

Knot



News

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Single Strand Star Knot Grommet

©Pieter van de Griend
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The nomadic people roaming the north of Sweden and Finland consider the Slip Knot something magic. The Chain Sennit has more widespread magic still. Even mathematicians fall for its spell, its symmetry and other peculiar properties. One of these properties allows you to create a Star Knot like grommet. That is, if you succeed in getting your train of Chain Sennit-loops to link up.

In the illustrations below you can see how to start and complete such a grommet. Once started, repeat the sequences A through E of the first plate as often as you require – completion is illustrated on the second plate.

[1] C.W. Ashley, *The Ashley Book of Knot*, Doubleday, New York 1944.

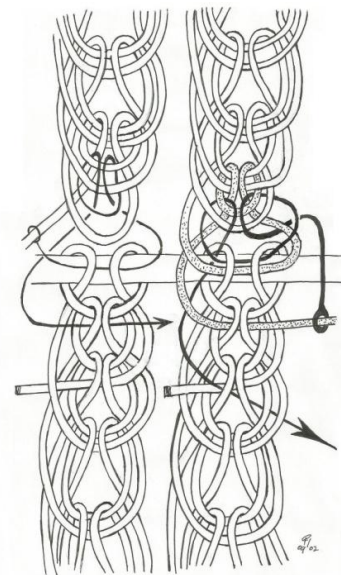
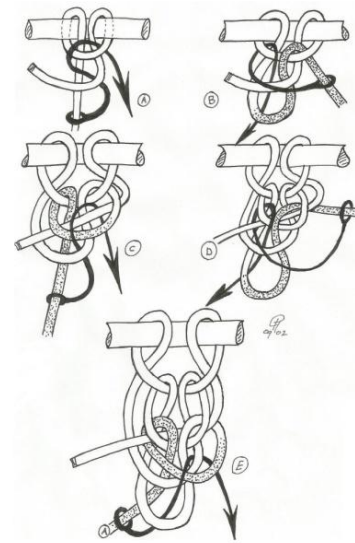
[2] P.R. Cromwell, "Celtic Knotwork: Mathematical Art", *The Mathematical Intelligencer*, Vol.15, No.1, pp36-47, Springer Verlag, 1993.

[3] R.H. Crowell and R.H. Fox, *Introduction to Knot Theory*, Springer Verlag, 1963.

[4] R.H. Fox, "A remarkable simple closed curve", *Annals of Mathematics*, Vol.50, pp264-265, 1949.

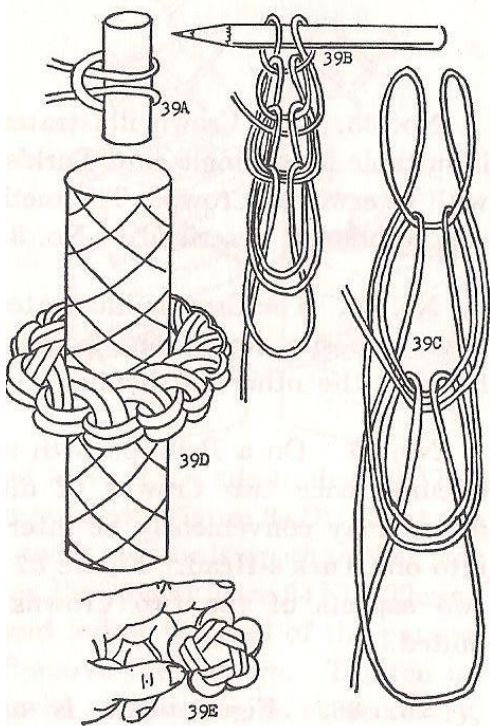
[5] J. Lehman, *Systematik un geographischen Vorbereitung der Geflechtsarten*, Leipzig 1907.

[6] H.A. Orval, *Om Knutar*, bonniers Stockholm 1916.



Continuing on with this thought, I looked in my knot library and came up with this piece from *The Harrison Book of Knots* by P.P.O. Harrison.

No. 39. ***The Single-cord Star Knot Turk's Head.*** This is an original knot and was developed by the writer. It has never before been seen in print. The need for it must have been felt by knotsmen for a long time. It quite replaces the cumbersome Star Shroud Knot. It is particularly suitable for encircling Bellropes as there are no unsightly ends to be hidden by other Turk's Heads. The size of the cord with which the knot is made is immaterial as one has only to increase or decrease the number of 'points' in the Star to encircle the Bellrope. Method of construction: Secure the cord to a pencil with a Cow Hitch (Figure 39A). Follow the sequence shown in Figures 39B and 39C. When one complete cycle has been made take up all the slack and tighten it before proceeding with the next cycle. When a sufficient number of 'points' have been made to encircle the Bellrope, make the 'locking point'. This is when the cord passes through the loops of the Cow Hitch. The result is a particularly handsome and distinguished Turk's Head.



