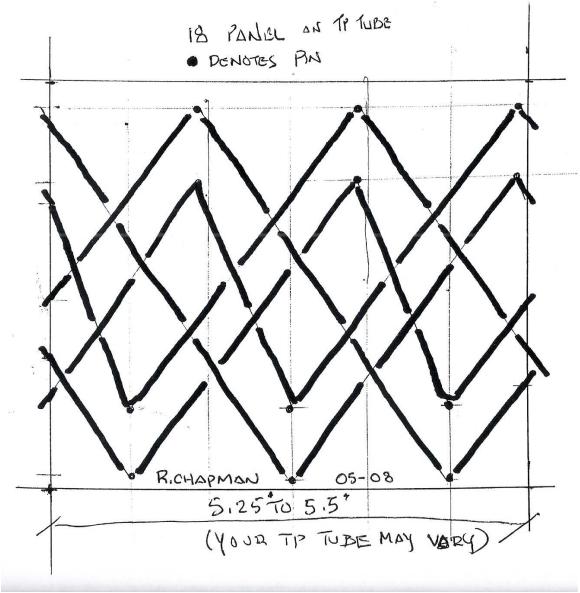
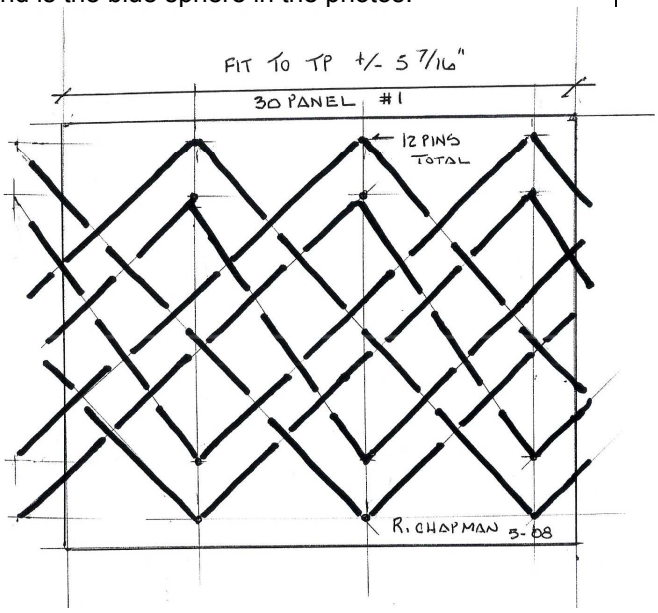
A Tale of Two Spheres
by Roy Chapman

You may remember my articles *From the Ditty Bag*. I started off the first essay explaining that I was often frustrated by DIU articles, which require rare tools or unobtainable materials. "KISS". Therefore I used common houshold hand tools.
This article was prompted by the very nice reprint in KN of an article by Luc Pouveur regarding spherical coverings of 18, 24, 36 and 48 panels. Tied in hand, his method "keeps it simple".

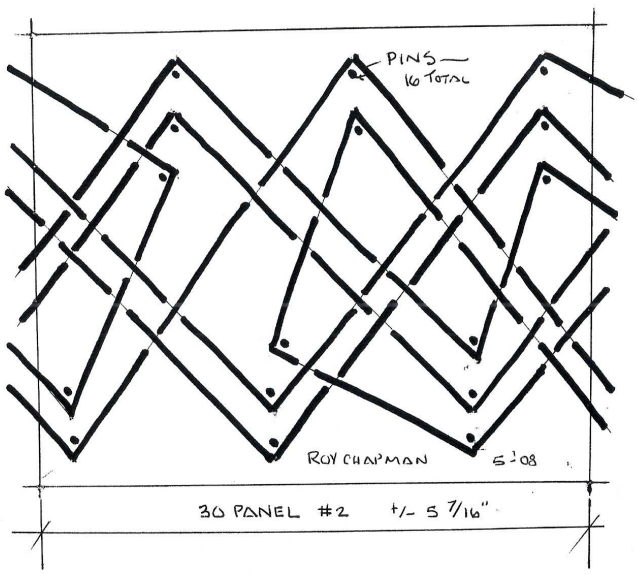


At the time it arrived I was working at knotting over a mandrel with ABOK #2360, extending, elongating and blending. Two blended #2360s produce an 18 panel sperical variation. I like simple grids wrapped around any handy cylindrical object (TP tubes?). The included grid will produce an 18 panel variation (derived form the ABOK #2360s). If you turn it "inside out", as you would a sock, it will be the same as Luc's "tied in hand" 18 panel product. Well done!
Next I extended two #2360s and found a 30 pane knot (the white one in the photo and grid #1). Also nice, now I'm getting somewhere. Could I develop another variation?
This resulted in the 30 panel variation #2. This is the included grid with the odd direction change labeled #2 and is the blue sphere in the photos.



30 Panel #1

Working on the mandrel allows me to make variations as you see in these photos. Slipping one of the "tied in hand" 18s on a mandrel helped me see that the 2 x #2360 knot I made was the same structure but "inside out". Slipping a 4Lx3B Turks Head Knot onto the mandrel as a variation of #1 thirty panel knot resulted in the red handled awl in the photo.



30 Panel #2

To help me think of these spheres and variations I have found it useful to think in terms as if it were working on the surface of a globe. I use North and South Poles, Equator, Northern Tropic, Southern Tropics as well. I think of directions of travel as if the cord was sailing around the world! This method of working and naming enables me to extend from the sphere while still on a mandrel resulting in new variations.

If you look at the 18 panel grid, please consider the pins along the Southern Tropic. Notice that at each pin the cord moves Southwest until it reaches the South Polar pin. What if the cord now left this grid and entered a THK South of this grid? Try a 4Lx3B THK and lead the working end into the THK at the crossing of two leads. Follow the clue provided by the 4Lx3B as well as the grid from your 18 panel knot, exiting the sphere at each South polar pin and re-entering at the same pin after a circuit of the THK. Now you will have created a pear shaped covering, sherical with a chimney growing out where the South Pole would have been.

I have not included a grid for this but only a photo of some yellow cord building a pear using the end of the provided 18 panel.

If you will photocopy the included grid and try this experiment I think you will see many more variations than we can possibly hope to publish. Could you create a “baton” with bulbous ends and a long THK between them (all in one cord)? Of course!

I hope that forming a mandrel from these grids and making these 3 knots will help you enjoy these useful tools for other tasks as well.