

girl scouts
of western ohio

Knots



Camp and Outdoor Curriculum Manual



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Parts of a Rope

Bight: A bend in the rope

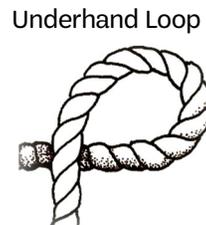
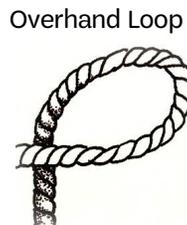
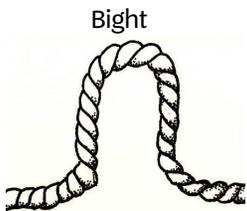
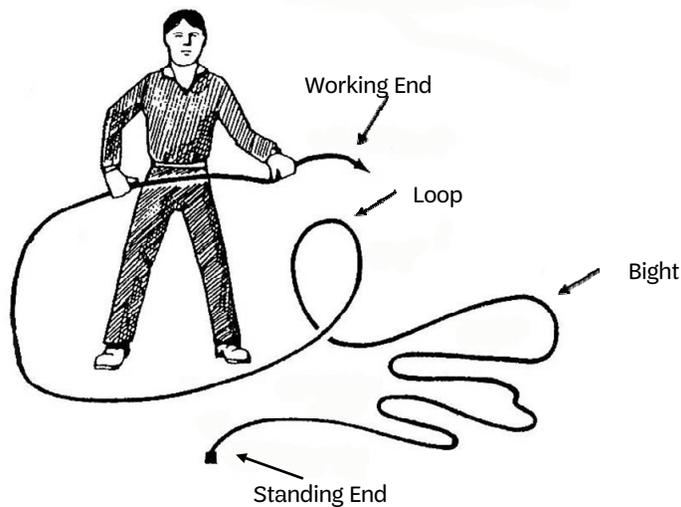
Loop: Crossing the rope over itself, creating a loop

Overhand Loop: When the working end of the rope crosses over the standing end

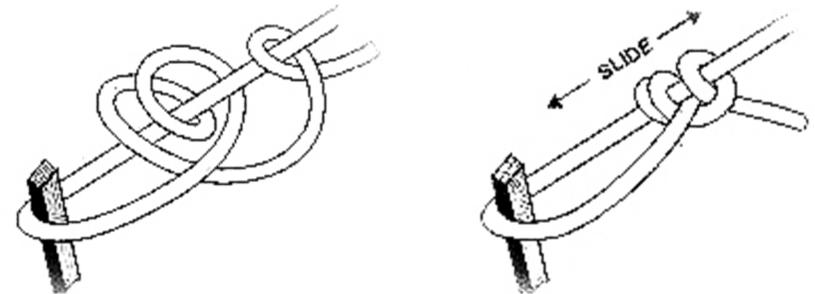
Standing End: Section of rope unavailable to work with

Underhand Loop: When the working end of the rope crosses under the standing end

Working/Free End: Section of rope available to work with



HITCH Tautline Hitch



Instructions

- Wrap the working end around a post from left to right
- Wrap the working end, underhand, around the standing end twice, getting closer to the post each time, passing the end through the loop on the last wrap
- Wrap the working end, underhand, around the standing end on the opposite end from the post, tucking the working end through the loop
- Pull knot tight

Knot Information

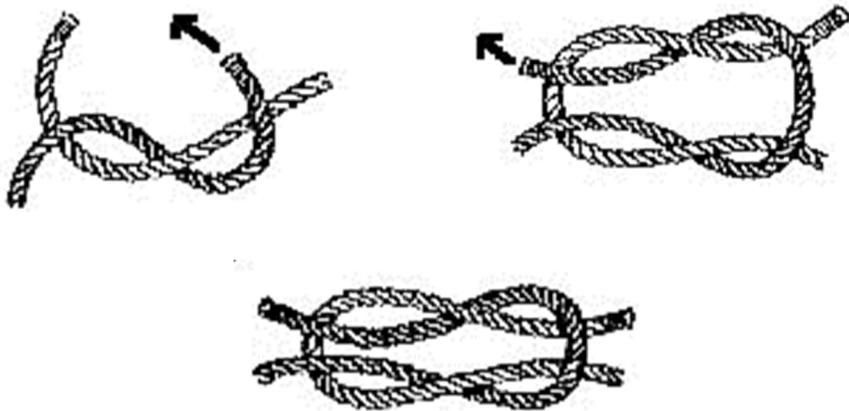
The Tautline Hitch can be slid up and down its own standing end, creating a knot that can tighten the line it's tied on.

