tight.



Double Overhand Knot

The Double Overhand Knot is tied like the regular overhand except pass the end under and up through the loop two times instead of just one. This makes a larger knot to stop the rope from sliding through a hole or a loop of another knot.



Figure Eight Double Knot

The Figure Eight Double Knot is tied like the regular figure eight but two ropes are used.

Joiner Knots

Joiner knots are used to tie two ropes together.

Square Knot (Reef Knot)

The Square Knot is a joiner knot used to join two ropes or strings of the same thickness. To tie: pass the right end over and under the left end, curve what is now the left end towards the right, cross what is now the left end over and under the right. Draw tight.



Tie a square knot while telling that if you keep your eyes on Jesus you will always be in the right and your life will hold because this knot won't slip.

- Notes -

Knots tied wrong may look right - but will slip and not hold. The Christian life can not be faked.

Granny Knot

Don't tie the weak Granny Knot. Remember, the square knot has two ends lying together under one loop and over the opposite loop. The Granny has one end under and one over on both loops. This knot will slip under pressure.



Surgeon's Knot

The Surgeon's Knot is often used for twine – chiefly to keep the first tie from slipping before the knot is completed. To tie: with the right end, take two or three turns about the other end, bring both ends up, pass the left end over and under the other end similar to the square knot. Draw tight.



Fisherman's Knot

The Fisherman's Knot is very strong and is commonly used by anglers. To tie: lay the two ends together – each pointing in the opposite direction, tie an Overhand Knot in the end of each – around the standing part of the other. When drawn tight, the two knots slide together and will not slip.



Sheet Bend Knot

The Sheet Bend is for joining ropes of different sizes. To tie: form a bight on the end of the larger rope and hold firmly in your hand, then pass the end of the smaller rope from below up through the bight, bring the end of the smaller rope around and under the bight of the larger rope, then slip it under its own standing part and continue over the bight of the standing rope. Tighten by pulling the standing part of both ropes.



Carrick Bend Knot

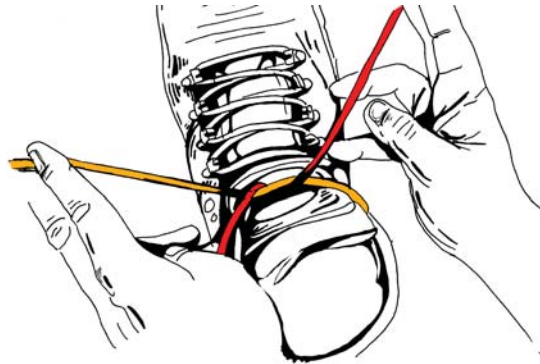
The Carrick Bend Knot is one of the strongest knots. It cannot jam and unties easily. To tie: with one rope-end form an underhand loop – with both the end and standing part pointing away from you, start the second rope beneath both sides of the loop, take the end of the second over the standing part of the first rope, then under the end of the first rope, then over the left side of the loop, then under itself – and let the second end lie over the right side of the loop. Finish by pulling on the standing parts of both ropes.

*“For nothing will be impossible with God.”
(Luke 1:37)*

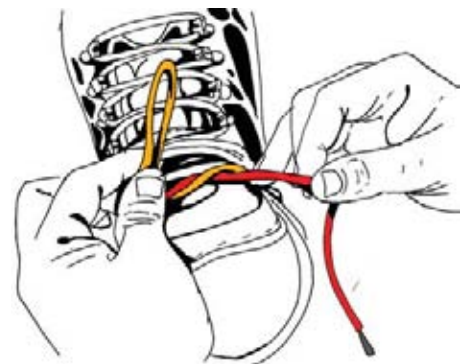


Bow Knot

The Bow Knot is used for tying your shoe laces. Before starting the Bow Knot, make sure the laces are pulled snug. To tie: with a shoe lace in each hand, pass the left lace over and around the right lace, firmly pulling the ends in opposite directions forming an overhand knot. With the left hand lace make and hold a medium sized loop as shown. (Loop)



Overhand Knot



Loop

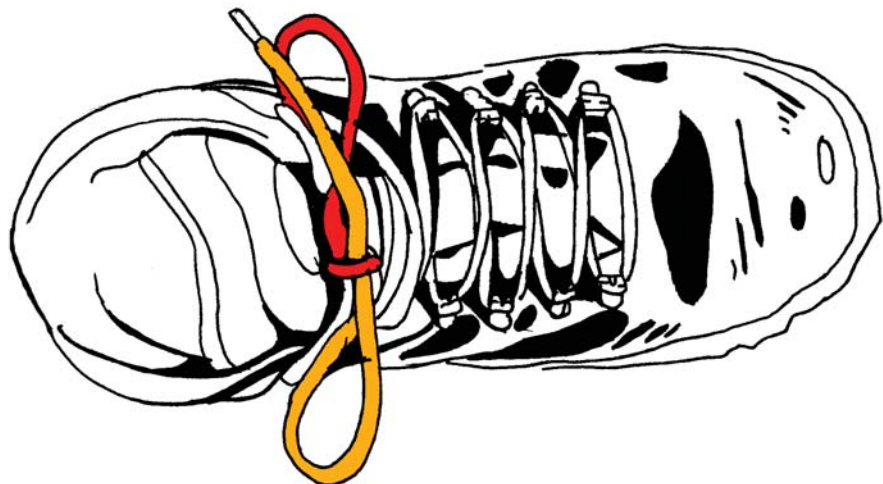
Now pass the right hand lace over and around the neck of the loop as shown. (Swoop) With the right hand lace form a bight and pass under itself forming a small loop. Grasp a loop in each hand. Pull firmly in opposite directions forming two equal sized loops as shown. (Pull) To untie the Bow Knot pull on the ends of the laces.



