

# Knot



# News

**International Guild of Knot Tyers – Pacific Americas Branch**

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## **Knot Therapy**

Mike "Hooey" Storch

I've always wondered to what extent knotting and braiding might be applied to physical therapy, in or out of a clinical setting. The mental therapy aspect is obvious: the mind stays occupied, even challenged, in a bed ridden patient with little else to do – a copy of *The Ashley Book of Knots* and some light cordage could keep a patient constructively occupied indefinitely.

As for physical therapy, the possibilities are far reaching. A person needing hand/finger therapy (after an injury) in a mild or passive mode, could begin with basic knot tying, and graduate up to fid work or some other demanding form of tying/braiding. Beyond injury via trauma, consider a more extreme scenario: a patient recovering from stroke, where one half of body function has been compromised – in such cases a person may have to "re-learn" how to use the affected hand, or learn to "teach" the unaffected hand to become the dominate hand if need be. The type of therapy I have in mind in this case would seem best suited to the use of a braiding spool. Braiding spools used to be quite common, and they can still be found searching the internet – they can also be made quite easily, with a minimum of effort or expertise. The braiding spool, a crochet needle, and some yarn or thin string completes the set.

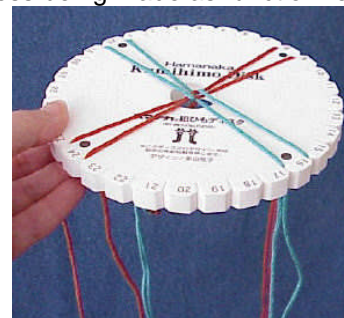
In practice, the strong hand works the yard with the crochet needle. The weak hand has only to learn how to grasp the spool – the actual stitch can be learned in a matter of minutes. There are several stitches to choose from, none of them difficult – eventually, as the weak hand regains the grasping function, the crochet needle and the spool can be switched into the opposing hands. This would allow

the weak hand to progress to grasping something smaller, as well as minor manipulation (of the crochet needle) – different degrees of manipulation can be achieved by introducing different thicknesses of yarn, or size of crochet needle.



A kumihimo or braiding spool

A nice feature of this system is the finished product, which is a hollow tubular braid. Checked at timed intervals, it is a physical record, measured in inches, and of progress being made as function returns.



Because this type of therapy can be accomplished either under supervision, or eventually by the patient alone, it could fit easily into a more comprehensive therapy program. If unsupervised, the patient need only have 10 minutes of training in the use of the spool to be proficient. Progress beyond the braiding spool (i.e. when the weak hand has gained sufficient function) can be achieved in several other areas of knotting or braiding where a more equal amount of effort is required of both the strong and weak hands. In knotting, macramé comes to mind because it usually requires a lot of square knots, which would equally distribute the effort to both hands – it also has the encouraging benefit of allowing the patient to see a project in progress. Braiding has much to offer as well, although it is more demanding physically than macramé. Details aside, I believe knotting therapy can be a sound idea in many instances – and by the examples mentioned, a progressive direction should not be difficult to plan to suit any individual patient's needs.



Macramé therapy

Last thoughts: considering the simplicity of knot therapy, and the fact that in some instances it can be done unsupervised (by the patient alone), it is easy to overlook the fact that all such therapy should be somewhat interactive. Progress must be monitored and recorded, encouragement offered, a new stitch introduced to promote creativity and relieve monotony, etc.

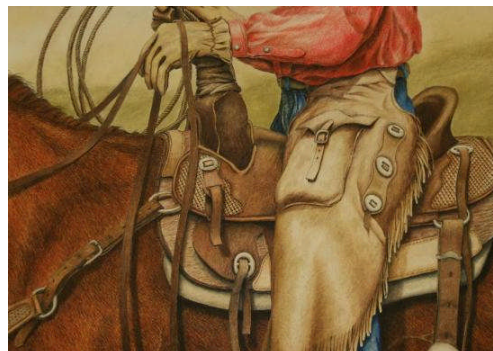
You are part of the healing process. Ultimately the patient's success is your success.

Do good work.

