

# ***Long Turk's Heads -***

## *Simple Ways to Make Them and Remember How!*

*by Capt. C. Allan McDowall, Master  
Mariner*

(Shipmaster Allan McDowall, afloat off Saudi Arabia and separated from his knot books, sought an easy way to accomplish advanced Turk's Heads unaided. Back briefly from seagoing, he here unloads for us his cargo of discoveries. Starting now - in this issue -his writings and drawings will appear in 5 instalments over 12 months. Before he's through, you can be tying with confidence even a cross-shaped Turk's Head of your own design. Away again soon, no doubt, on the out-going tide, Allan (who helped found our Guild and choose its name) will leave behind for us shorebound folk a treasure-chest of original ideas for all to share.)

## *No. 1 - "Magic" Numbers*

### Introduction

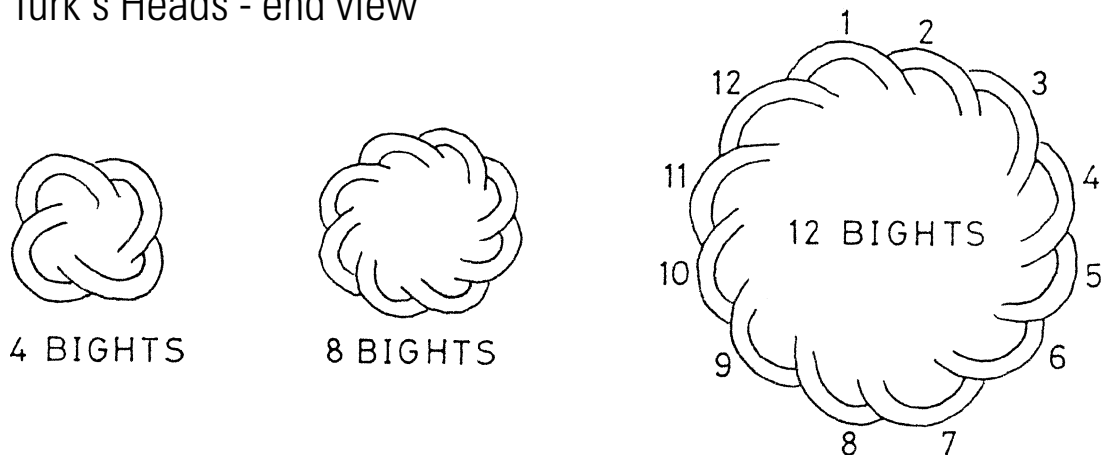
Turk's Heads are to me more interesting, more beautiful, and more useful than Rubik's Cube. However, the number of people who can actually make a long Turk's Head in a short time is - I surmise - fairly small; so I hope this article will be of real use to a lot of people.

There are several methods of making a long Turk's Head, but two are particularly appealing and POWERFUL. The first I call "the Magic Number method". It is really very simple for smaller, less complex knots. I found it myself as a small boy, so it can't be too difficult. The second I call "the Origami method"; why will become obvious. "Origami" is more powerful than "the Magic Numbers", and you will be making some exotic and fascinating things with it . . . next time.

This article deals with the Magic Number method. To make Turk's Heads by Magic Numbers you need to recognise that the Turk's Heads fall into basic categories, these categories determined by the minimum number of loops or bights visible when the knot is viewed end-on (fig. 1).

The first family of Turk's Heads created by the Magic Number series will be the one of a-bight knots. Doubling the Magic Numbers - and, with some slight changes in the sequence, the operations they represent - yields an 8-bight knot. Tripling the Magic Numbers would result in a knot of 12 bights. (Don't try to make a Turk's Head of 8 or 12 bights by this

Fig. 1  
Turk's Heads - end view



method . . . except as a personal challenge! The Origami method is much better for those.) For a straightforward 4-bight knot of any length you fancy, the Magic Number series is exactly the same: and the making (once you are good at it) is fascinating to watch and deeply satisfying to do.

#### Method

THE MAGIC NUMBERS FOR A 4-BIGHT TURK'S HEAD ARE:-  
3 2 2 1 (remember them)

With your left hand hold the object to be covered so that it extends to the right. Trap the standing part of the cord with your left thumb. Now wrap the cord away from you around the object to the right at a helix angle of 45 degrees. This is the first pass of Magic Number 3, and how many initial turns you wrap will determine the length of the completed knot. A first wrap of a whole turn (360 deg's) plus 45 deg's will result in a 9-part knot ( $45 \times 9 = 405$  deg's). Note - "parts" are the numerous cords which would be severed if the knot was slit lengthwise. The smallest number of parts for a 4-bight knot is 5 ( $225 \text{ deg's} \div 45 = 5$ ) but we will master first a 9-part knot because it is much easier to handle, and it looks grander.

