Introduction

I had a Viking outfit I wanted to accessorize and sprang looked as if it ought to be easy. I even took a class or two or three. But when I slipped it off the frame, to my horror, I had nothing but twisted strings that fell apart, and nowhere I looked gave me any clues as to what I had done wrong or how to do it differently. I admit, I gave up for almost two years. The sprang frame I had invested in sat in my workroom and mocked me whenever I saw it.

“This is not an impossible craft! I’ve seen sprang items.” I muttered to myself. “There has to be a way I can figure this out.”

So I slowly, with many false starts, worked my way through a beginner’s project taking notes of what went right and where I made mistakes. If you’ve done sprang, this is not the class for you. If you’ve never attempted it, or if you have and it did not come out right for you either, maybe I can help.

We’re going to make a sprang pouch.
**Materials List** –

Frame – with two dowels and 2 yards sturdy cord

Skewers, 12”, wood or bamboo, minimum 9 - max one package

Sandpaper

Permanent Marker

Thread or yarn – about 15 yards each of two colors

Needle for finishing, yarn needle or other large-eyed, blunt tip needle

**Materials Description** –

**Sprang Frame** – at its most basic this is a way to hold two dowels parallel and at least 18” apart so you can work on the thread wrapped between them.

The wooden frames often used are made from embroidery “scroll frames,” the ones with screw tensioning sliders on the sides such as


One of the easiest ways to construct a sprang frame is to go to the hardware or big-box DIY store, such as Lowes, Home Depot, etc. Head for the plumbing department and find the PVC pipe. Get 4 right angle connectors for ¾ inch pipe and a length of pipe that fits into them. If you ask, the store employees will usually be happy to cut the pipe into lengths for you. Cut the pipe into at least 4 pieces: 2 pieces about 14 inches long, and 2 pieces about 24 inches long. Assemble the pipe with the connectors to form a rectangle by just shoving the pieces together; you do not have to glue it.
The frame has four directions that will be referred to as we go along. Hold your frame with one of the short sides up. This is the orientation it is used in. It has a top – the short side of the rectangle at the top. A bottom – the short side at the bottom. Front – is the side facing you. Back is the side away from you.

It is also possible to make sprang by tying a dowel to a post, so that it can stay level, tying another dowel to your waist and working between them. I have not tried this.

**Dowels - warp holder and tensioner – called heddles.** Sprang is worked between two rigid bars that hang off the frame. ½ inch or ¾ inch dowels work very well. The finer the thread you are weaving, the smaller the dowel can be. While you are at the big box or hardware store, also get a piece of doweling and cut it into two pieces that fit inside whatever frame you are using. The fit should not be tight as the dowels need to be able to move up or down easily to change the tension on the threads as you weave them.

Use a piece of sandpaper to smooth and round the cut edges of the dowels as you don’t want them to snag your threads.
The heddles are suspended inside the frame using sturdy cord, leaving a gap of at least a few inches between them and the top and bottom of the frame. There is a lot of tension on these heddles. To tie them onto the frame, use a piece of cord that you cannot break with your hands. Trust me, it is easier to use sturdy cord in the first place. You can use shoelaces, braided pieces, anything as long as it is sturdy.

If you are using a PVC pipe frame, make the loops that hold the heddles on the top longer than they need to be and wrap the string around the end of the dowels several times. As you work the sprang, when the tension gets too tight, you will be able to slip a loop off the end of the dowel to give yourself room to work. If you are using a wooden frame with sliding sides, those will be used to adjust the tension. You can mark \( \frac{1}{2} \) intervals on the posts as guidelines, if you like.

Make sure the heddles are level when they are tied, and lay parallel to the top and bottom of the frame. For this project, they should be about 18 inches apart when they are inside the frame.

**Thread, string or yarn** – almost anything can be woven into sprang – wool yarn, acrylic yarn, crochet cotton, linen, silk, etc. You do not need that much to get started, about 10 yards each of **two different colors**. Smooth finished thread is easier to work than yarn. Yarn is not impossible, it just gets fuzzier as you work towards the center. Medium weight is best for a beginning project.

Cut ten yards each of **two different colors** of the same weight and fiber. Using two colors is very important.
Cut two pieces a yard long of any color, these will just be used to keep the dowels in position while you begin warping.

**Mark the top front** – Find the center front of the top of the frame. It does not matter which of the four possible places this is, but you **must** choose one of them. Using a permanent marker, identify the center front of the top of the frame.

Sprang works by twisting threads. If you put the frame down, you will need to know what orientation it was in when you started or the next rows of twists may only untwist the previous rows when you take it off the frame or you will get a break in the pattern where the thread slants at a different angle.

**Putting the thread on the frame – called Warping** – Lay the frame on a flat surface. The dowels should be pushed towards the center to the limit of the cord they are on. Tie the two shorter pieces of string into a loop the same size as the distance between the dowels. Slip the ends of the loops over the ends of the dowels to suspend them inside the frame.

