

SPLICING

Splices are used to join any two parts of rope together permanently. A good splice has up to 95 per cent of the rope's strength, while a knot's efficiency varies from only 45 to 60 per cent of the rope's strength.

Before beginning to splice, you need a couple of tools - a sharp knife and a marlinspike. The marlinspike is the tool included in some pen-knives that most Scouts think is used for taking stones out of horses' hooves. The marlinspike is used to help you in opening the lay of the rope at the point where the strand is to be introduced. If you haven't a marlinspike handy, a 15cm nail will do the job.

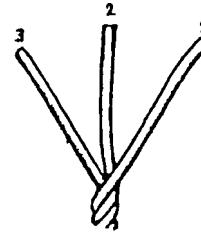
The most important step in splicing is the start. Marry the strands correctly and the remaining steps follow easily.

To properly prepare a rope for splicing, unlay the end adequately and whip each strand with a temporary whipping.

Four tucks will hold any splice providing that they are full strands (i.e. not tapered off). Tapering off is done after the fourth tuck and is performed by reducing each of the strands by one-third with a knife; tuck again with the thinner strands and then reduce the strands by another third; and finally by tucking and trimming off close.

Back Splice

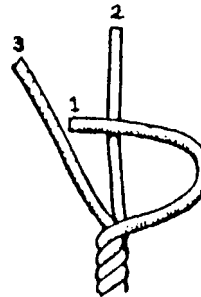
This is also sometimes called the end splice', it is used as a permanent fastening at the end of a rope to prevent unravelling. However, as it causes a bulge at the end of the rope, which might prevent it from passing through a block, for most purposes it is better to whip the end of a rope.



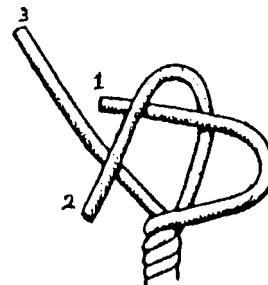
Unlay the end of the rope about 12 to 15 centimeters.

Hold the rope upright, where the unlay strands begin, and make sure that the three strands hang down over your hand with an equal distance between each of them.

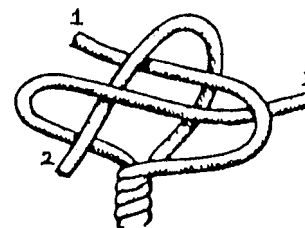
Make a Crown Knot to start the splice. This is done as follows:



Take one strand (1) and lay it over its neighbour (2), working anti-clockwise.



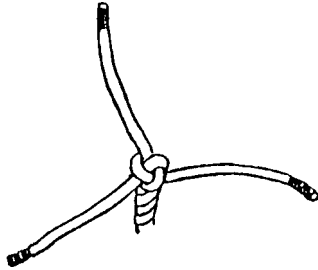
Bring down strand 2 over strand 1 and 3.



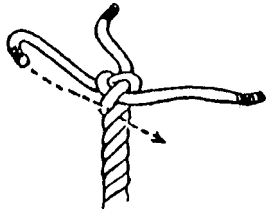
Take the end of strand 3 over strand, 2 and down through the loop made by strand 1.

Tighten each strand in turn by pulling downwards. If you have tied the Crown Knot correctly, the strands will hang down

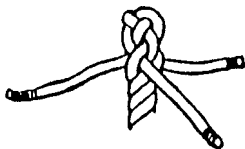
the rope with an equal distance between them. You are now ready to make the first 'tuck'. From above the Crown Knot should look like this:



With the marlinspike or nail, lift one of the strands of the rope immediately below the Crown Knot and pass the end of one of the strands underneath it. Pull tight.



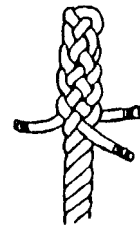
Working anti-clockwise, take the end of the next strand and pass it underneath the next laid strand of the rope. Then take the third end and pass it under the third laid strand of the rope. Pull tight. You have now completed the first 'tuck' and if you have done it correctly the strands will hang down with an equal distance between them. After every completed tuck this should be the case. On completion of the first tuck your Back Splice will look like this:



Now complete the second tuck by passing each of the three ends under a strand in turn as described above. At the end of your completed tuck the strands should hang down with an equal distance between them.

Four sets of tucks will be enough, after which the ends should be trimmed off. If you wish to taper your splice, after the fourth tuck unravel each of the ends in turn and cut one-third of the yarns (see page 2) off. Tuck again with the thinner strands; reduce the strands by another third and then finish off the splice with another tuck. Trim off the ends.