Used For

- The last step for clothes-lines or other lines that may need to be tightened occasionally
- Regulating the tension (tightness) on guy lines for tents, shelters, etc.

BEND

Square Knot aka Reef Knot



Instructions

- Place the working end in the right hand over the working end in the left hand and tie an Overhand Knot.
- Place the working end in the left hand over the working end in the right hand and tie a second Overhand Knot.
- Pull ends tight.

“Right over left, left over right, ties a square knot, tidy and tight.”

Knot Information

- If tied using the working end of one hand twice (e.g. right over right, right over right), a very unreliable “Granny Knot” will result.
- Difficult to untie after put under strain

Used For

- Tying two rope ends of the same size together
- Many craft projects, for instance tying bandanas, macramé, etc.

Types of Knots

Bend: Knot used to secure two ends of rope

Binding: Knot used to secure objects together

Decorative: Knot usually used solely as decoration such as wrappings, necklaces, key chains, etc.

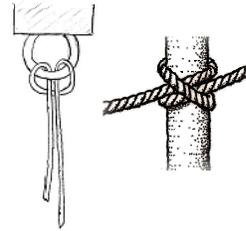
Hitch: Knot used to secure a rope to another object such as a tree, railing, dock, post, or ring.

Loop: Knot used to create a loop in a rope

Stopper: Knot used to prevent rope from passing through a restriction, such as a cleat, or used as a back-up for another knot.

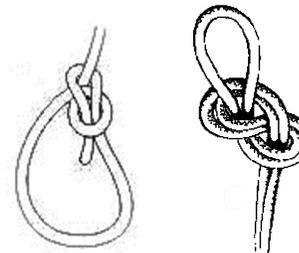
HITCHES

Clove Hitch
Cow Hitch
Half Hitch
Tautline Hitch



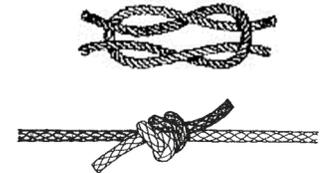
LOOPS

Bowline
Bowline on a Bight
Double Figure Eight
Overhand Loop
Slip Knot



BENDS

Fisherman’s Knot
Sheet Bend
Square Knot



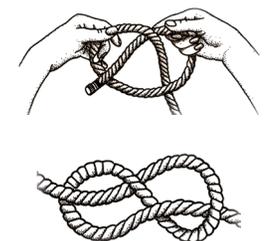
DECORATIVE

Monkey’s Fist

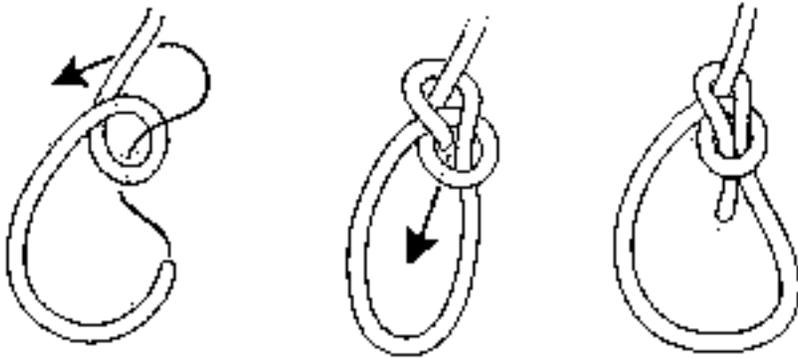


STOPPER KNOTS

Figure Eight
Overhand



LOOP Bowline



Instructions

- Create a vertical overhand loop so the rope forms a “6” keeping plenty of rope available on the working end.
- Bring the working end through the overhand loop, from back to front. Wrap the working end around the standing end, from right to left
- Place the working end back into the overhand loop
- Pull the working end and loop tight

