

Preparing the Drum

Kristofer Bergstrom

1 Whipping Rope Ends

To prevent the ends of the tsukeshime from fraying during threading and general use, it is critical that they be “finished”. Whipping involves wrapping twine around the last inch or so of each end of the rope, to hold secure the rope’s constituent threads. Done properly, rope ends generally only need to be whipped once — the rope often breaks or is worn and needs replacing before the twine comes loose.

Whipping is generally accomplished by wrapping the twine 20 or more turns around the rope end (until the wrapped section is approximately two centimeters long), pulling tight every two or three turns. For thin twine and a one centimeter diameter rope, this requires approximately 80 centimeters of lashing twine. The turns of the whipping are done over a perpendicular section of the twine, laid on and parallel with the rope. This allows for the securing of the ends of the whipping twine without the need for tying a knot.

The ends of synthetic rope can be melted prior to (and with some ropes, instead of) whipping. Excess melted plastic should be removed while the end is still hot by wrapping a thick piece of paper or cloth around the rope and pulling the end through. Otherwise, excess plastic will harden at the tip and can scratch and dent the body of the tsukeshime during tightening and release.

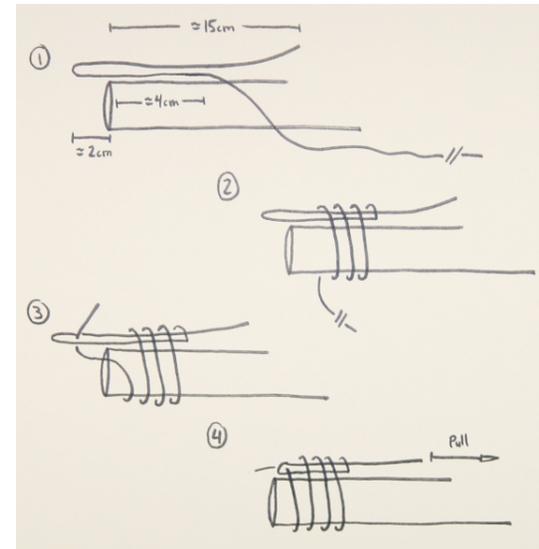


Figure 1: Basic whipping

2 Start-Knot

Lacing of the drum begins with tying one end of the rope through a hole in one of the drum's heads. The other end of the knot will be loosely laced back and forth between the heads. While any one of a number of different knots will work, the tsukeshime start-knot must have two important characteristics. First, it must be a static, non-slip knot, so that the loop created by the knot always remains open. Unlike a noose-type knot in which the loop tightens under tension, the start-knot must retain an open loop under stress. Secondly, the knot should be relatively easy to loosen, even after having been pulled to high tension. A knot which "locks" and is difficult to release will require more pushing and prodding, weakening the rope.

The simple bowline knot, often pronounced "bow-lin", is a perfect candidate for the start-knot. The bowline knot may be tied with any of the common procedures (including the famous rabbit-hole-tree mnemonic). The most important aspect of the finished knot is that the loop it creates is the correct size. The finished knot should create a loop whose inner length is approximately one-third to one-half the distance between the two heads. This should be the size of the loop after all slack has been removed and the knot has been placed under tension. If the start-knot is tied too close to the bottom head, the loop will be too small, and vice versa. In both cases, the final tightening stage (in fact, the crucial, last pull) will be significantly more difficult.

3 Lacing Direction

With one end of the rope tied to a hole in the bottom head, there are two possible directions in which to proceed. The rope can be threaded through the hole up-and-to-the-right of our start-knot position, working our way