Having completed the first wrap, do the same thing again to the left, completing precisely the same number of turns and fractions of turns. This ends the second pass of Magic Number 3. So, do it again to the right. The first series, 3, is now complete. The Magic Numbers, then, dictate the number of passes to be performed for each mode, with a mode for each Magic Number. All crossing-points have thus far been 'over' (no 'unders') so there is still nothing holding the cord in place except your thumb. Take care. This first stage is also the most difficult because the amount of wrap is fairly critical - it is easy to end up with a longer knot than intended, just by wrapping a bit too much the first time. So far and no further (fig. 2).

Winding away from you to the right creates a so-called "righthand" knot, which is what we are doing. Most people,

being righthanded, tend to do that. Wrapping the cord in the opposite direction - towards you - but still anchored by the left hand results in a "lefthand" knot. Only an end view reveals the difference.

Remember the Magic' Numbers (3, 2, 2, 1)? You also need to remember the MODE for each Magic Number:-

3 - Wrap the cord over (no unders);

2 - Tuck the cord under 1, over 1, until you get to the other end;

2 - Tuck the cord under 1, over 2, until you get to the other end;

1 - Tuck the cord under 1, over 1 (the "locking tuck") until you arrive back where you started.

Now start the second series of operations represented by the first Magic Number 2. You are at the right of the knot, so start by tucking under to the left, then over, then under - never mind whether it looks right or not. When you reach the left end, repeat the operation to the right. This completes the second Magic Number (3, 2, 2, 1) (fig. 3).

The third series has a small trap for the unwary. In the case of the 9-part knot (also with 5-part and 13-part knots) the second series ends with an 'over'. You must also start each pass of the third series with an 'over'. It doesn't seem right, but that's the secret. Similarly, 7, 11, 15-part knots and so on end the second series 'under', and you must therefore start each pass of the third series 'under'. So, here we go, starting the third series of our 9-part knot 'over', then under 1, over 2, under 1, over...and you are at the left end, first pass completed. Repeat to the right. You have completed the third series, second Magic Number 2 (3, 2, 2, 1) (fig. 4).

The fourth and final series is just one pass, over 1, under 1, until you arrive back at the start, locking every part in place in perfect symmetry (fig. 5).

(A 14-bight Turk's Head has an odd number of' parts and so the bights do not lie directly opposite at each end but are staggered)

Following around the complete knot twice will give the traditional three-plait effect (fig. 6).

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Feel like trying the 8-bight version? The Magic Numbers are 3, 2, 10, 1, with the third series contributing the extra turns and passing over 1, under 1 (NOT 2). But - as I said - the "Origami" method is better for this. It's easier and success is guaranteed!

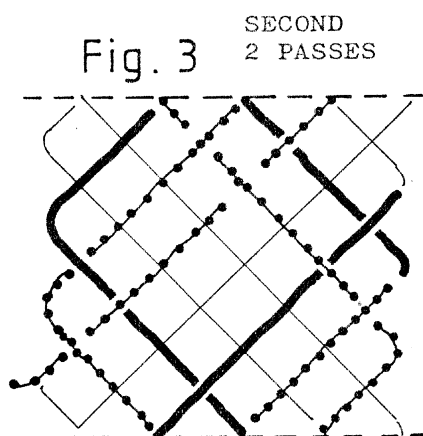
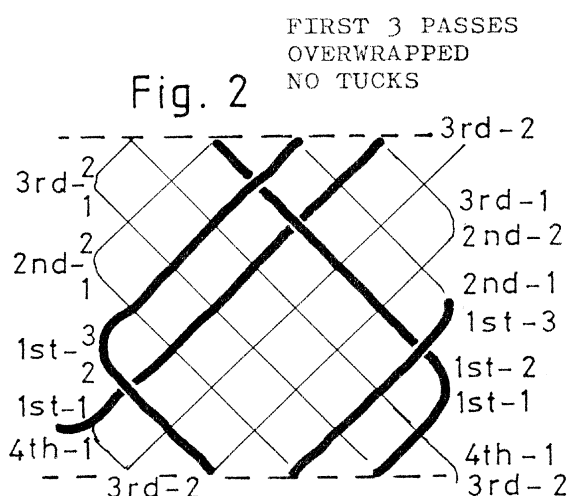
LONG TURK'S HEADS

BY THE "ORIGAMI" METHOD

NEXT TIME.

Figures 2 - 5 inclusive represent the cylindrical Turk's Head flat. Picture the diagrams in your mind actually wrapped around the item to be covered, with the pecked lines joined and glued. The thinly drawn lines show where strands will lie. The thick lines are the strands being dealt with at that stage. Dotted lines (like strung beads) are what you've already done (or should have done!).

FIRST 3 PASSES OVERWRAPPED



\* Start each pass of this series 'over' (if a 5, 9 or 13-part knot); and 'under' (if a 7, 11, 15-part knot). See the circled tucks.

