

*In Roy's own words :*

[OPEN QUOTE]

“Pears and Avocados” by Roy Chapman

As I looked at the article on Two Spheres I noticed some things I could clarify (and should) before we go forward.

A “panel” is a “gozover”. It is easier for me to define coverings by discussing the number of panels rather than the THK from which the knot was derived. After I close one end of a THK and pucker the other (a pear) then the parent knot is lost in the shuffle. There is a sketch of “a panel” here.

I also omitted a discussion of bights and crossings. Fig 1 through Fig 5 shows a bight, shows it when wrapped to a crossing and wrapped again to be double crossed. It depends if it is crossed over or under and causes variations that will cause confusion if ignored. I don't want to invent a vocabulary and only mention it as it matters in creating coverings and THK variations. Note in Fig 4 that two THK's, both 4Lx3B knots, are mirror images of each other. Blending each with a multi-panel knot will result in two differently shaped knots. Note also that turning each of these THK's inside out does not change their structure, they still remain mirror structures. Note also that this is not true of all THK's. For example a 3Lx5B knot will invert if turned inside out (as you would a sock) but also inverts if turned end for end. This inversion swaps the “gozovers and gozunders”. This may help keep you working on single strand structures. For me this all comes back to ABOK # 1397: “Projections of such knots can be varied and, if desired, additional arms may be projected from other compartments. An easy way to build up elaborate knots of this sort is to cut the bights of several knots and then tie the ends of the cords together to form a single large knot. When completed, substitute a single cord for the knotted cord. However, unless care is observed, more than one cord will be required.” Wow! CWA says “an easy way”! I haven't found it very easy yet. But it can be done. If you are having trouble avoiding the multiple cord knot structure try the inverted or mirror structure of the second knot. I find it easier to tie the parent knots and slip them on a grid and don't actually cut the bights but use the two as a “clue”, following the over and under pattern. When satisfied I then remove the parent knots, sketch the knot on the mandrel and have a new grid for a “new” knot.

You will find attached two grids, one for a 27 panel pear shaped covering (derived from an 18 panel sphere with a 4Lx3B THK) the other for a 42 panel avocado shaped knot (derived from a 30 panel sphere with a 4Lx3B THK). You can change the size of the collar by putting pins at the alternative positions shown. The grids aren't perfect in alignment but the crossings are correct (and besides you may have smaller towel tubes than I do). One of our talented contacts (Jimbo) from the East coast suggests not filling the tube but wrapping layers of paper around it to hold the pins. That also gives you more adjustment in circumference to fit your tube. I am thinking of “scrimshawing” the grid onto PVC pipe for my most often used grids. Patrick Ducey would undoubtedly CAD draft nicer grids... but these will get you started on these two knots and hopefully on to making grids of your own (and besides I can't CAD draft).

The attached photo shows one of each knot on my carpenter's scratch awl (50 years service as a knotting tool I thought it deserved some bright new jackets). Also pictured is the 4X4 gear shift knob for my Ford. That knob is HUGE before the knot! In the photo it is temporarily displayed on a “Blood Wood” fid (which Jimbo was kind enough to make for me). I will add that the fid has about ½ the length without taper, which I find makes a nicely balanced tool. Before covering the knob I pulled the little “2H-4H-N-4L” button out of the knob so that I can tie a flat mat with the button as the center, then glue the button to the dash. To avoid this on customer knobs I am thinking of not closing the top of the sphere so that the shift pattern icon can be read.

It is in this context of “knotted coverings” that I bring up the subject of mirror image knots. I have deliberately avoided “handedness” or references to clocks as causing more confusion than clarification. Brighter minds than mine can work out the vocabulary. For our purposes it is sufficient to recognize that there is a mirror structure and that it often will change the sequence of over and under to allow a “new” or at least different knot. [END QUOTE]