A New Icicle Hitch?

Henry Davies-Ball

Mr. Davies-Ball lives in , England. He is an ex-taxi driver who has taken up tree climbing in his new avocation as an amateur tree surgeon. By paying attention to his knotting he invented what, he imagined, was a new knot.



Take 4 turns



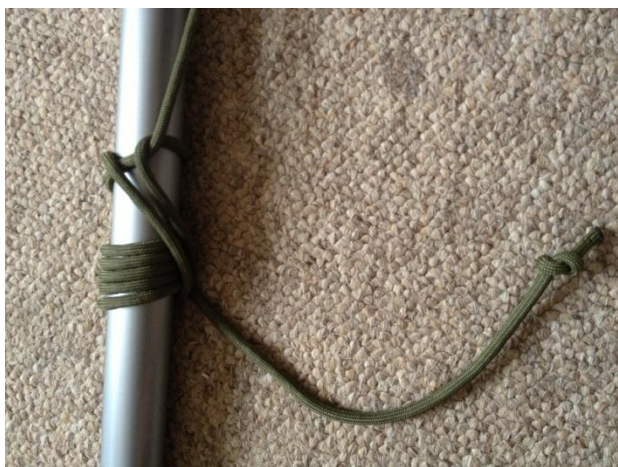
Make a loop from the last turn



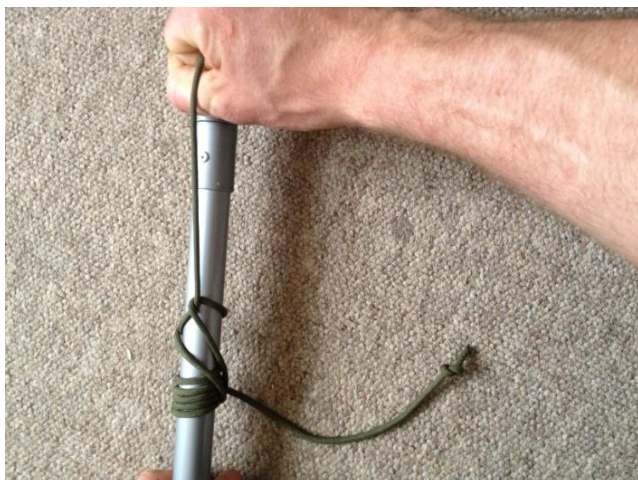
Pull the loop around and capture the working end



Put the loop over the end



Wrap the end around the hitch



Pull the standing part to complete

Henry is so confident of this hitch that he has hung from it when tied around a pointed broom handle and found it held his weight safely.

Dan Lehman, the IGKT authority on original knots, was contacted and gave his verdict on this “new” hitch:

I don't think that there is much to say about this one:

“He thinks he has invented a new ‘icicle-type’ hitch”

And that is just what it amounts to: a coil-away sort of friction hitch loading one strand (in contrast to the Hedden/Prusik/Klemheist) with a brief closure. Whereas the icicle hitch sends the tail to be secured at the near/loaded end adjacent/parallel to the standing part, this “new” one locks it at the away end. And the path of the legs of the bight that can be brought over the pointed end of the hitched-to object (should one have such access) are reversed. To my mind, the icicle's finish is neater, more secure – less ready to slip out of parallel sitting (i.e., I find the tail of the “new” one to start to diverge from lying parallel to its adjacent part). So far as any effect on gripping, though, I should think that these are roughly the same – but I'm not sharpening any broom sticks to test, nor have I a suitable marlinespike handy, either.

I did a quick test, using thin steel cable (3/16" = 5mm) that was hitched at opposing ends by the icicle old and new versions, tied in nylon braided binding cord (hollow, so it compresses) and it's about a smidgeon less wide than the cable's diameter and maybe 3mm “thick”, in a sense – diminished, under load. Using a 5:1 pulley, I stood on that and so put a fairly strong load on it (Guesstimate, say, 100lbs?). I wasn't going to chance supporting my full weight x the lousy 5 multiplier for upwards of 500 to 700 lbs! In any case, I saw no real slippage of either. Then, as another check, I replaced this new icicle with the Prohaska Grip, which is also a coil-away hitch; that held as well and it's a good bit more stable.

To the annoying question “Is it new?” one may muse about how many folks might have tied it – maybe it was discarded in the search for the published one, or it was viewed as a not terribly different variation of the icicle hitch, or as a multiple pile hitch with the tail backed out to the last turn. I don't see that it has any easier method for forming – a multiple pile hitch would be simpler in just wrapping a bight and on relatively narrow objects it would have maybe a significant effect on opening the helix angle of the gripping strand.