*“The bunny comes out of the hole,
around the back of the tree, and back into the hole.”*

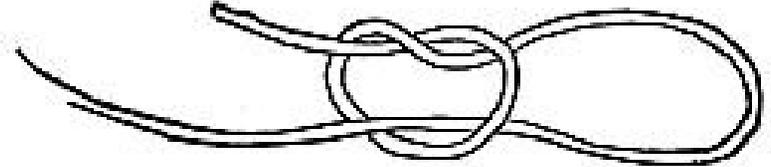
Knot Information

Properly tied in ordinary rope, there is little danger of the Bowline slipping before the breaking point of the rope itself is reached. The Bowline is easy to untie, even when wet and put under a load.

Used For

- Two interlocking Bowlines can be used to tie a bedroll
- One end of a clothesline
- The first step of a tie-down for a trailer, truck, etc.

LOOP Slip Knot



Instructions

- Using the working end, tie an Overhand Knot around the standing end, creating a loop.

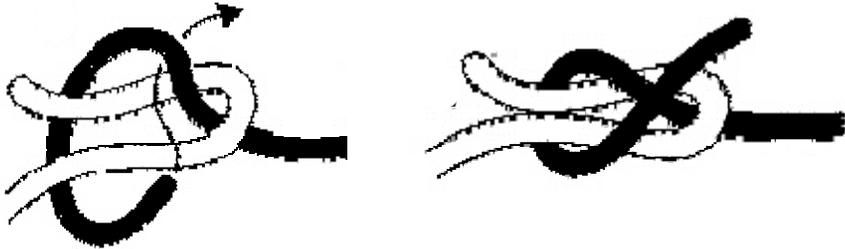
Knot Information

Used For

- Creating an adjustable loop in a rope

BEND

Sheet Bend



Double Sheet Bend



Instructions

- Using the working end of one rope, tie a Slip Knot around the other rope.
- Using the working end of the second rope, tie a Slip Knot around the first rope on the standing end side of the first knot.
- Pull standing ends of both ropes until knots slide together.

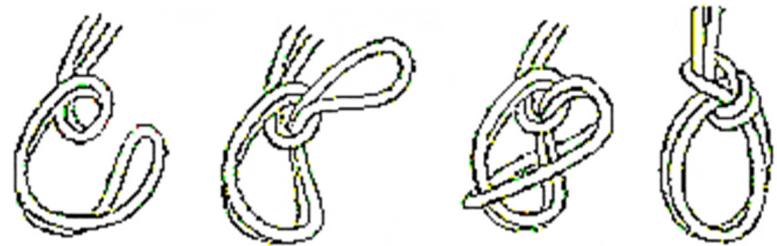
Knot Information

Used For

- Joining two ropes of different sizes together.

LOOP

Bowline on a Bight



Instructions

- Take a bight in the rope
- Create a vertical overhand loop so the rope forms a double “6” keeping plenty of rope available on the working end bight.
- Bring the working end bight through the overhand loop, from back to front.
- Open the working end bight and put knot all the way through loop.
- Pull loop tight.