## Thoughts on Retirement

Mike "Hooey" Storch

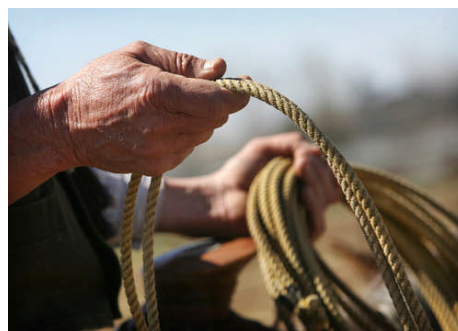
I just finished the "Older than Dirt" quiz in *Knotting Matters* #106 – being in my retired years I knew all the answers. I have travelled a different path in life though, so while I don't get very excited about trivia, I do enjoy recalling small details about this path less traveled. How this applies to the Guild is simply through knots and braid work.



Many of my years have been spent living, working, or playing out of doors. Living in a tent for up to six months at a stretch has happened several times, and two or three months at a time was fairly routine. That of course involved lots of rope knots and braid work – not in a 'hobby' sort of way, but in a "matter of fact" manner. Much of the work I did in life involved rope and knots as well. Now, in my retired years my direction and needs are changing – I will of course be braiding and knotting to an ever greater extent.

When I look back over the years it is the small details of camp life, the knotting and braid work that I enjoy dwelling on – for it has been my craft that has allowed me to spend so much time in nature, and work with livestock in a safe and enjoyable way, for such long intervals. In looking back I also look forward, in anticipation of new places and things in life where my craft will apply. There is much left to see and do. I intend to make retirement interesting.

*To be continued...*



**Notes on Nested Grids (4)**  
**Permissible Grids**  
Pieter van de Griend

## Prologue

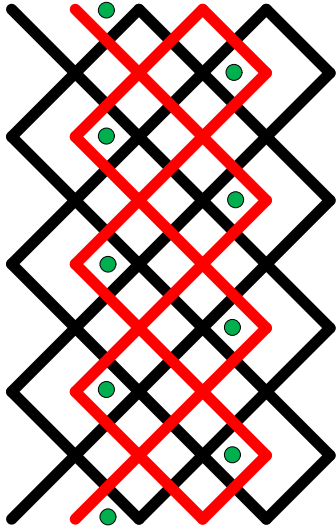
Nested Grids may come forth when super-positioning one Regular Grid over another Regular Grid. However, you cannot plaster any good old Regular Grid over the next, as there are some rules to this game. Paramount is that the grids satisfy so-called permissible dimensions. In this *Notes on Nested Grids* contribution we shall see what that means.

## Example 1

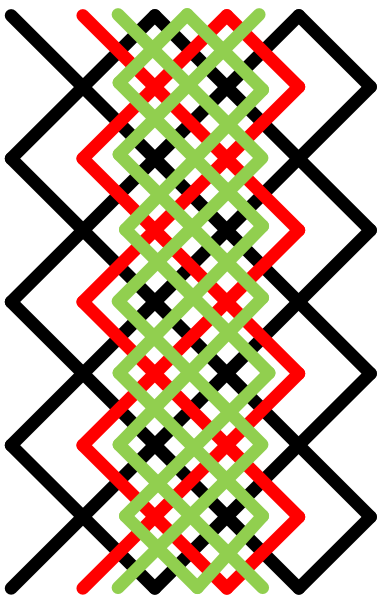
Assume we start from an Regular Grid with  $p=5$  parts and  $b=4$  bights. The Law of the Greatest Common Divisor tells us that this will be a single stringer

### Example 2

Suppose we want to put in yet a third centered interweave. What demands does that impose on our Nested Grid? In the rightmost figure above I placed some green dots indicating where such a centered weave should have its bight boundaries. Try and find a Regular Grid (or Nested Grid) which will fit.