Swoop



Pull



Bow Knot

Tiller's Knot

The Tiller's Knot unties easily and is especially useful when there is tension on the rope. To tie: make a bight with the end of one rope, pass the end of the other rope from below, up through the bight of the first rope and bring the end of the second rope around the bight of the first rope. Cross it over the standing part of the first rope and then form a bight under the second rope as illustrated. Finish by drawing the knot tight.



Loop Knots

Loop knots create a loop in the rope that remains usable until untied.

Bowline Knot

The Bowline is used for securing items or lifting. The Bowline Knot is often called the “king of knots” because it never jams or slips if tied correctly. To tie: make an overhand loop with the end held towards you, pass the end up through the loop, then up behind the standing part, then down through the loop again. Draw tight.



When tying a bowline, compare the standing part of the rope to your spiritual life. As you tie the knot, tell how Jesus comes into the door of your life, puts His arms around you and never lets go.

Double Bowline Knot

The Double Bowline makes a good sling for lifting and lowering people or objects.

To tie: make an overhand loop with the end held towards you, exactly as in the ordinary Bowline. The difference being that you pass the end through the loop twice – making two lower loops. The end is then passed behind the standing part and down through the first loop again as in the ordinary Bowline. Pull tight. For rescue use one loop under the arms and use the other loop to form a seat.



Running Bowline Knot

The Running Bowline, also known as the Bowline on a Bight, creates an adjustable loop knot. Tie the regular Bowline around its own standing part to create the adjustable loop.



Man Harness Knot

The Man Harness Knot is used for hauling. This knot should be tied large enough to go around the object. To tie: make a loop in the rope and fold it forward and slightly to the right to get the loop shaped like the one in the first image. Then take up and under and over, as shown in the second image. To finish the knot, yank hard to the left.



Taut-Line Hitch

The Taut-Line Hitch is an adjustable loop knot. To tie: create a loop, then bring the end over and under the standing part twice through the loop formed, take the end over the loop and the standing part of the rope, then back under itself. Work the hitch until it is taut around the standing part. The hitch can be moved by pushing it up and down the standing part.



- Notes -

*"If you continue in My word, you really are my disciples. You will know the truth, and the truth will set you free."
(John 8:31-32)*

A Clove Hitch becomes more secure the tighter you pull on the rope. Christ has secured our salvation and will never let us go.

End Securing Knots

End securing knots, also known as Hitches, are generally used to secure the end of a rope to an object.

Clove Hitch

The Clove Hitch is a quick simple method of fastening a rope around a post or stake. It is used to begin lashing. It will slip when used at the end of a rope. To tie: make a turn with the rope around a post and over itself, take a second turn around the post, place the end under the second turn. Tighten by pulling both ends in opposite directions.



Half Hitch

The Half Hitch is generally used for fastening to an object for a right-angle pull. To tie: pass the end of the rope around the object and go around the standing part and back under the turn. This is the first step in tying more complicated hitches. The illustration shows the Half Hitch tied with the end nipped under the turn of the rope some distance away from the standing part – this method is fairly reliable for temporary use – if the pull is steady and the arrangement is not disturbed.



Double Half Hitch

The Double Half Hitch is used to make a rope fast to a ring or post. It is simply two Half Hitches tied around the standing part of the rope. It is more reliable than the single Half Hitch. It will also adjust to loosen or tighten the rope.



Timber Hitch

The Timber Hitch is a simple convenient hitch that does not jam and is untied easily when the pull ceases. It is used mainly to tow or hoist cylindrical objects, such as logs. To tie: pass a rope around the object and take a turn with the end around the standing part, then twist or turn the end back around itself following the lay of the rope. Three turns back are generally sufficient.



Cow Hitch

The Cow Hitch is used for tethering, mooring, and hoisting. To tie: double the end of a rope to form an open loop, reach through the loop and grasp the end and standing part and pull them back through the loop. Place the double loop formed over a post and draw up tight.



Other Knots

Sheepshank

The Sheepshank is intended to shorten a rope for temporary use only. Carefully tied and drawn up tight, it is fairly reliable under a steady pull. To tie: form an S loop as shown in the diagram, then with one free end of the rope make a Half Hitch and slip it over one of the loops and tighten. Repeat procedure with the other loop.



Tie several slip knots in a rope and wad it up. Tell how our lives can get all tangled because of sin and we can never get untangled from our situation without Christ. Tell how Jesus can restore our relationship with Him and straighten out our lives as you pull the knots out of the rope.

Slipknot

The Slipknot forms a easily removable loop. To tie: form an overhand loop, then insert a bight into the loop.



Trucker's Hitch

Use this knot to cinch down a load on your car top, boat, horseback, etc. This combination of knots allows a rope to be pulled extremely tight. To tie: tie off one end of the rope, lay rope over the load to be tied down, tie a slip knot in the middle of the rope and form a small loop, with free end make a turn around a fitting and bring the free end back up to the loop in the rope, feed through and pull the rope very tight. Secure the knot with a Tiller's Hitch to allow you to untie the knot easily.