Knot Information

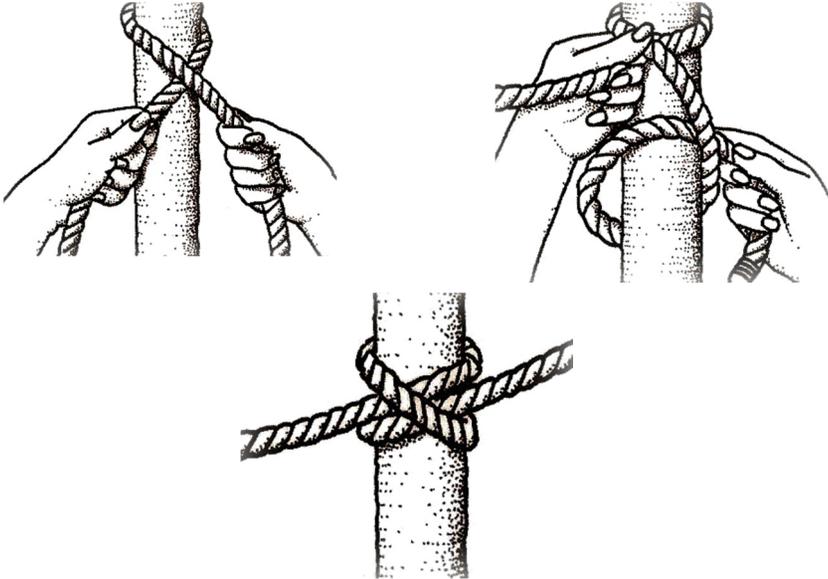
May come untied if a load is only applied to one loop.

Used For

- Creating two loops in the middle of a rope that's easily untied.

HITCH

Clove Hitch



Instructions

- Wrap the working end around the back of a post twice, crossing on the front
- Wrap a third time, passing the working end under the “x” created by the cross on the front of the post

Knot Information

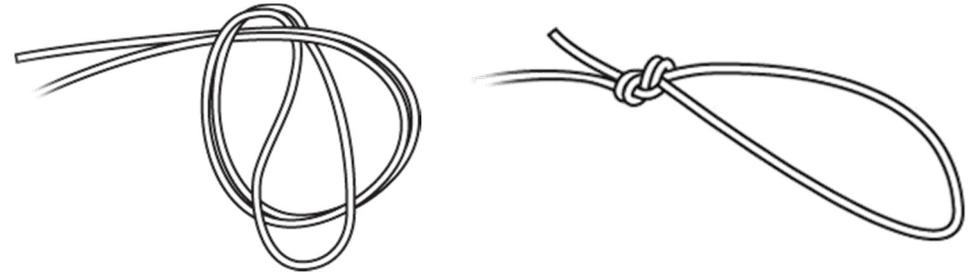
- Not good for square posts
- As more force is placed on the knot, or if the standing end tries to unwrap the knot, the knot actually tightens
- Can be easily un-tied if the working end isn't pulled all the way through.

Used For

- Hitching an object to a post or railing (e.g. boat at a dock)
- Fastening a rope to a tree, post, or railing that will incur a constant force

LOOP

Overhand Loop



Instructions

- Take a bight in the rope
- Form an overhand loop using the bight as the working end
- Pass the working end through the loop
- Pull tight

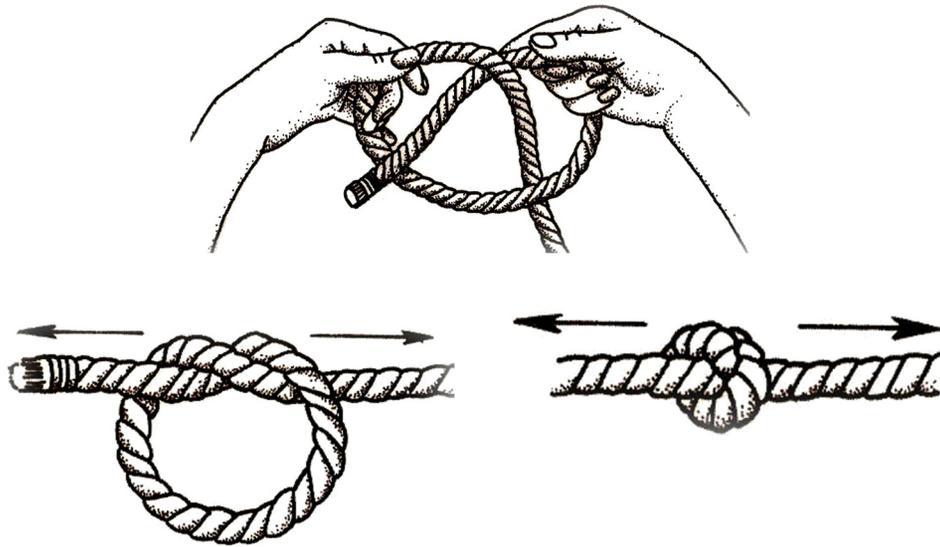
Knot Information

Quick and simple loop, hard to untie after put under extreme load or when wet

Used For

- Permanent, easy loops

STOPPER KNOT Overhand



Instructions

- Form an overhand loop with the working end
- Pass the working end through the loop
- Pull tight