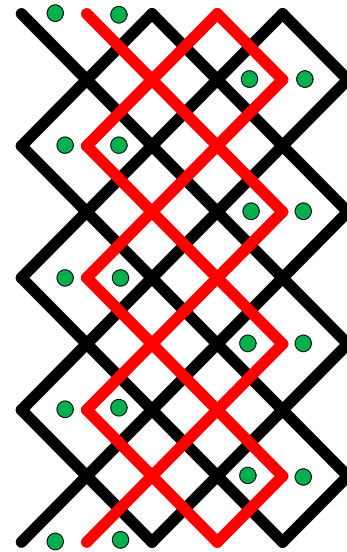


What caused this sample fail in accommodating a centered grid? Count the number of parts from the left green dot bight boundary to the right green dot bight boundary. How many you say? Had we snuggled in a Regular Grid, then it would have had 4 parts and 8 bights. Moreover, the resulting grid would no longer have been a Symmetrical Nested Grid, but what is shown below

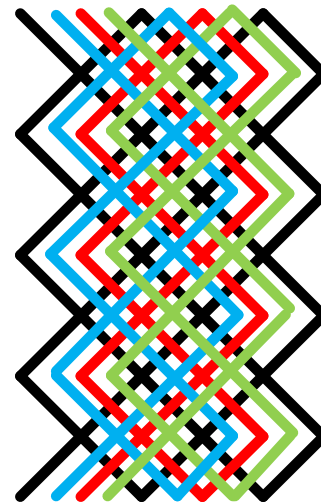


### Example 3

Suppose we put in more green dots? Well in that case try completing the image given below

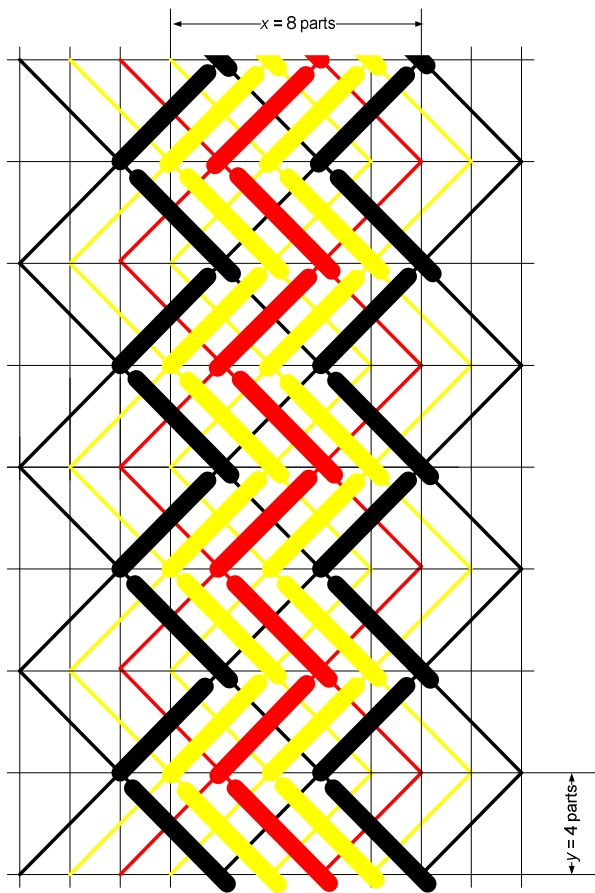


You will find that you can now connect the dots in 2 sets, equating to two non-centered Regular Grid for which  $p/b = 3/4$ . The construct is shown below.



Is there no hope of centering *three* Regular Grids to get a Symmetrical Nested Grid? Well, it depends on what you mean by that question. Consider the (4,4,8,4) above. Clearly the different colors *visually* destroy the centering of the components. Suppose you had given the green and blue component the same color, say yellow. In that case you may have been able to optically cheat your way through, provided a suitable coding could be found. Consider, for example the 4-pass row-coding given below.



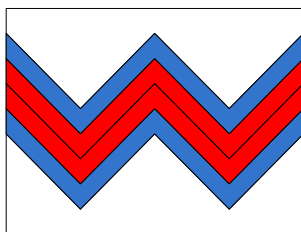


Symmetrical Nested Knot (4,4,8,4) with 4-pass row-coding

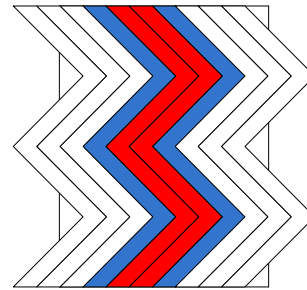
Have these two examples helped us figure out what “permissible dimensions” are? I should think not, but they have indicated certain boundaries. Before moving on to a generic solution, let us consider yet another example.