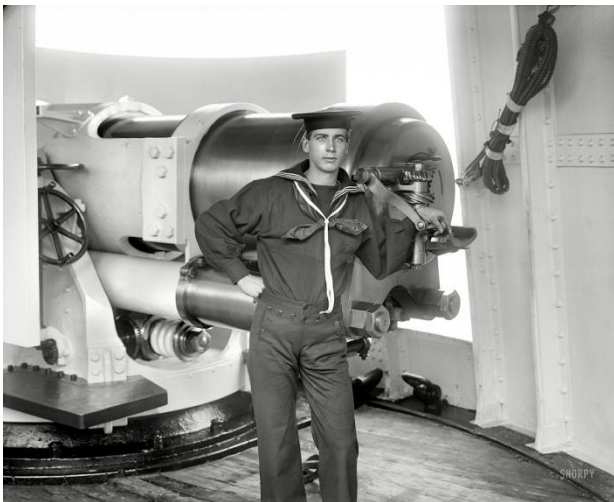




Crew aboard cruiser *USS Chicago* 1898



"...then the rabbit goes around the tree..."



US Navy knife lanyard and 8 inch gun

Now, mustering the spare poles from below, and selecting one of hickory, with the bark still investing it, Ahab fitted the end to the socket of the iron. A coil of new tow-line was then unwound, and some fathoms of it taken to the windlass, and stretched to a great tension. Pressing his foot on it, till the rope hummed like a harp-string, then eagerly bending over it, and seeing no strandings, Ahab exclaimed, "Good! and now for the seizings."

At one extremity the rope was unstranded, and the separate spread yarns were all braided and woven round the socket of the harpoon; the pole was then driven hard up into the socket; from the lower end the rope was then traced half way along the pole's length, and firmly secured so, with intertwistings of twine. This done, pole, iron, and rope – like the Three Fates – remained inseparable, and Ahab moodily stalked away with the weapon, the sound of his ivory leg, and the sound of the hickory pole, both hollowly ringing along every plank."

Herman Melville
Moby Dick



USS IOWA BB-61

Joe Schmidbauer

My son-in-law and I recently visited the battleship *USS IOWA*, now moored as a floating museum in San Pedro, California. If you are ever in the area I heartily recommend taking the tour. You don't get to visit the whole ship from keel to truck, but what you do get to see is more than enough and very impressive indeed. She is a very big piece of weaponry.

But me being me I could not help but notice the bits of knotting and fancy rope work here and there as we explored the various compartments and spaces.



Coachwhipping and Turks Heads

One of the first indoor areas you get to see is the officer's wardroom. This is a big room that stretches across the width of the vessel. All of the stanchions are covered with this ropework – a many stranded coachwhipping with the ends covered by Turks Head knots. None of this work looks recent and it has been painted over many times. This was probably the nicest looking work I saw aboard and that is not surprising considering the location.

I saw the same kind of knotting on the bridge, the Admirals chair had fancywork on his foot rest. Many ladder railings had coverings and the crew's galley had it as well, but it looked to be more workman-like and maybe more used and abused.

On the practical side, I was amazed at the size of the mooring lines they required and there were also

a number of hoists and cranes for supplies, ammo and small boats. The *IOWA* has only been opened to the public for the past year or so and I can only imagine that they will eventually have even more areas to explore as the restoration continues.

There are docents aboard stationed in strategic locations that give short explanations of what you are looking at, and are also available for questions.



One of the most eye-opening things to me was where during battle the captain is stationed for protection from incoming fire – along with the helmsman and other necessary officers and enlisted bridge personnel. This is a room with 17 inch thick armor plated walls! They leave one door open so you can appreciate just how thick these walls really are.



The 16 inch shells were also something to see and they have a sample for viewing next to the front turret, along with the required 6 powder bags that are needed to propel it 25 miles. My son-in-law, Tom, calculated that would easily reach his apartment in Santa Ana from where we were standing on the California coast!

Australian Looping

Vicki Paul

Approximately two decades ago, my little girl was easily interested in many things. Our local Parks and Recreation Department published options of things to do and we choose to attend three class sessions on *Looping*. When we signed up, we were told to bring a small rock because our first assignment would be to make it a sweater.

This was a suitable amount of whimsy to maintain our momentum, and so after supper, off we went to Loop. Once there I remembered that when I had lived in Australia, I had an excellent booklet from the Post Office there that summarized this craft from the view of the Aboriginal tribes and the fiber arts of the Australian Outback. Unfortunately, my booklet can no longer be found.

The sweaters for our rocks were quite delightful and made us ready to branch out into making more useful objects. Our instructor tolerated all skill levels and brands of creativity as we embarked on this graceful craft that was not weaving, crocheting or net making. Other than the start and finish or closing the seams, it does not have knots. One was encouraged to incorporate any decorative accent to enhance the looped fibers. We used small beads here and there but could have used feathers and other natural accents as easily.