Splicing

Splices are used to mend a damaged rope or to fasten one rope to another. A good splice has up to 95 percent of the rope's strength, while a knot's efficiency varies from only 45 to 60 percent of the rope's strength. The Long Splice allows a rope to run through a block or pulley, and should be made only with two ropes of the same size. The Long Splice is time consuming and uses up considerable rope. The Short Splice is the strongest way to join two ropes, can be made quickly, and involves little rope waste although the disadvantage is that it cannot pass through a pulley. The Eye Splice is used to create the strongest loop in the end of the rope. The End Splice can be used to replace whipping to keep the end from unraveling.



Short Splice

Splicing Tips

- Whip or tape the end of the strands to prevent fraying during splicing.
- A splicing tool can aid in making splices.
- Twist the rope slightly against the lay of the rope to raise the strands open in order to tuck the strands being spliced into the rope.
- Tuck the working end of the strands away from the splicer.
- Roll the rope towards the splicer a third of a turn after each tuck.
- A good splice should have a neat uniform appearance.
- A minimum of three to four tucks is recommended per strand.
- When splicing any of the synthetic ropes, add at least one extra tuck per strand.
- Roll and pound tucks into the rope and clip the strand ends to finish the splice.



Buddy Rope

- Notes -

"The Father and I are one." (John 10:30)

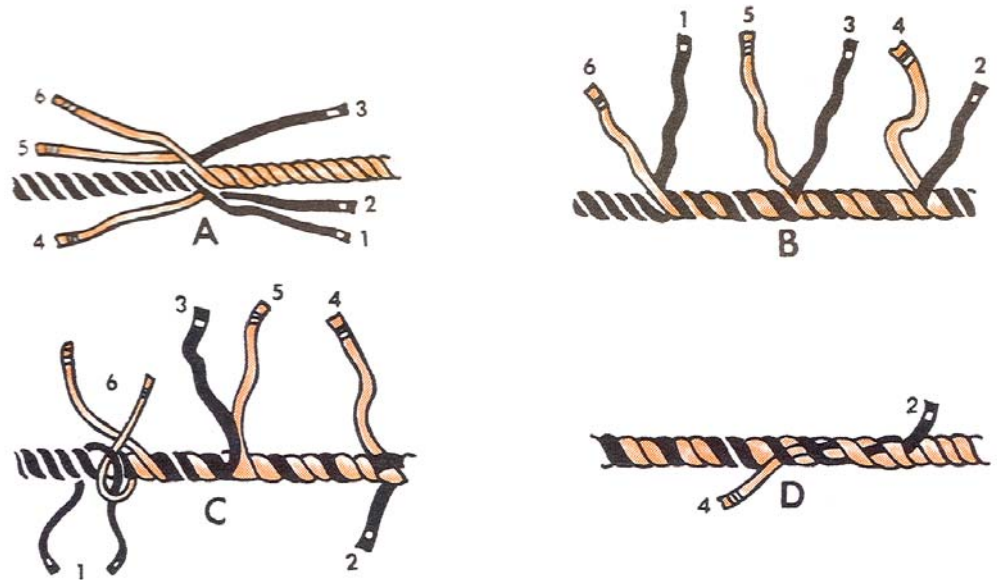
Jesus came to Earth as God in man.

"I pray for them. I am not praying for the world but for those You have given Me, because they are Yours. All My things are Yours, and Yours are Mine, and I have been glorified in them. I am no longer in the world, but they are in the world, and I am coming to You. Holy Father, protect them by Your name that You have given Me, so that they may be one as We are one." (John 17:9-11)

We are spliced together with the Father when we become a Christian for we are spliced together by Jesus Christ.

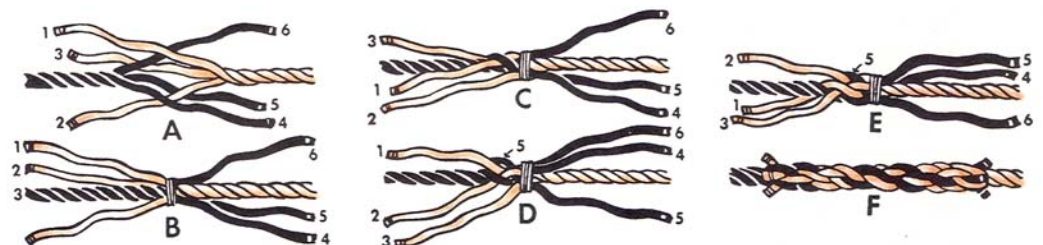
Long Splice

The Long Splice: A. Unlay (untwist) each rope end about 15 turns and place ropes together, alternating strands of each end. B. Using opposite pairs, unlay one strand (4) and fill its place with its "partner" strand (2). Repeat operation exactly with another pair of strands (1) and (6) in opposite direction. C. Trim the longer strand (4) and tie each pair of opposing strands (2) and (4) with an overhand knot, tucking each strand twice. The tuck goes over one strand, under the second, and out between the second and third. Strands (3) and (5) are simply tied with an overhand knot. Strands (1) and (6) are halved, and opposite strands are tied with an overhand knot before tucking. D. Roll and pound tucks into the rope and clip the strand ends.



