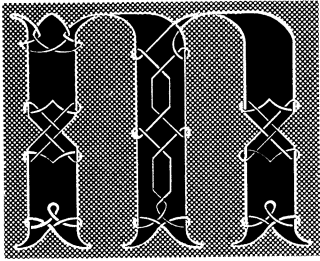
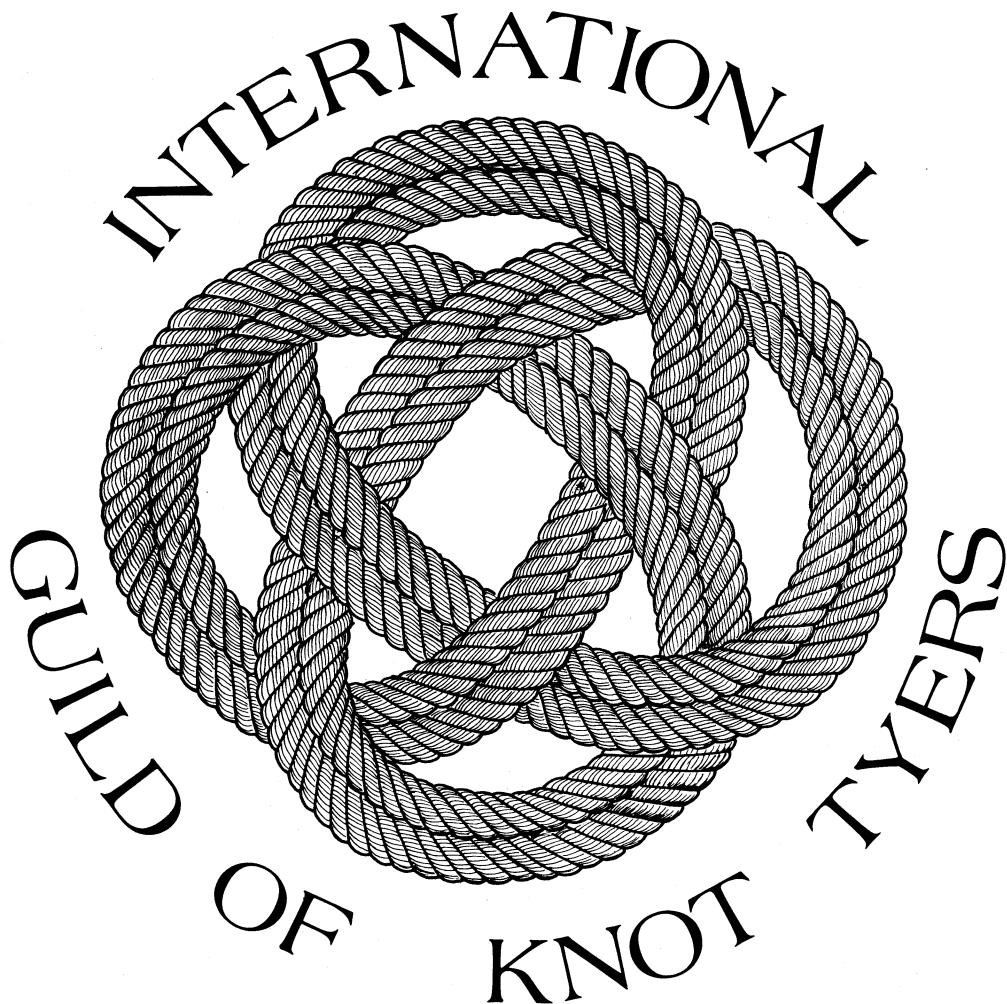


Knitting



Matters

THE NEWSLETTER OF THE



# "KNOTTING MATTERS"

THE QUARTERLY NEWSLETTER OF THE  
INTERNATIONAL GUILD OF KNOT TYERS

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Issue No. 15  
April (Spring), 1986

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## ***Editorial***

The updated membership list with this newsletter is laid out once more in national and regional clusters to encourage members to unite. The Guild's Surrey Branch is thriving. A London Branch had its first get-together recently. Who will be next?

The list is as informal as it can be. First names are given, when known, since we're a friendly crowd with no needless formality. Only titles required to address mail are included, hence 'Dr' and 'Revd' and 'Capt' ('Mr' is taken as read); but no civil or military honours, few service ranks, no alphabets of trade and professional qualifications. Our shared affair with knots can ignore such labels. No slight is meant.

There are occasions, however, when showing-off may decently be done. Our 'Knotting Extravaganza' on Saturday, 21st. June, will now be held in Charlton House, Charlton Village, London S.E.7, a fitting venue (designed by Inigo Jones) with its Long Gallery, carved wooden panelling and plasterwork ceilings . . . plus a gentlemen's toilet in the orangery! It has to be the best Guild gathering yet. The Media in all its forms will be invited, and so will the multitude. We must impress.

It's vital we submit the knotwork we've undertaken in good time to reassure the organisers.

Then - on the day - the plan is to hold a splendid celebration of knotting, centred on Ashley (the man and his book) but with much, much more besides. That means us turning up and bringing with, us all the rest of our stuff (ropework, tools, books, etc.) to display. The house has nooks and corners, side rooms and landings we can adopt. There's even outside, if it's fine.