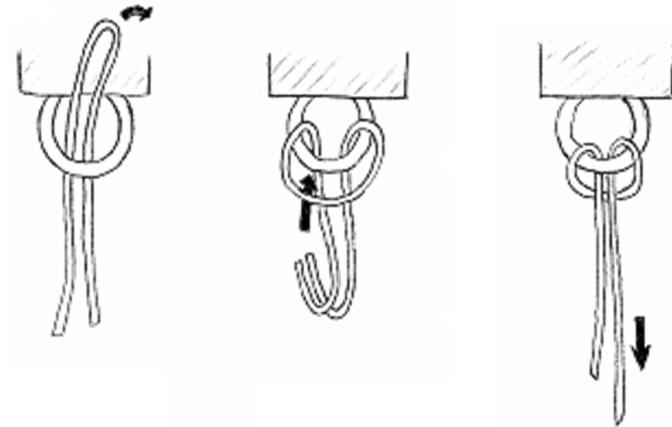
Knot Information

Simplest of stopper knots. Best used on twine or thread. Use on cord you do not want to untie later.

Used For

- Putting a knot in the end of a rope to keep it from fraying
- Making a “stop” to keep your hand from sliding off the end of the rope
- Joining two pieces of string or cord that you do not wish to undo later

HITCH Cow Hitch



Instructions

- Place the working end on top of the standing end
- Wrap a second time and pull tight

Knot Information

Simplest of stopper knots. Best used on twine or thread. Use on cord you do not want to untie later.

Used For

- Putting a knot in the end of a rope to keep it from fraying
- Making a “stop” to keep your hand from sliding off the end of the rope
- Joining two pieces of string or cord that you do not wish to undo later

STOPPER KNOT Figure Eight



Instructions

- Take a bight in the rope
- Wrap the working end all the way around the standing end
- Pass the working end through the loop from the back
- Pull tight

Knot Information

- Universal stopper knot used often in climbing, rappelling, and sailing.
- Easier to untie than an Overhand Knot, especially when wet or extremely tight.

Used For

- Preventing end of rope from running out of a retaining device, such as a cleat.
- Tied on a bight, creating a loop, to attach ropes to a climber.

Decorative Monkey's Fist

Instructions

1. Hold standing end of rope between middle finger and thumb, with tip pointing down.
2. Wrap working end around index finger and middle finger three times.
3. Wrap working end around middle finger a fourth time.
4. Wrap working end around these loops three times by passing through triangle created by loops, middle finger, and index finger.
5. Remove finger tips from loops. Wrap working end through these now free loops three times.
6. Start at the beginning and tighten each wrap, working the excess out of the knot.