Short Splice

The Short Splice: A. Unlay each rope a few turns and alternate the strand. B. Tie the strands down to prevent further unlaying. C. Tuck one strand (1) over an opposing strand, and under the next strand. D. The tuck of strand (2) goes over the first strand (5), under the second, and out between the second and third. E. Repeat operation with the other two strands (1) and (3) from the same rope end. F. Remove tie and repeat operation on other rope end. Make two more tucks for each strand. Roll tucks into the rope and clip the strand ends.



End Splice

The End Splice: A. Unlay the ends of the rope at least 5 lays. B. Fold strand (2) down between strands (1) and (3), leaving a small loop. C. Take strand (1) over strand (2) and down beyond strand (3). D. Take strand (3) over strand (1) and through the loop of strand (2). E. Pull evenly on each of the strands to form a triangular crown with the strands turned back down the rope. F. Strand (1) is tucked over (a) and under (b) and out between (b) and (c) Strand (2) is tucked over (b) and under (c) and out between (c) and (a) Strand (3) is tucked over (c) and under (a) and out between (a) and (b) Make two more tucks for each strand. Roll tucks into the rope and clip the strand ends.



A



B



C



D



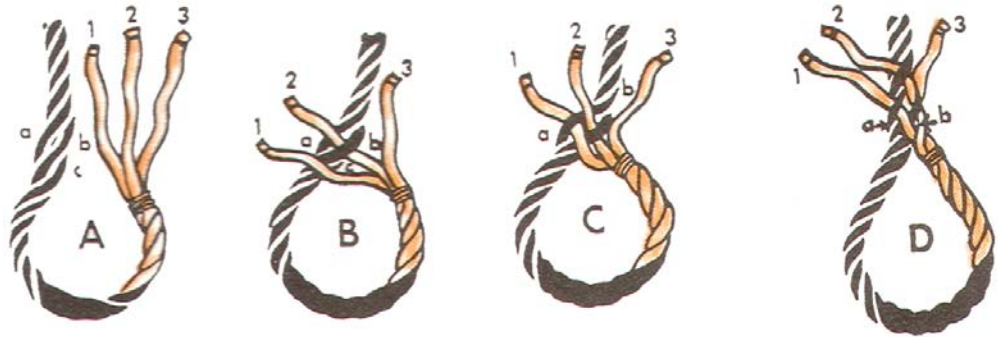
E



F

Eye Splice

The Eye Splice: The size of the eye will be determined by where the splice is started into the standing part. A. Unlay the end of the rope at least 5 lays. B. Strand (2) is tucked over strand (c), under (b) and out between (a) and (b). C. Strand (1) is tucked once over (b) and under (a) and out between (a) and (c). D. Strand (3) is tucked once over (a) and under (c) and out between (c) and (b). E. Make two more tucks for each strand. Roll tucks into the rope and clip the strand ends.

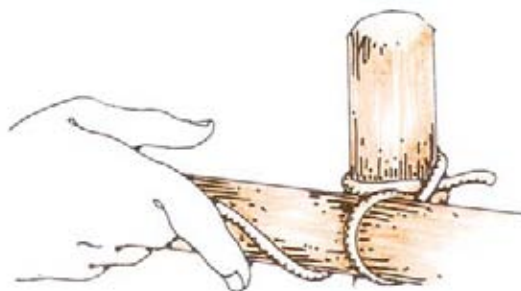
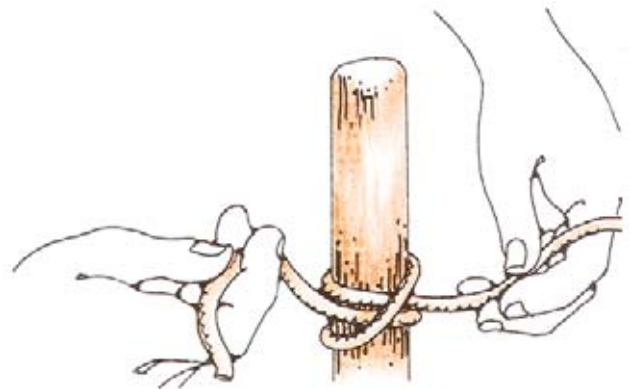


Lashing

Lashing is a way of joining sticks or poles together with rope or twine. Simple outdoor equipment can be quickly constructed to make outdoor living easier. Items needed for lashing include sturdy twine, knife or saw, sticks or poles.

Square Lashing

Square Lashing is used to join two sticks together at right angles. You can make coat hangers, towel racks and other items. Begin by making a clove hitch on the vertical or upright stick with a long piece of twine. Be sure to leave several inches on the free end to complete the lashing.

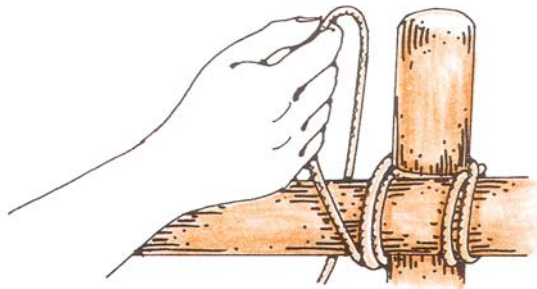
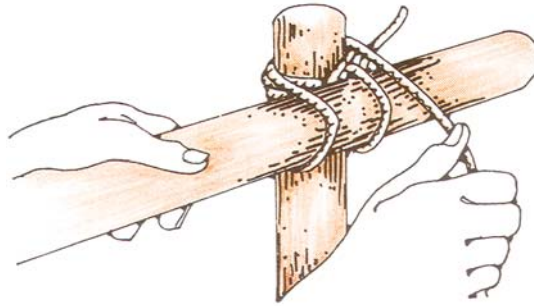


Pull the twine forward and over the front of the horizontal stick. Then pull the twine behind the vertical stick and around to the front. Next, pull the twine up in front of the horizontal stick.