#### Example 4

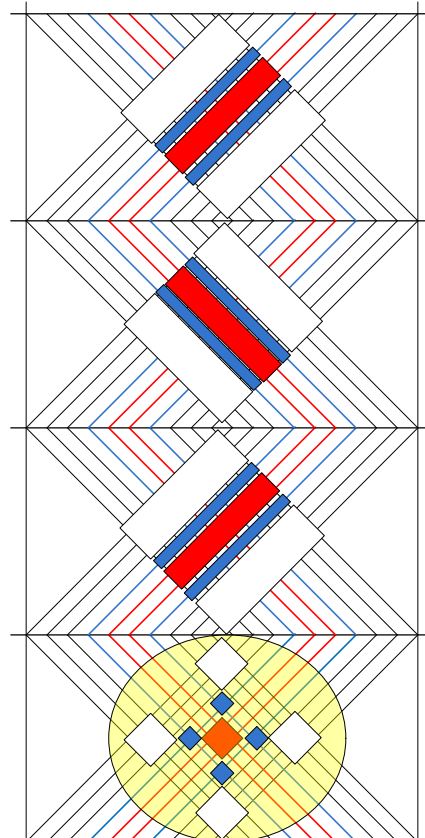
Will the coding on a Nested Grid always allow us to do what we want? My favorite Scandinavian countries have a flag which demands tri-colored chevrons like shown below. Can we solve that problem coding wise in a Nested Grid?



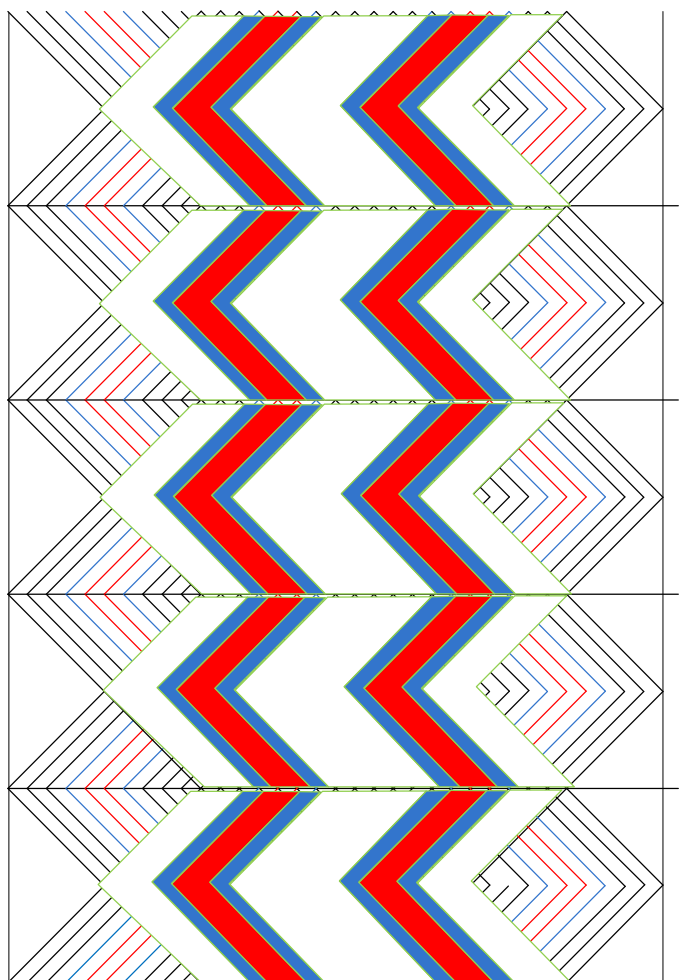
Turn the image and put in a few white chevrons to get the following pattern.



It requires some peculiar formation of its components and demands centering two interweaves in a challenging manner. All in all it is getting to look like a row-coded Nested Knot, which just might be feasible. The question is can it be done? The authority on Herringbone-coded Knots is silent on this specific problem [2]. Are there permissible dimensioned Regular Grid plus Nested Grid which allow such a pattern? Of course you can skew-place 10 Regular Grid-components and choose the required colors getting them to correspond with what we need. Okay, what dimensions should these Regular Grids have? We have seen that you can skew-place any number, say  $n$ , of single-stranded  $p/b$  Regular Grid with even  $p$ -value, and that the resulting Nested Grid will be of the form  $(B,A,x,y) = (b,n, 2,0)$ . One of the possible results is shown below.