I now find myself in need of replacing the canvas container for my personal alarm at work and am weary of the hum-drum of state issue. It occurred to me that this daily accessory would benefit from some strong fibers to hang it from my neck. It was this need that sparked my return to Looping.



This small project also inspired a return to an awareness of the Australian Aboriginal Dreamtime and an exploration of the awesome but subtle culture to which it is tied. This variegated lifestyle began 40,000 years ago before Australia became isolated after the end of the last Ice Age. When Europeans first saw these people with any regularity after 1770, their depth of thought and wealth of mythology was hidden by their obscure languages and masked by their lack of metals. Europeans viewed their culture as a non-civilization because of the absence of clothing and grooming; the traits of ambition and acquisition were not visible. Non ownership of property obscured the richness of the native's survival strategies for managing life in the inhospitable Outback.

These native peoples were not predisposed to gaining territory or competing and playing one-upmanship. They watched English surveyors crawling and dying from dehydration while crossing this vast arid terrain, not able to believe that these explorers could not smell the water a few inches away! The intelligence for dealing with this desert life was not respected because it did not acquire property and power. Hunting and gathering worked quite well locally but failed to impress the new arrivals from Great Britain.

The tools and containers used by the natives were made with enormous care because of the reverence for the Dreamtime. Each container – whether bark, wood or fiber – formed a statement from the user about his or her relationship with the

earth, its symbols and mythology and their place within it.

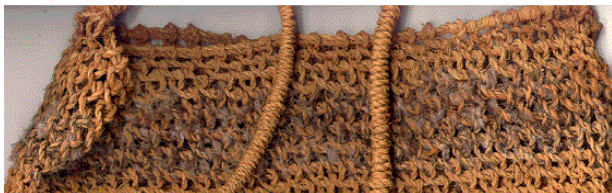
Dilly Bags

I will be making a dilly bag to hold my alarm, and it needs to be on the sturdy side. A dilly bag is usually made by tribal women to carry around their necks for collecting and holding the things they gather.



Dilly Bag

The feather string that might go with this bag was often made by men. Australian soldiers often used the word *dilly bag* instead of ditty bag as a part of their slang after 1885.



Note the Loops

My wee project will be made of waxed carpet thread mixed with linen cord, but purists may make their fibers from bark, or from the residue of plant fibers, like nettles, that have been dried and twisted into string.

The bag is a series of half hitches and bears some resemblance to macramé. It can be any shape, but

for the first try, make a rectangular or square one. Prepare a card to use as the template so that the edges will be regular. My dilly bag will need to accommodate a load that is 2 inches wide by 1 ¼ deep and 4 ½ inches long, plus a clip, so my card will be about 3 ½ inches across.

Working left to right, if you are right-handed, wrap the cord around the template three times. Thread the cord onto a *bodkin*, and knot a half hitch around all the cord, pulling it firmly as the starting knot. Then loosely loop the cord at regular intervals around all the cord until you have made a row of loops all around the template using care that the stitches are regular in size and tension.



Bodkin and making loops

Beginning with the second row of loops, you will thread the loop or half hitch through the previous row of loops, one at a time. This continues until you have woven or looped the needed measure plus desired coverage for the bottom or floor. Conclude your looping with a half hitch that is pulled firmly to tie off the mesh. Then stitch edges together to close the dilly bag.

I found some great resources on the cultural source of these fiber artifacts that explains the intricate relationships of these people, their work and their spiritual and social interactions.

Jane's Oceana on Australian anthropology:

http://www.janesoceania.com/australian_aboriginal_anthropology/index1.htm

Wikipedia – Australian Aboriginal fibercraft

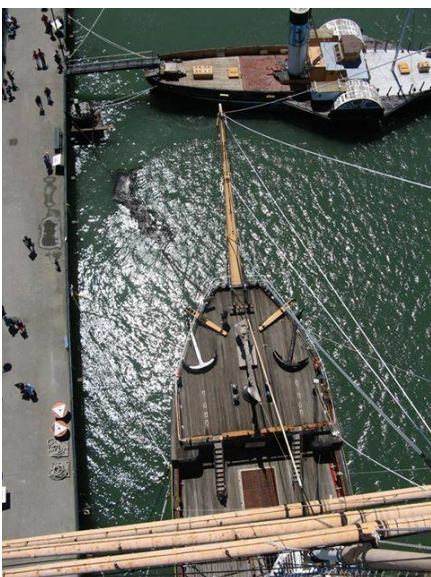
http://en.wikipedia.org/wiki/Australian_Aboriginal_fibercraft



Shirley Malgarji starts a dilly bag with pandanus fiber



Our long-time PAB member, Jose Hernandez-Juviel, spent part of the summer aboard the square rigger **Balclutha** as a volunteer rigger in the San Francisco Maritime National Historic Park.



View from the Fore Royal Yard



Jose aloft enjoying the view