*"I am the vine; you are the branches. The one who remains in Me and I in him produces much fruit, because you can do nothing without Me."
(John 15:5)*

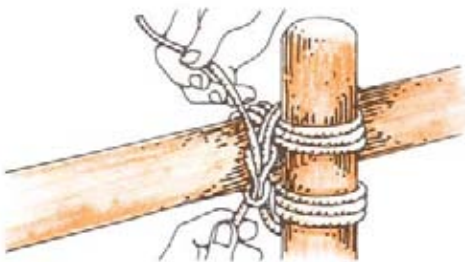
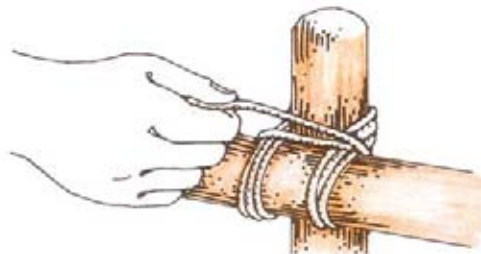
When we receive Jesus Christ as our Lord and Savior we become lashed together and now are able to do more than we could when we were alone.

Continue by pulling the twine around the upright and back to the starting point.



Repeat the same pattern three or four times, pulling tightly as each wrap is made.

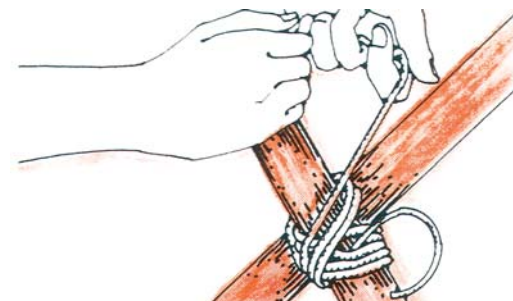
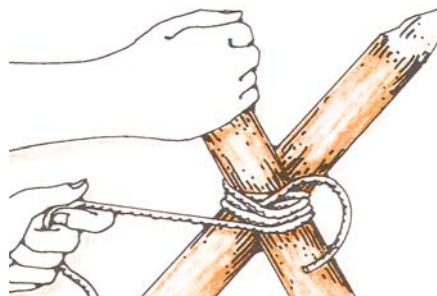
When the sticks are tightly wrapped, tighten the binding by frapping (winding the twine between the two sticks three or four times, pulling each wind tight).



End with a square knot at the beginning point. Cut off ends and tuck them under the lashing.

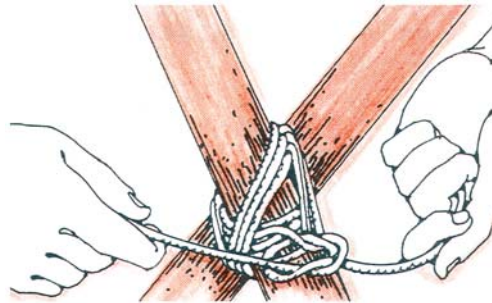
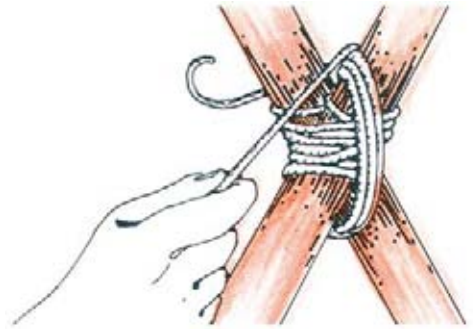
Diagonal Lashing

Diagonal Lashing is used to make racks and braces. Begin with a clove hitch around two or three sticks at the point where they cross. Make three or four horizontal winds.



Then make the same number of vertical winds, pulling each turn tight.

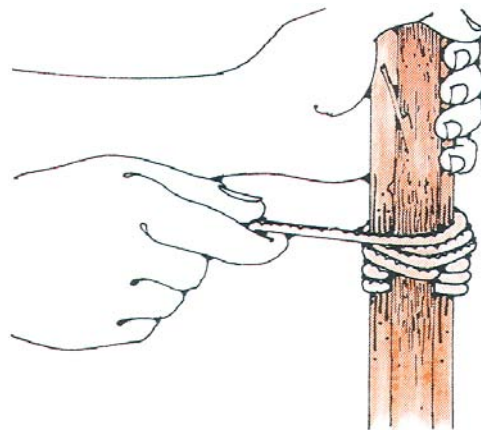
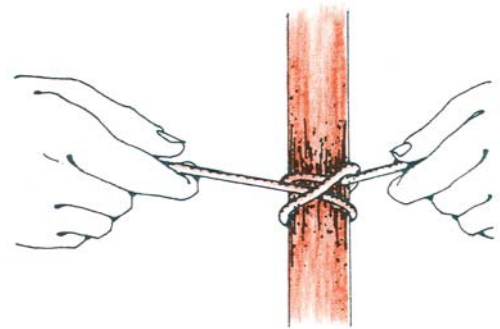
Frap between the sticks as in square lashing, winding three to four turns.