What are the problems with this knot? To begin with it will fall apart. There is not enough Equatorial Grid to hold a row-coding as the  $y$ -value is zero [1]. Good points! Secondly it will not be possible to repair the chevrons without sacrificing the pattern we originally wanted. What coding will suffice? The circle of the Nested Knot's lowest Length Block shows which crossings obtain a compulsory color. This means that adding width blocks to the design will cause the Nordic flag pattern to surface more than the one time we wanted it to appear. That was not what we bargained for. Why is this the case? Grids in general do not allow any degree of super-positioning. What are the conditions and how will a repair look like?



If you have 3 differently colored odd strings laying about, you may attempt making one. Just leaves me wondering whether it is such a good deal, accepting a 50-component spread in order to create a 3-color coding?

But, but, I hear a mutter. Is there absolutely *no* way you can continue centering? Yes, there is and that is where permissible dimensions will help you from wasting your precious time. Up till now we have seen everything we need to know in order to solve this problem.

Observe that, given certain Nested Grids, you can encapsulate them within a *larger* Regular Grid. Provided the left and right bight boundaries of the Nested Grid can be made to fall within the bight boundaries of the encapsulating Regular Grid, you will have created a *central* Nested Grid. At the end of this article a few examples are given. In a future Notes on Nested Grids - article I will give the formula for the encapsulation conditions. In the mean time enjoy trying to find it by yourself.