Holding one end of both colors of the long strings, tie a slip knot by making a loop and pulling another loop through it.

Hold the frame upright.

Slip the loop of the slipknot over the left side of the bottom dowel. Going behind the top dowel then down in front of the bottom dowel, wrap the string or yarn smoothly around the dowels, heading towards the right, ten times.

Loosely tie the string to the right hand side of the bottom dowel.

Starting at the left hand side, make sure that the string lies smoothly against the dowels with no twists and that the colors alternate. There will probably be twists in the thread. Work the twists down towards the end and off. As you go along, even out the tension of the threads. They should be fairly tight, but not so tight that you
can’t get your hand in between the front and the back. The dowel should not bow under the tension.

Make sure the thread is even. NO TWISTS. These are twists that should be worked off the end before it is tied off.

When the twists are out, the colors alternate, and the tension is even, firmly tie the end onto the bottom right dowel. Do not tie this end off at the top, it must be on the same dowel where you tied it at the beginning. Remove the positioning loops.

**Skewers** – as you twist the threads, they are held in place by inserting thin skewers. You need at least nine skewers, though you can use more or less. Keep a scrap of sandpaper handy to smooth out any rough places on the skewers so they do not snag your threads. Skewers are often pointed on one end and blunt on the other. Using the blunt end forward prevents splitting the threads.
The weaving process –

Hold the frame with the top front in the correct position. If you put the frame down at any point during the weaving, when you start up, be sure the frame is back in this position when you take it up again.

(The directions assume you are right handed. For left-handed people - reverse the directions. It will work the same.)

Push all the threads towards the center of the dowel on the top and bottom. Insert your left hand between the front and the back threads at the center point between the top and bottom. This forms what is called the shed and is where you do the actual weaving twists. Hold the threads flat and even in your left hand. You will be releasing them one at a time and pushing them onto the skewer. You need to keep them in the order they are in.

Take up a skewer in your right hand. Using the blunt tip of the skewer, pull the first back thread on the right to the front. Drop the first right thread off your left hand and push it to the back underneath the skewer. The skewer should now be between the two threads and there is a twist holding it there.

Using the tip of the skewer again, grab the next thread off the back. You’ll be able to tell you have the right one because it is the second color. Drop the next thread of the second color off your left hand and push it back. The skewer should now be between two sets of threads one of each color and each pair should have a twist.

Continue this way, alternating colors – color one up, color one down; color two up, color two down; color
one up, color one down, etc - until you reach the end of the row.

Take a deep breath. You finished the first step. If you find using the skewer tip to be too awkward, you can try doing the twists using your right hand until the end of the row and then insert the skewer. As you go along, experiment to see which method, or a combination, works best for you.

Slide a second skewer along the top of the skewer already in place. You can wiggle the first skewer to give yourself more room to slide in the second one. Slide the topmost of these skewers towards the top of the frame, pushing the twists towards the top. Slide the bottom one towards the bottom. Push them firmly to the dowels as far as you can. Use even pressure. The skewers are fairly delicate and can snap if pushed too hard or twisted. If a skewer snaps, just take it out and insert a new one, using the remaining skewer as a guide to make sure it is in the same twists.
For the second row – the purpose of sprang is to twist the threads together into a netting pattern. If you do every row the same, you will only have twisted strings at the end instead of an interlocked net. To make the net on the second row:

Insert your left hand between the strings at the center the same way as for the first row. Using the blunt tip of the skewer, grab the TWO back threads on the farthest right, one of each color, and pull them to the front. Then push ONE thread from the front to the back. Grab ONE thread from the back and bring it to the front. Push ONE thread from the front to the back. Continue in this pattern – color two up, color one down; color one up, color two down; color two up, color one down, etc. – to the end of the row. At the end of the row, you should have two front threads, one of each color left, push them both to the back.

When I do a “starts with two threads” row, I often find myself half way along still counting it up and down by color like the pattern in row one. This is fine as long as I am SURE that I just changed how my inner voice is doing the pattern in the correct order. For row one it is each color to the front then to the back. In row two it is each color to the back then to the front. If I reach the end of the row and have two threads in front to push back, I’m pretty sure I did it right.

If you do not have two top threads, one of each color, left you did something out of order. Slide the skewer out, open up the shed with your hand to get rid of the twists, and try again.

When the row works, insert another skewer as you did for row one, and push them to the top and bottom.
Work them gently as close as possible to the previous skewers. The closer you get the skewers to each other, the more rows you will be able to work.

Third row – a repeat of row one. Start by picking up ONE thread from the back.

Fourth row – a repeat of row two. Start by picking up TWO threads from the back.

Continue in this pattern with odd number rows started by picking up ONE thread, and even number rows started by picking up TWO threads.