Your untapered, untrimmed, completed Back Splice should look like this:

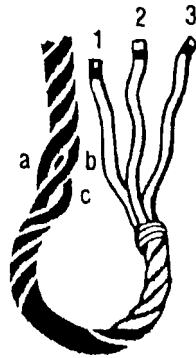


Eye Splice

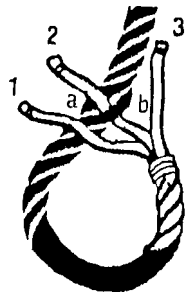
The Eye Splice is the strongest type of rope loop (an 'eye'). Unlay the rope for a sufficient distance from the end, depending upon the size of eye required and the size of the rope. Normally, about 12 times the diameter of the rope is about right.

If you are a beginner in the art of splicing, it is a good idea to put on a temporary whipping around the rope at the point where the strands begin to unlay. This whipping should be cut off after the splice is formed.

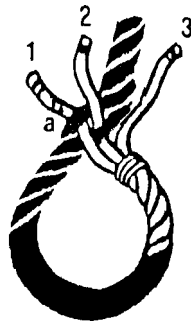
1. With the eye towards you and the standing part of the rope away from you, open out the three strands.



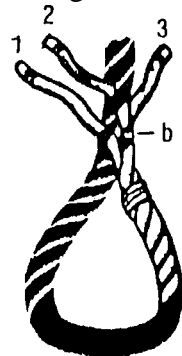
2. Take the middle strand 2 and pass it over strand 'c', under strand 'b', and out between strands 'a' and 'b'.



3. Take strand 1 over strand 'b' and tuck it under strand 'a'. Pull it through.



4. Tuck strand 3 under strand 'c' and pull it through.



Tug on each strand in turn. If your start has been done correctly the three strands should have an equal distance between them.

Continue forming the splice by making four tucks in the same way as you did for the Back Splice described above. At the end of the fourth tuck, trim off the end of the strands, or taper the splice.



Short Splice

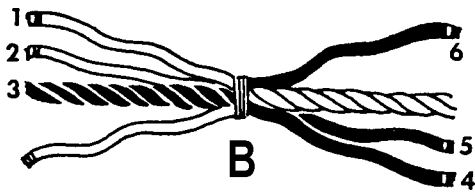
The Short Splice joins two ropes of equal size or two ends of the same rope. It is the strongest of splices, but because it increases the diameter of the rope it cannot run through a block of the correct size for the rope. Its bulk can be reduced by tapering the strands toward the end of the splice, but this weakens it somewhat.

Unlay both ends of the rope for a distance about equal to 12 times the diameter of the rope.

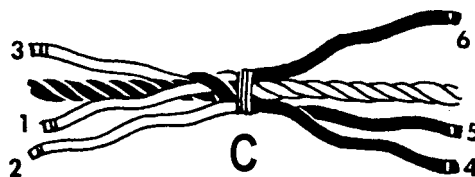
- A Place the two ends of the rope together alternating the strands.



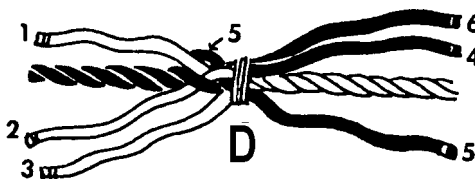
- B Temporarily tie down the strands to prevent the rope unlaying further.



- C Tuck strand 1 over an opposing strand and under the next strand.



- D Bring strand 2 over strand 5 and under the next one.



- E Bring strand 3 over strand 6 and under the next one. You have now completed the first tuck.



- F Remove the temporary tie and repeat the operation described above on the other rope end. Continue tucking the strands in sequence until you have done four tucks on each rope. Trim the ends.



To taper the splice, finish several complete tucks on each rope, then remove the whippings from the strands. With a sharp knife or razor cut about one third of the yarns from each strand. Retwist the yarns,

whip as before, and make another full tuck. Again, untwist and slice about one third of the remaining yarn of each strand for the remaining tuck.

For synthetic rope, follow the same method as mentioned above, but allow one additional tuck (with or without tapering).

Docker's Splice

The Docker's Splice is sometimes called the Marline Eye Splice or the Tucked Eye Splice. It is the easiest of all to form. It is a quick method of making a temporary eye a rope at any point and is often used on ridge tents to hold the dolly of the main guylines.

In most splices the lay of the rope is opened and the tucks are made with the rope strands. In the Docker's Splice the whole rope is used.

Open the lay at the chosen point in the rope and tuck the whole of the running end through the raised strand to make an eye of the required size (A).

Now open the lay of the standing part of the rope immediately below the first tuck and pull the running end through until both tucks lock together (B).

As in all splices, remember to work against (or across) the lay. After the second tuck make sure that the running end is of reasonable length so that there is no danger of it pulling out.