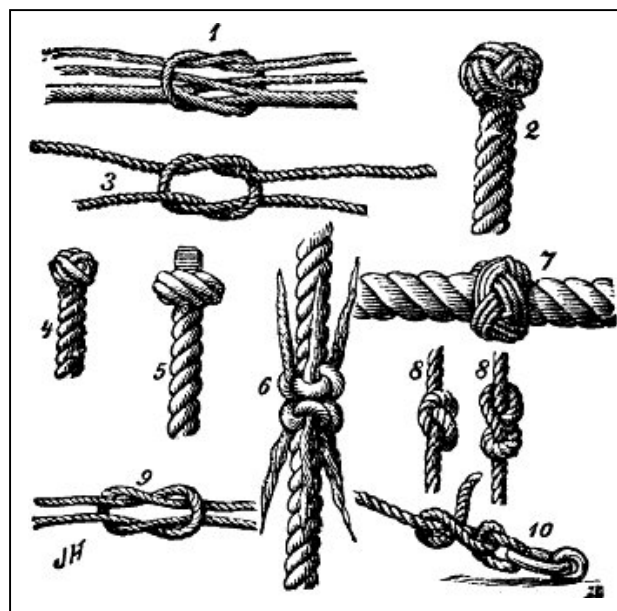
## Epilogue

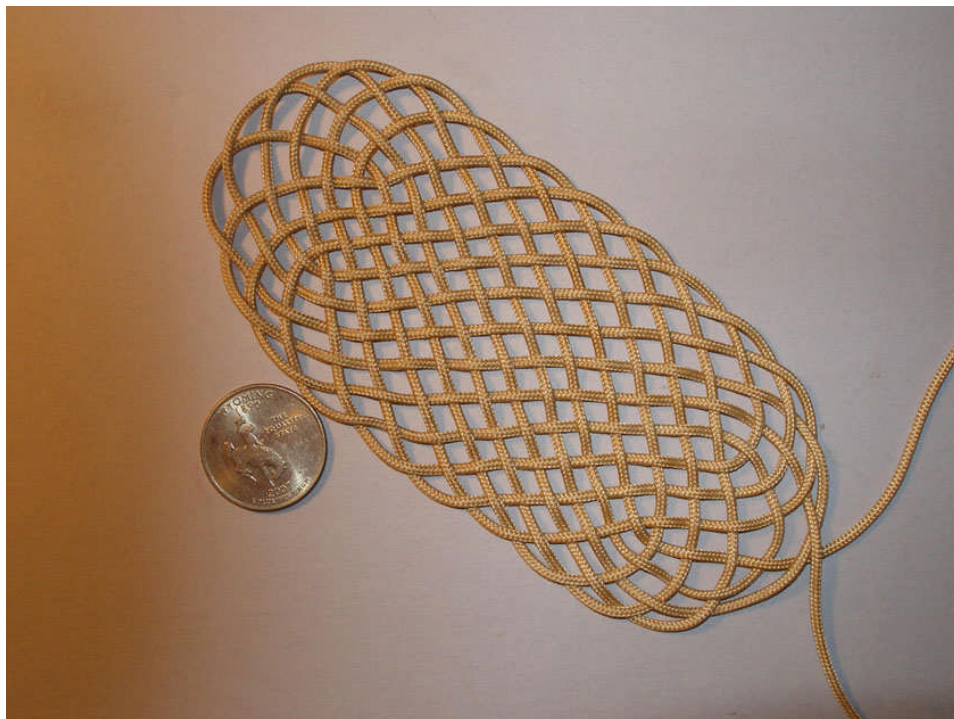
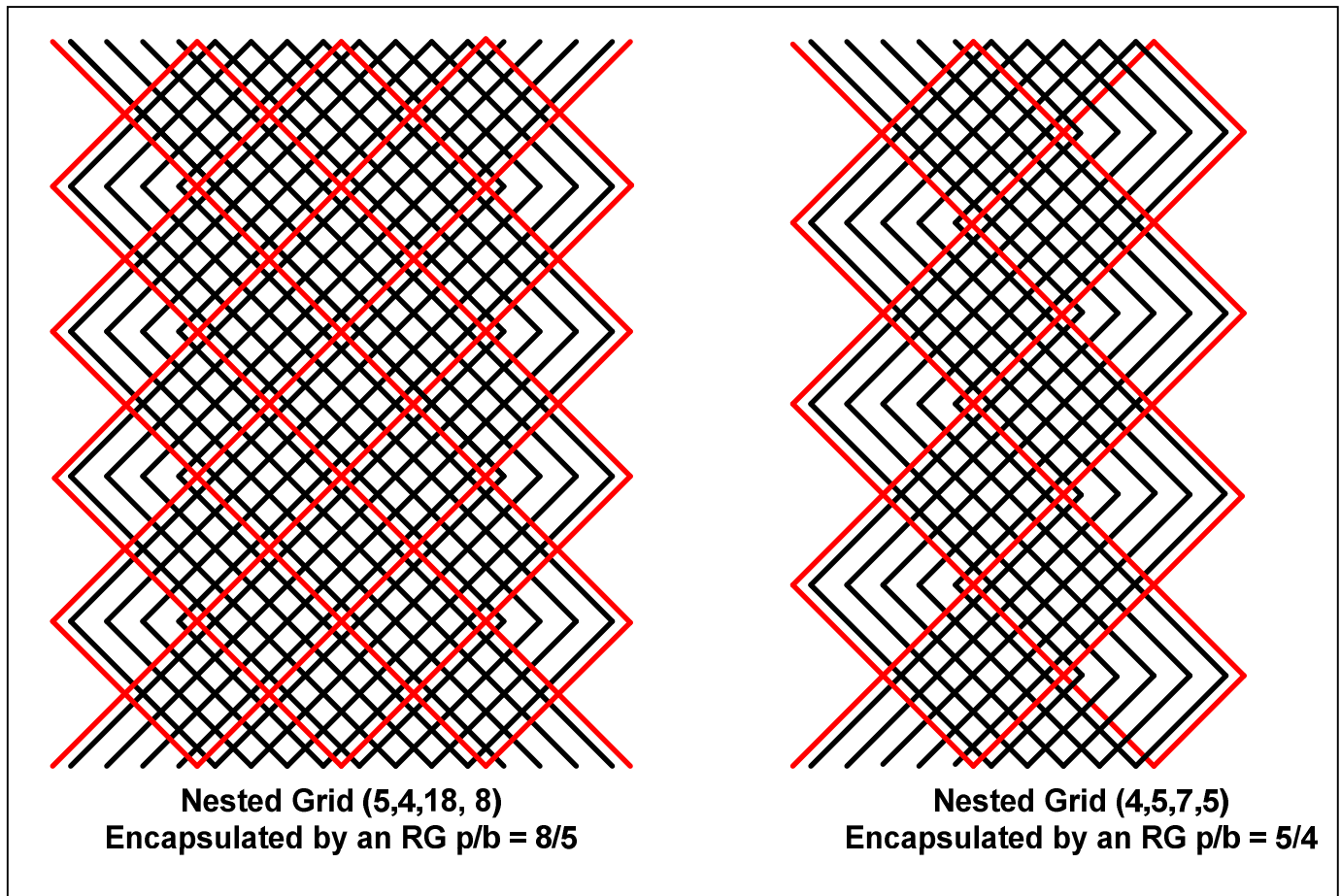
Okay, so we have seen that you cannot stick any Regular Grid into any other unsuspecting and innocent Regular Grid to get a Nested Grid. Can you do the same thing with Nested Grids? Come on guys, what does the US-team think?