Pull windings tight and finish with a square knot.

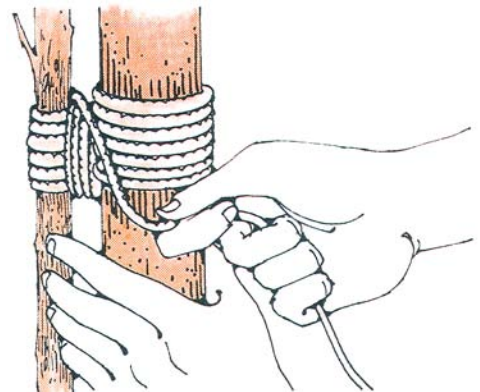
Round or Sheer Lashing

Round or Sheer Lashing is used to join two parallel sticks. It is used to make pot hooks and to attach sticks to trees. Begin with a clove hitch on one stick.

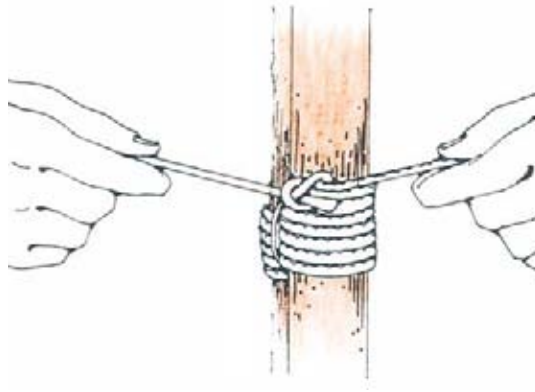


Place the other stick parallel and make parallel winds until the sticks are bound firmly.

Frap by pulling twine to the front and between the sticks.



Make three or four winds pulling each wind tight and finish with a square knot.



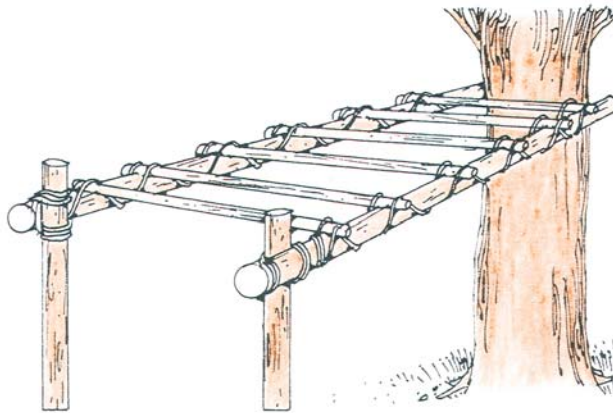
Tripod Lashing

Tripod Lashing is a type of Round or Sheer lashing where three poles are used and the windings are not made very tight. Begin with the center pole pointed the opposite direction of the other poles. Make several windings around the three poles. Frap between each pole, pulling tight. End with a square knot.

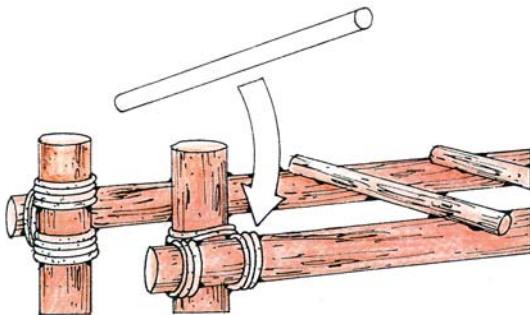
"I give thanks to Christ Jesus our Lord, who has strengthened me, because He considered me faithful, appointing me to the ministry." (1 Timothy 1:12)

Continuous Lashing

Continuous Lashing is used to make a table top or seats.

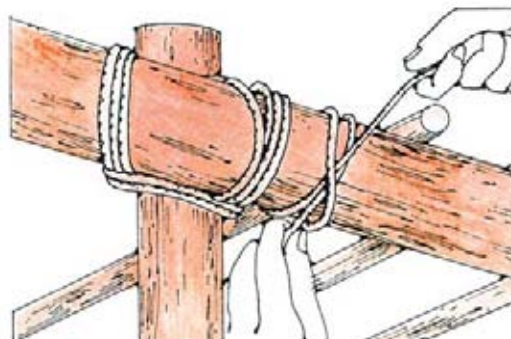


Every believer is called to be involved in God's mission and ministry. Pray about where God would like you to be involved.



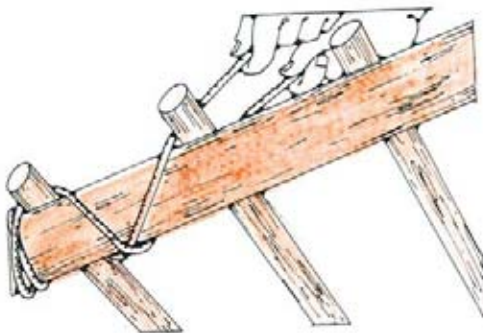
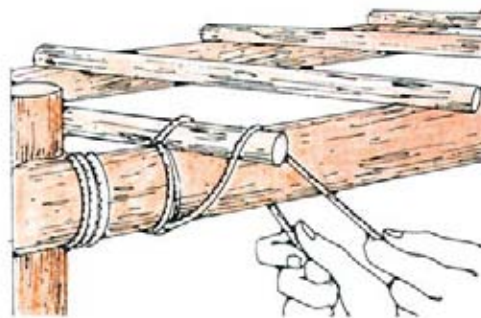
First, make a frame using square lashing. Cut and trim sticks to be used as cross pieces.