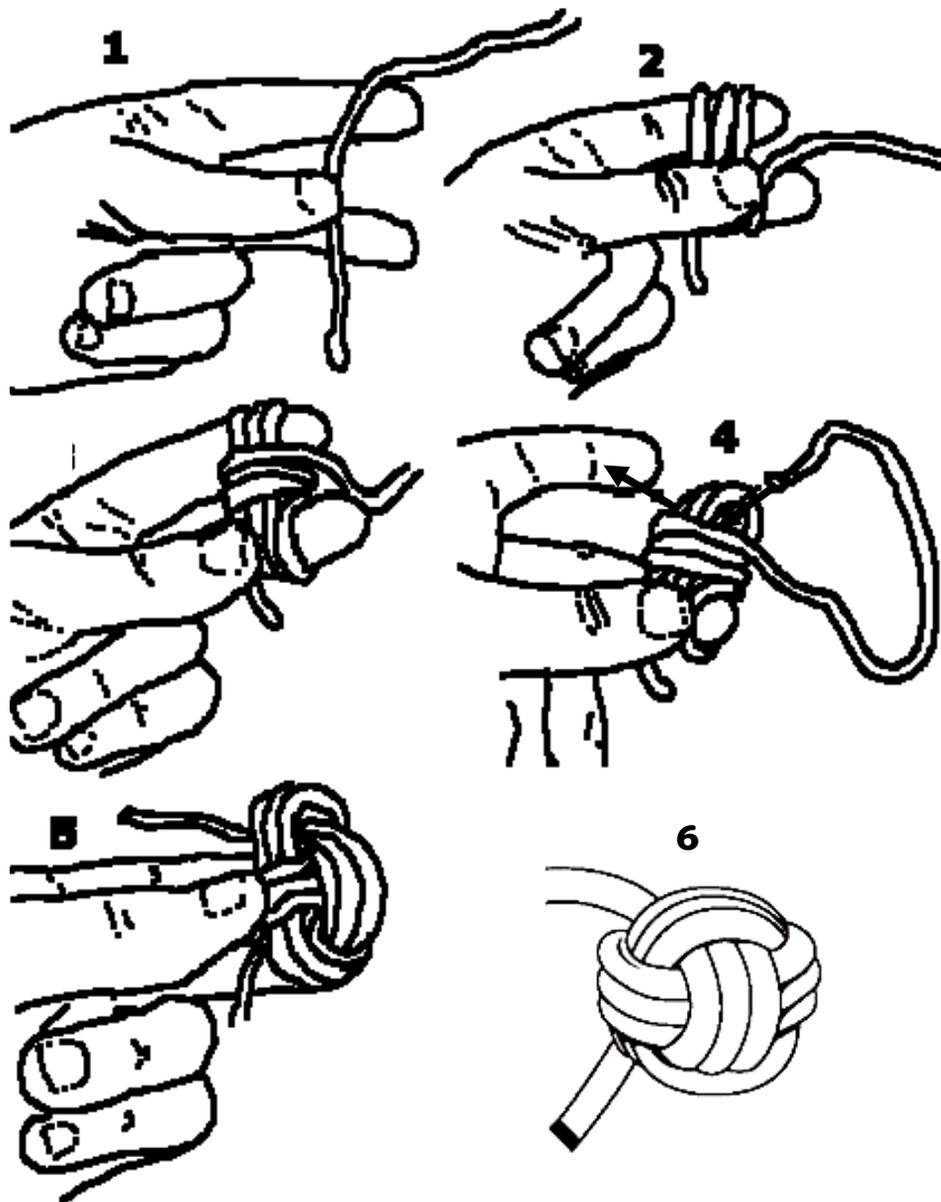
Knot Information

Leave more room on standing end if wanting to tie Monkey's Fist in middle of rope. Tie an overhand knot on standing end if wanting to tie Monkey's Fist on the end of a rope.

Used For

- Originally used as stopper knot on tall sailing ships.
- Can be made into a necklace or keychain.
- Given as a gift, it is a sign of community, camaraderie, and good luck.

Decorative Monkey's Fist



LOOP Double Figure Eight



Instructions

- Take a bight in the rope, using the original bight as the working end
- Take a second bight in the rope
- Wrap the working end all the way around the standing end
- Pass the working end through the loop from the back
- Pull tight