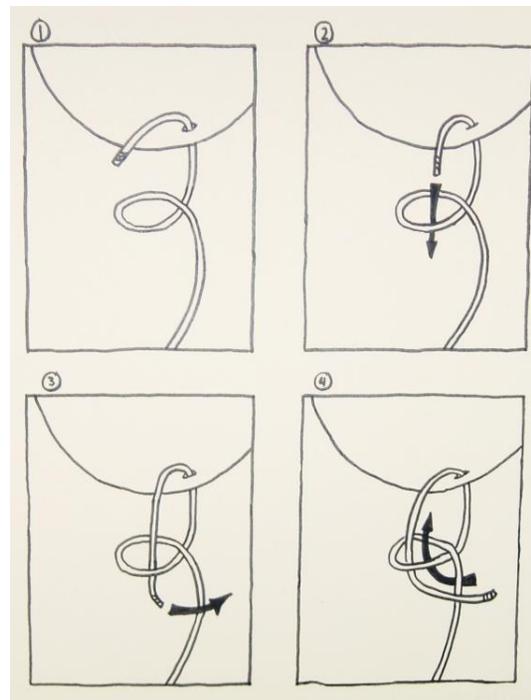


Figure 2: Start-knot: bowline

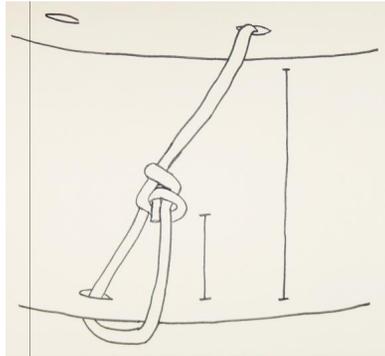


Figure 3: Start-knot loop size

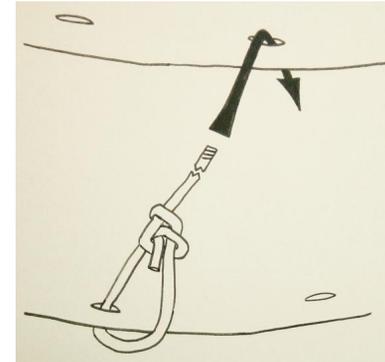


Figure 4: Lacing direction

around the drum to the right, or the rope can be threaded through the hole up-and-to-the-left of our start-knot, continuing around the drum to the left. For either direction there are two possible ways to pass through the holes. The rope can go around the head's outer ring and then through the hole, called "outside-inside" in the TIASOU Method, or through the hole first and then around the outer ring, referred to as "inside-outside".

There are thus four lacing possibilities:

- up-and-to-the-right / outside-inside
- up-and-to-the-right / inside-outside
- up-and-to-the-left / outside-inside
- up-and-to-the-left / inside-outside

The direction the rope is laced affects minor details of subsequent steps of tightening, mainly the lace-tightening stage. Any of the four directions

will produce satisfactory results but for those without a particular preference, the TIASOU Method recommends up-and-to-the-right / outside-inside, as shown in figure 4.

4 Finished Product

Upon completion of lacing, the rope should pass through every hole of both heads, in the same outside-inside direction at every point. The rope should remain loose and the body free to slide around between the two heads. The free end of the rope should pass through the loop of the start-knot. (See figure 5.)

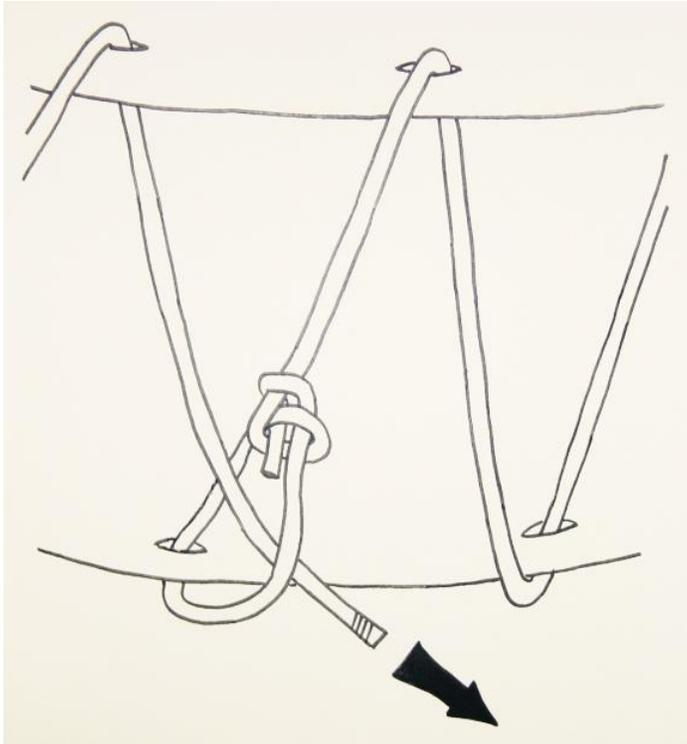


Figure 5: Finished lacing

5 More Information, Copyleft

For more information, please visit tiasou.org or contact Kristofer Bergstrom by email, phone, or the address below. All questions and comments are welcome.

kris@tiasou.org
310-350-8825
1411 S Burlington Ave #28
Los Angeles, CA 90006

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