If you have trouble keeping track of the odd and even rows, use a marker to color the ends of half the skewers. Use the colored skewers only on even rows. It will be obvious at a glance if the next row is an odd or even row.

**How can I tell if I am doing it right?**

After you have worked a row, turn it over and look on the back. Each thread should be tied in. If you have a loose, floating thread, you need to pull out the skewer and try again.

After you have done at least two rows, you can carefully spread the loops out along the top, sliding them along the skewers that are still place. Look at the twists. The first row should have threads of the same color twisted together. The second row’s twists should be one of each color. This will alternate. At any point you can spread the net out and look at the twists. If they are same colors twisted together, then different colors twisted together, in alternating rows, you are doing it right.
Correcting mistakes - If it is ever wrong, and as long as the skewers are still in place, you can easily back up to the row where the error occurred. Gently pull the most recent skewer from the top towards the center, using your hand behind it in the shed to help the threads untwist. Then pull up the skewer from the bottom until all the threads in that row are untwisted. Remove the skewers. Repeat with as many pairs of skewers as necessary.

Wait – I’ve run out of skewers! – After a more recent skewer has locked the previous twists in place, you can slide out a skewer and reuse it. Remove skewers from the top and bottom in pairs, always taking out those closest to the dowels first. Leave at least two skewers in place around the shed, the area where you insert your hand, so you can check for and correct mistakes, if necessary. Once you have pulled out the skewers, mistakes are impossible to correct.
The threads are getting really tight. Now what? –
Time to loosen the tension. If you twisted threads around the dowels to allow for this, drop one of the loops off the top dowel on both sides.

My hand doesn’t fit in anymore. The shed’s too small. – Try working the skewers closer together towards the top and bottom. If you are down to a shed that is only an inch or less wide - Yay! You’ve finished!

Finishing the piece – There are several ways to secure the twists so they do not unravel when taken off the frame.

Securing the center. The easiest way is to run a piece of the thread or yarn through the last shed. Make it long enough that you can use it to sew up the sides.

For a stronger, slightly more finished look, weave the thread you put through the center back again from both sides after you have taken it off the frame.

If you want to be really clever, you may have noticed that one edge of the piece is color one and the other is color two. Tie a piece of each color together before you weave it across the center. Put it through the first time with the opposite color hanging out, and then weave it back through for strength. The ends will then sew up the sides in the correct color.
You can also use a crochet hook to chain the threads together in a line across the center. Loosen the tension so this is possible. You can either chain every thread, or every pair of threads. The second way makes it tighter across the center and less stretchable.

Securing the top and bottom. If you are making this into a little pouch, where the threads passed over the dowels makes perfect loops for a drawstring. Braid two drawstrings about a foot long and pass them through the loops on the dowels, one on the top and one on the bottom.

Removing the sprang from the frame – Loosen the tension as much as necessary, and slide the dowels off the loops.
Using the remaining thread from the center tie, fold the piece in half and sew up the sides. Hide the loose ends in the seams.

Thread the drawstrings through the opposite side's loops, so each drawstring forms a “U” shape and tie off.
You have successfully completed the project and have a cute striped bag to use.

**What are some other sprang resources?**

*Techniques of Sprang, Plaiting on Stretched Threads; Peter Collingwood*

This has a detailed history of sprang, including pictures of extant pieces. Good written instructions at the intermediate level. Shows lots of variations.

*Sprang Language and Technique, Revised Third Edition; Jules Kliot*

This is probably the worst set of instructions for any craft that I have ever tried to follow. If you already know what you are doing and if you are, unlike me, the kind of person who can easily visualize and extrapolate complex patterns from minimal and abstruse wordage it does contain a lot of very interesting, very advanced, very out-of-the-SCA-period techniques.

*Sprang; thread twisting: A creative textile technique; Hella Skowronski*

I have not actually read this one, but include it for the sake of completeness.

**Is this the best/only way to do this?**

There are many different ways to do sprang. This is one way that worked for me. Feel free to experiment with other techniques or to go to other sources.

**How come some other sites/books tell you to wrap the thread on with a figure-8 and you say to do it flat?**

The figure-8 wrap just puts on the twists I do as "row one". Starting row one with two threads and row two with one thread just seemed counter-intuitive to me. I find it easier to remember if the first row I work is "row one" and it - and all the other odd rows - starts with one thread and "row two" - and all the other even rows - starts with two threads.

It is also harder to do a figure-8 with the two-color wrap used here, and in many of the more advanced
patterns you’ll want to work with later you don't use the figure-8 wrap anyway.

**What is that “safety cord”?**

One of the books, and many of the web-sites based on those directions, describes a “safety cord”. This is just an additional string you put in the center of the shed in case all the skewers fall out. It may have been how some sprang was observed being worked in some obscure village somewhere. I’ve never found it necessary and it looked like a real pain to take in and out of every row.