## References

- 1 P.v.d. **Griend**, "On Gridtype and Codingform Interplay", *Knot News*, issn 1554-1843, no.66, pp1-8, March 2008.
- 2 A.G. **Schaake**, T. **Hall**, J.C.**Turner**, *Braiding - Standard Herringbone Knots*, series books on braiding 3/1, ISSN 1170-6937, Department of Mathematics and Statistics, University of Waikato, Hamilton, 1992.

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Stiphout April 2010





The Turk's Head Knot enlargement processes transferred to an Ocean Plat Mat (as theorized and studied by both George Schaaque in New Zealand and Charles Hamel in France) here brought into existential fruition by Don Wright.

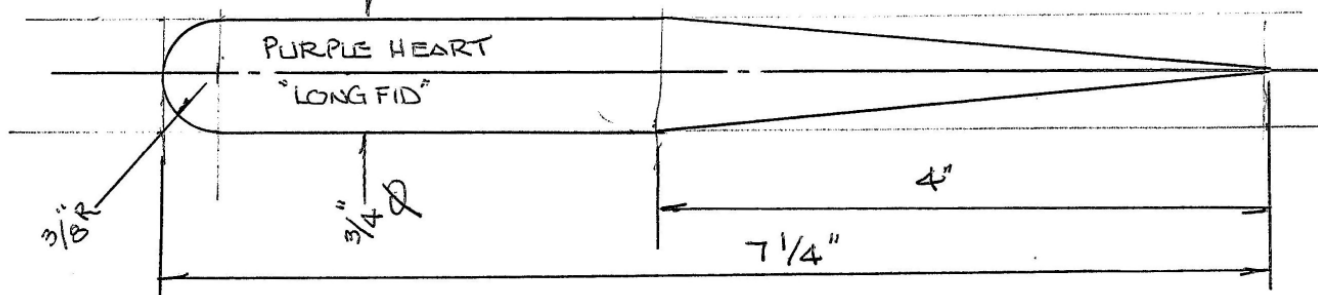
## A Short Story about a Long Fid

Roy Chapman

Everyone must have a favorite fid. A few years ago these pages [*The Fid - Revisited* KN #26] presented several articles, which covered every aspect of the perfect fid. Without attempting to start a new debate, I would like to introduce a different fid. I'll call it the "**Long Fid**".

What is different about this fid? Well... it is long. So what? Who cares? Ah ha! I do and you may too.

Please look at the photos and the drawing. What may not be instantly apparent is the change in balance and leverage that the relatively long cylindrical section provides. It seems to fit the hand better and offer an improvement in power when compared to the usual conical fid. It is one of those ideas that prompted me to say, "Why didn't I think of this?"

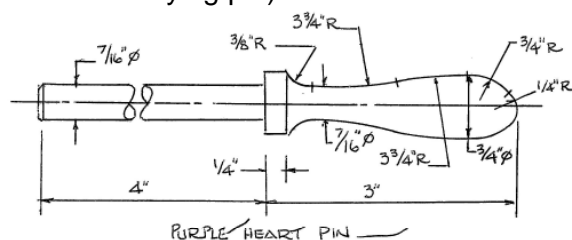


Recent KN contributor, Jim Long, made my first one when he was working with a new lathe. I am not privy to what inspired him to turn this shape. Whatever the inspiration or cogitation was, I am glad he made it and continued making them, for I now have a fleet of Long Fids. These join many cherished fids from other knotting (and wood working) friends. The significant difference in the Long Fid is the smooth cylindrical "handle". When I lived in the woods I carried a marlingspike constantly. Perhaps it was a harsher lifestyle. Now I carry a Long Fid all the time. At the risk of sounding like that credit card advertisement from some time back: "Don't leave home without it."