Start with a piece of twine long enough to completely lash each side. Tie a clove hitch around the frame in the middle of the twine with the knot underneath.



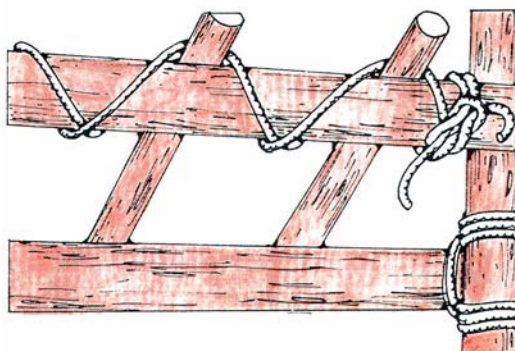
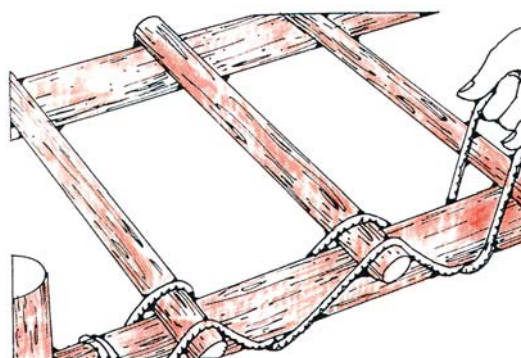
- Notes -

Take an end of twine in each hand and pull it up and over the first cross piece then pull it down under the frame.



Cross the twine under the frame making an X, pulling the twine tight.

Bring twine up and over the next cross piece. Continue the pattern crossing the twine under the frame each time.

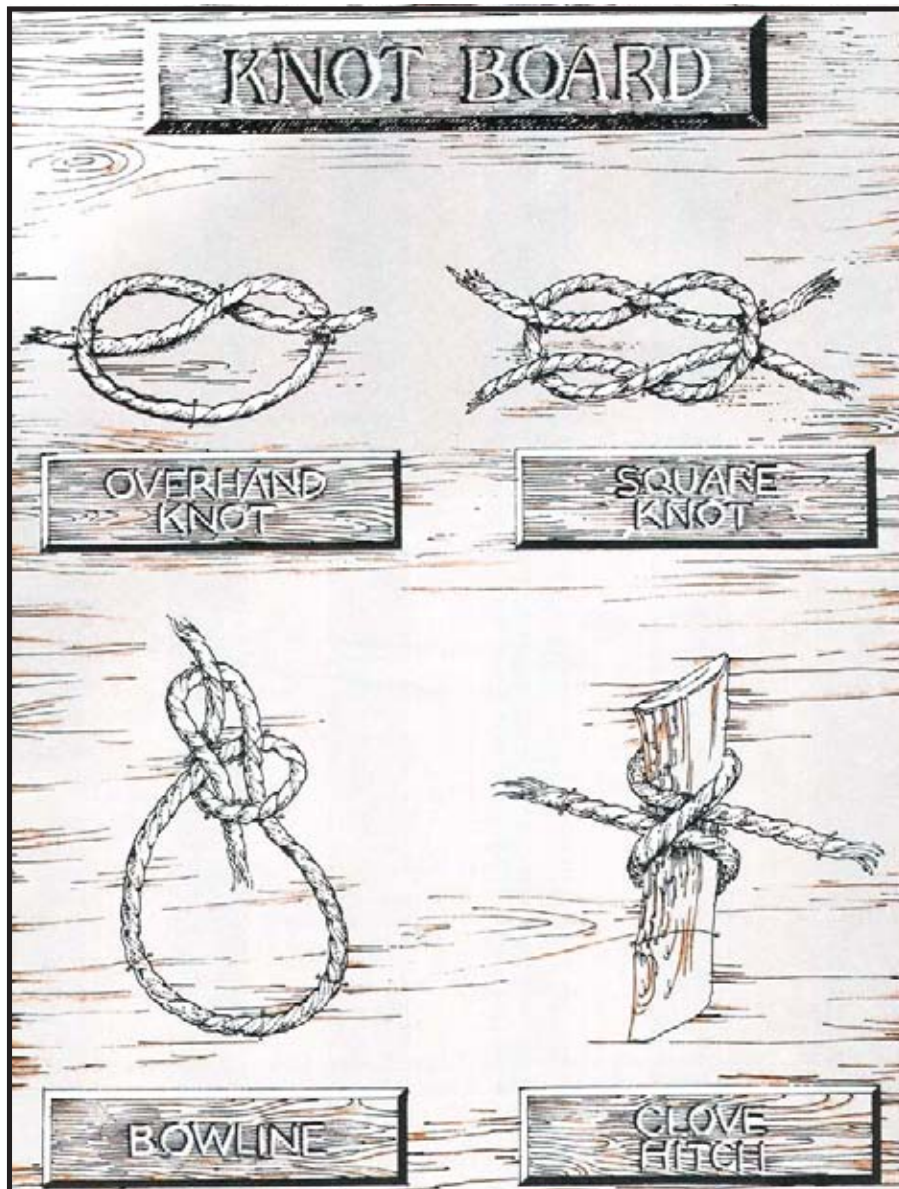
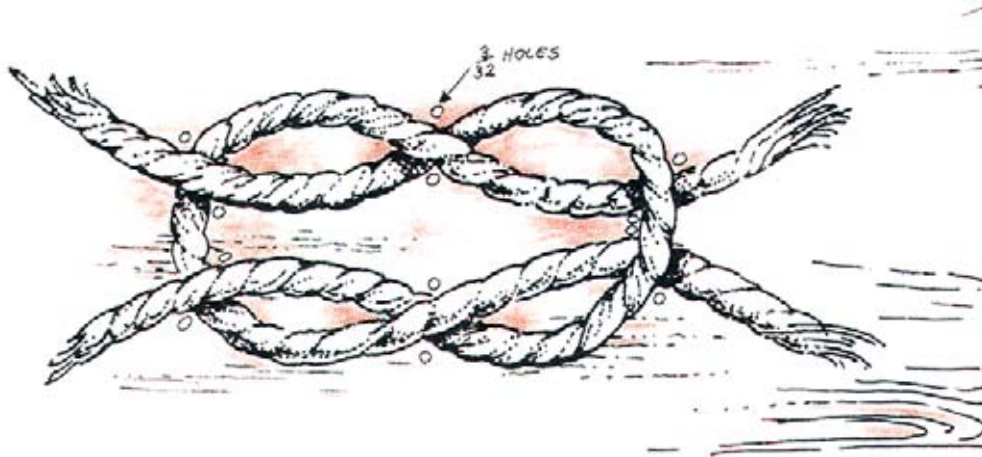