Knot Information

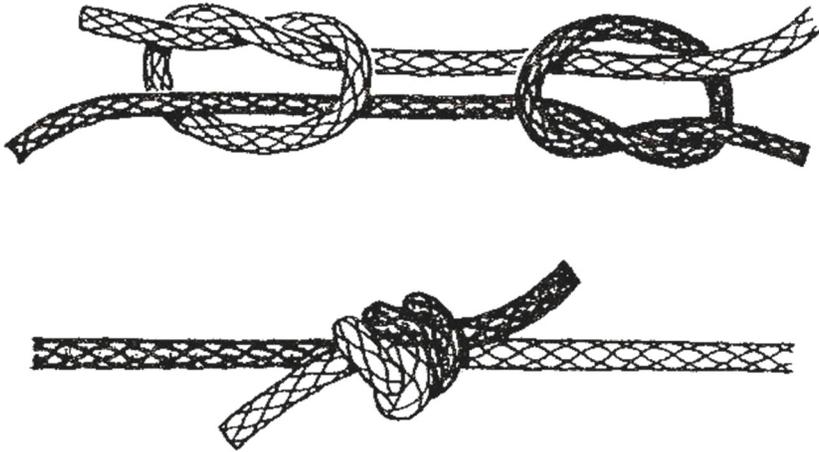
Simplest of stopper knots. Best used on twine or thread. Use on cord you do not want to untie later.

Used For

- Putting a knot in the end of a rope to keep it from fraying
- Making a "stop" to keep your hand from sliding off the end of the rope
- Joining two pieces of string or cord that you do not wish to undo later

BEND

Fisherman's Knot



Instructions

- Using the working end of one rope, tie a Slip Knot around the other rope.
- Using the working end of the second rope, tie a Slip Knot around the first rope on the standing end side of the first knot.
- Pull standing ends of both ropes until knots slide together.

Knot Information

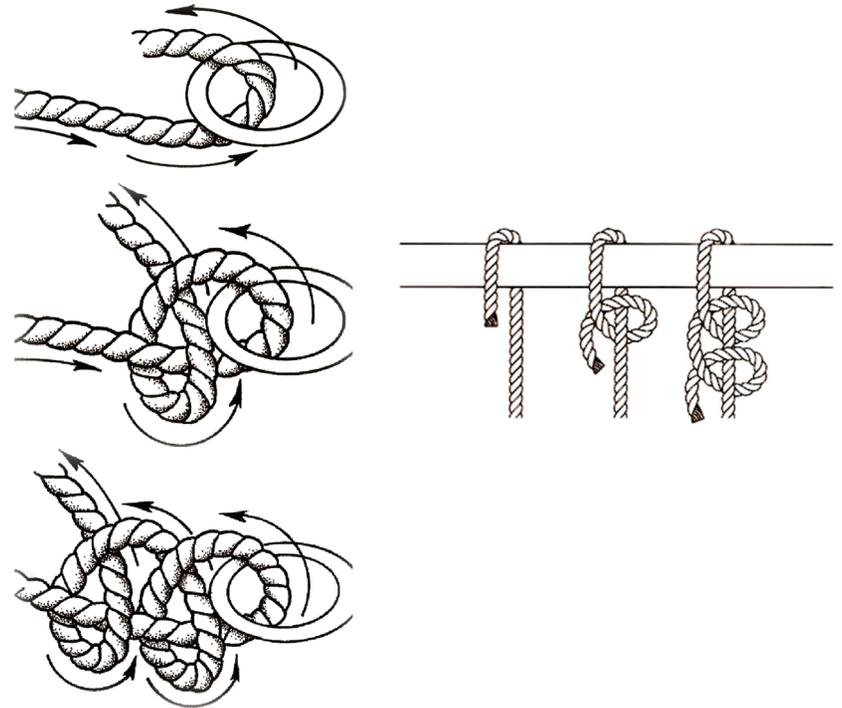
- Add additional turns in each Overhand Knot for a more secure knot.
- Difficult to untie wet.

Used For

- Joining small rope, twine, or fishing line
- Jewelry projects such as bracelets and necklaces that need to be loosened and tightened easily.
- Multiple uses in fishing.

HITCH

Half Hitches



Instructions

- Pass the working end of the rope through a ring or around post
- Wrap the working end behind the standing end
- Pass the working end through created loop
- Pull tight and repeat

Knot Information

Can be easily un-tied if the working end isn't pulled all the way through.

Used For

- Jewelry making, such as friendship bracelets
- The last step for a tie-down on a trailer, truck, etc.