My hands have gotten weaker. With the extra leverage I can really put on some pressure, using the methods in ABOKs #130, #2029 and #2030. When I tighten the mesh on a glass float with my large Long Fid I am almost afraid I'll crush the glass ball!

I also find that when I drop my Long Fid the "butt heavy" end hits the ground and keeps the point from being bashed on the pavement. How different my life has become (we have pavement where we now live).

You can make a trial Long Fid from an old broom handle to see if you like the style. If you do like it you can turn one (or have one turned) from some exotic hardwood. Flooring companies often have 3/4" thick scraps, which work up into wonderful Long Fids. That is where the wood for these (and the below unrelated belaying pin) came from.



Another good feature about Jim's fid is that the cylindrical portion can be pulled through the work and a strand can often be inserted before the opening slams shut (or push the fid through with the strands).

Quite beyond ordinary fid tasks you can also use a Long Fid as a handy toggle as seen in ABOK #1919 and vicinity. You can also use it as a serving stick, ABOK #3346.



Here are some photos of Long Fids:



Illustration 1: For size comparison the float is 9 inches in diameter.



Illustration 2: Working the net without any fid would be futile – both fids shown get hard usage.

I think innovation is the normal human condition. Stagnation is the anomaly. We are driven to improvement.

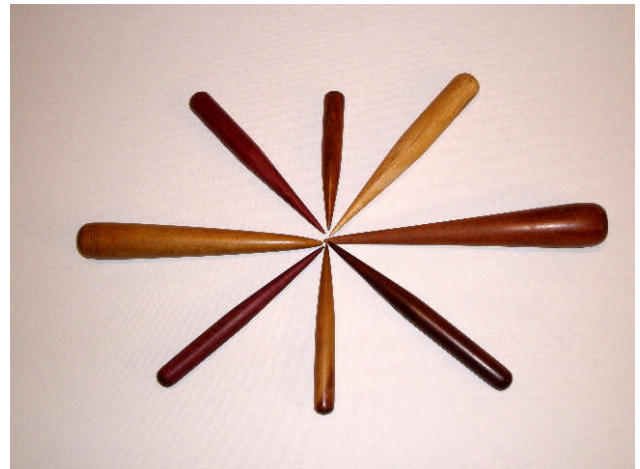


Illustration 3: Here are some Long Fids compared to "Traditional Fids".



Illustration 4: Two Long Fids and a "Hip Fid" from Bob Solon (and that unrelated belaying pin).



Illustration 5: Here are Long Fids, belaying pins, toggles and leashes. Leashes sell very well.

My thanks go to the several wood artists who have shared their creations with me over the decades.

As our company commander, a veteran chief torperdoman, told us on our first complete day in the Navy, there are three ways of doing anything in the world: the right way, the wrong way, and the Navy way. We were expected to do things the Navy way. The lashing of our hammocks was no exception.

There was an eye splice in one end of the hammock lashing. In lashing your hammock the Navy way, this loop was positioned near one end of the rolled hammock. The other end of the lashing was passed through the loop, hauled taught, and then, in eight evenly spaced hitches – again logically called hammock hitches – snugged home to make a long, tight, cigar shaped bundle.

In complete innocence – and even more complete ignorance – I committed the terrible sin of passing the running part of the lashing under the standing part when it should have been passed over that part – or vice versa – I don't remember which now. I could not see that it made much difference or that it posed much of a threat to the security of the United States one way or the other. Our newly appointed company commander could, though. He did a marvellous imitation of a man in the early stages of apoplexy at my terrible error. It was clear I would have to be punished."

*Sailor from Oklahoma: one man's two-ocean war*  
Floyd Beaver



This is the way the finished job look at Oak Harbor Yacht Club in nearby Oak Harbor, Washington. I got \$happy to do the two Turk's Head that hold the bronze hardware to hang the sign. This is where I played "kick the can" with an open a can of shellac. That can't be good.

I was up to the commercial marina today to bid a line to chain splice. The owner also wants me to do a pair of sea chest beackets and a bell rope. I'll take samples when I pick up the chain and rope for splicing and see if he wants to pay the price."

(photos and text courtesy of Roy Chapman)