

Continuous Loop Bow Strings

Jacques the Spink

In primitive times, bowstrings were made from raw animal and vegetable fibers, depending on what was available. Later, linen came into use because it was strong and did not stretch as much as the earlier fibers; two primary requirements for bowstring material. In fact, several battles of medieval times may have been won or lost due to the condition or dampness of the bowstrings. Modern materials in use that are not as subject to stretch and dampness are standard Dacron B-50, or special materials such as Fast-Flite string. Care should be used with materials other than B-50 since many older bows will not hold up to the performance characteristics of some of the newer materials. For this reason all information given here applies only to B-50.

Making the Jig

Following is a fairly easy method of making a continuous loop bowstring for the average archer. The Archery Manufacturers Organization (AMO) has standards for bow and string length. The length of all AMO bows is designed to give the proper string height when the bow is braced with a standard 1/16 inch diameter steel cable. This cable is exactly 3 inches less than the marked length of the bow. Therefore, a cable for a 66-inch bow is 63 inches.

If you only plan to make one or two lengths of bowstring, an easy way of making a jig is to take a board about 6 feet long, and drive a headless nail into one end of it. If you have a spare bowstring, put one end of the string over the nail. Then stretch the string the length of the board and drive a nail into the other end. That way, when the other end of the string is put over the second nail, it is taut.

Another way of spacing the nails is simply to put them 3 inches closer together than the distance between the string grooves (3 inches less than the AMO bow length).

If you own a number of bows and plan to make several different lengths of string you can also build or buy an adjustable jig.

Making the String

Tie a Dacron thread to one of the nails and wind around the other nail until you have the number of strands desired. Then tie the two ends together with a square knot. Use ten strands for a 25 pound bow, twelve strands for a 35 pound bow, and fourteen strands for a 45 pound bow.

Shift the string until the knot joining the ends is about 1 1/2 inches from one of the nails. Using the knot as a guide, mark the opposite group of strings with a colored pencil or marker. Now put similar marks on the two groups of strands at the opposite end of the board about 1 1/2 inches from the nail. These sections will become the end loops of the string.

Give the whole string a good coat of string wax. You can obtain string wax at an archery supply store, or you can make your own by mixing one part of resin to three parts of beeswax.

Slip the string around the nails until the two sets of marks line up with each other. Separate the two groups of string by six to eight inches with a couple of thin blocks of wood with "V" notches in the ends.

Serving

In order to protect the string from wear, wrap it with thread in the areas that get the most usage. This process is called "serving." Start serving your string from the knot toward the mark, which should be three or more inches from the knot. You can do this by hand, which will be a little loose. Or you can use a special serving tool, which will usually result in a more uniform serving.

To start serving, lay three inches of thread along the string, with the end lying toward the mark where you will finish, and make your first wrap around the string and over the thread. Carefully continue wrapping the serving for about 1/2 inch. Then pull the end of the string to snug down the starting wraps. Trim the end to about an inch long, and lay alongside the string.

Continue serving down the string until you are one inch from the finish mark. Now cut off a piece of scrap bowstring thread about twelve inches or more long and fold it in half. Put some wax on it and lay it on the string so that the loop is one half inch past the finish mark.

Continue serving over the string and the looped thread until the finish mark is just hidden. Pull extra serving off the spool. Hold the end of the serving to keep it from unwrapping, and cut off a two to three inch end from the spool. Put this end through the thread loop, and take hold of both ends of the thread with one hand. Hold the end wrapping of serving with the other hand, and pull the loop with the end of the your serving back through the wrapped serving. Trim the excess serving off to the wrapping, and your first serving is complete.

Do the opposite group of strands the same way starting just outside the mark (so as to cover the mark).

Once both marked areas are served, shift the string around until the served sections are around the nails with the same amount of serving on either side of the nail. The loop that will be on the bottom should be slightly smaller than the loop on top and just large enough to slip over the bow tips and into the string grooves. Close the loops by serving the string together for four to five inches down the string. If your serving tends to be a little loose and you wish to ensure it does not come off immediately, a dab of Super Glue can be used to help ensure a lock on the beginning or end of the string. This is particularly useful when serving a thick bundle of string such as that used for a crossbow.

Put your string on your bow and make sure there is enough clearance between the arrow rest and bowstring (six to eight inches). If the string is too long, you can twist the string to shorten it. If the string is too short, start over with the nails a little farther apart.

Nock Serving

Once the string is on your bow, and you are satisfied with the length, mark a point about two to three inches above the arrow rest and about five to six inches below it. Serve the area between these marks with the string mounted on the bow. Once this serving is done, wax the whole string again and rub it in with a piece of leather. This will cause the wax to heat slightly, and will penetrate the string strands better.

Source

BSA Archery Merit Badge Pamphlet, 1986 and Traditional Bowyers Bible Volumes 1-3.