Pull the twine tight and finish with a square knot. Repeat on other side.

Knot Board

- Notes -

Learn to tie the four basic camping knots as illustrated as well as others you might add. Practice them until you can tie them well. Display them on a knot board made from a square of peg board (or plywood), white nylon cord, and fine wire. The knot board makes an attractive display for the chapter room or your own room at home.



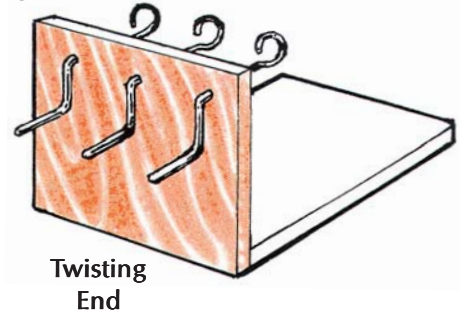
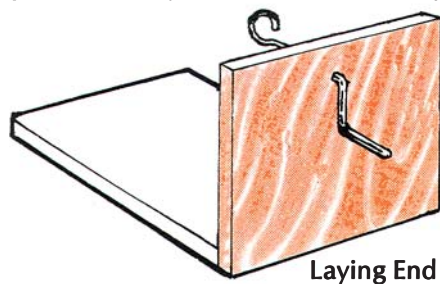
- Notes -

*"I am able to do all things through Him who strengthens me."
(Philippians 4:13)*

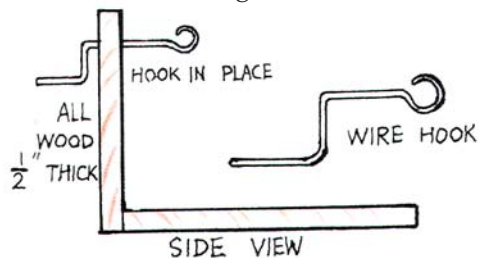
Rope Machine

Making your own rope with a rope machine is a fun group project that requires at least three people. Materials needed are ½ inch lumber, metal coat hangers, and screws or nails. Refer to the illustrations for dimensions and assembly.

The type of rope that is constructed by the rope machine is a three strand laid rope. This type of rope is made by twisting the strands of fiber in one direction (clockwise) and then laying the strands together in the opposite direction (counterclockwise). Any of the following materials may be used to make rope: binders twine, baler twine, plastic twine, jute twine, sisal twine, yarn, or string.



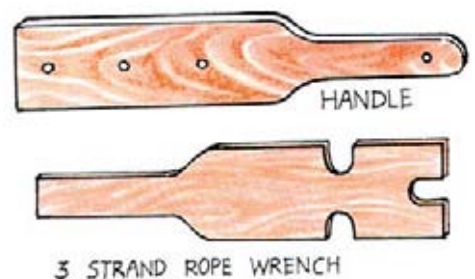
The primary parts of a rope machine are the twisting end (3 hooks), the one that twists the three strands, and the laying end (1 hook), the one that is used to lay the twisted strands together.



Anchor one of the end assemblies to a table with a "C" clamp or other method and have someone hold the other end. Tie the end of the twine to the laying end hook. Next hook the twine over one of the hooks on the twisting end, and then back to the laying end. Continue back and forth

until each of the three hooks on the twisting end has two lengths of twine. Try to keep the tension equal on each length of twine.

While keeping the laying end from turning, turn the handle on the twisting end so that the cranks are turning clockwise as you are looking at the handle. Twist the strands until they become firm and resist further twisting. Strands that are not twisted tight enough will cause the rope to be loose. Strands that are twisted too tight will kink. Experience will teach you when the strands are twisted just right.



To complete or "lay" the rope, use the rope wrench to assist in laying the strands uniformly. The actual laying of rope is done by turning the laying end crank in a counterclockwise direction while moving the rope wrench toward the twisting end. While twisting and laying the strands a modest amount of tension must be kept on the rope.