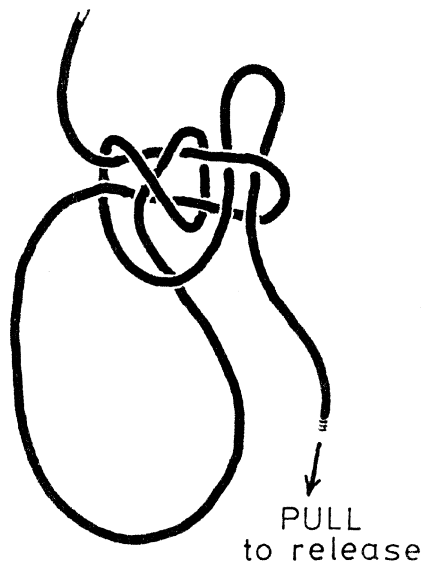
Show initiative. Set up a stall and sell cordage items. Demonstrate your knotting party-piece. Act as a guide to visitors. Give an interview to a journalist. Modest and retiring members will no doubt choose to be indispensable in some other way.

This public performance must be the best we can do.

## ***Peace Knot*** of Pieter van de GRIEND

This is something I thought up myself because it is quickly tied and makes an even quicker untied loop.

I thought it up while I was working for the boatmen of Terneuzen. We used it to hoist the mooring ropes of the ships onto the jetties. I don't think it is a very strong knot, but tied in 20mm nylon we managed to hoist the heavy mooring wires without it spilling. It was very quickly untied and that was the only reason I thought it up . . . the often-used bowline were too much of an annoyance to the crew up on the jetty (at least, that is what they shouted down to us!!).

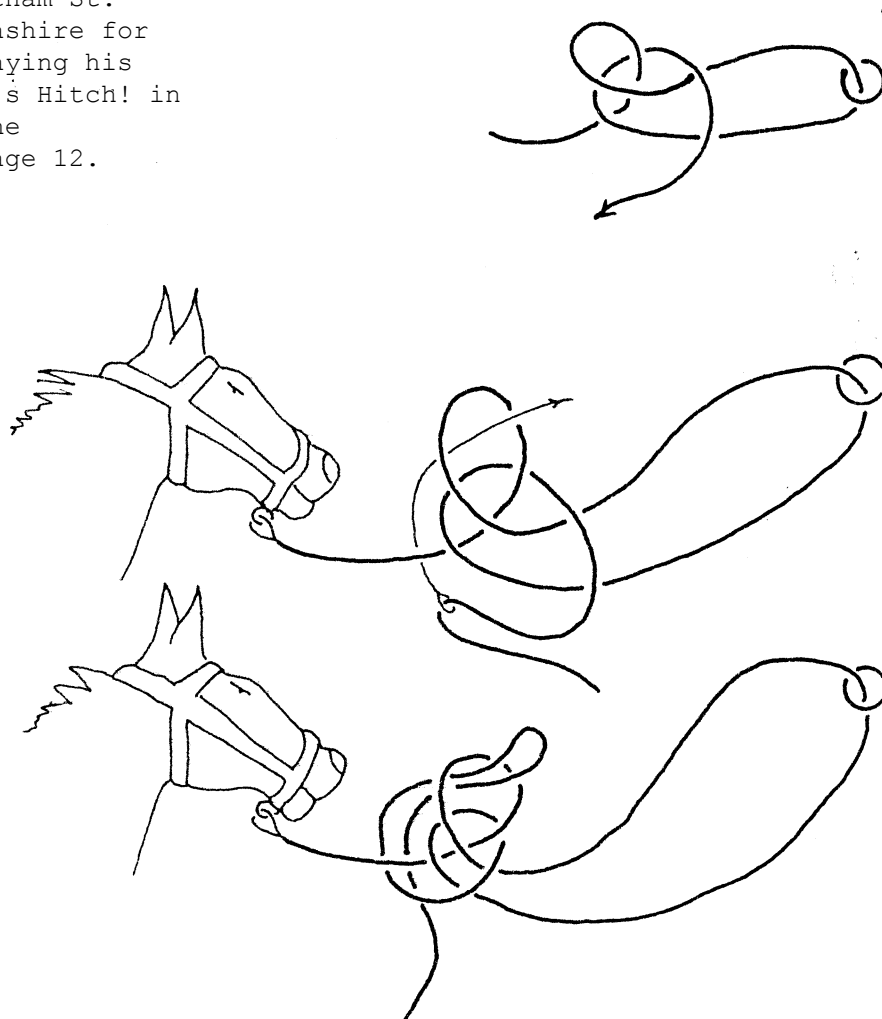


## ***Apology*** from the EDITOR

An apology is due to Tony BLOOMER of Lytham-St. Annes in Lancashire for wrongly portraying his 'Horse Dealer's Hitch! in issue 13 of the newsletter, page 12.

Here it now is, as it should be; and now - perhaps - "it CAN (as Tony originally wrote) be tied quickly and securely - in the dark - even with an argumentative horse on the end!"

Still, what do you make of the accidental variant? Has it any worth?

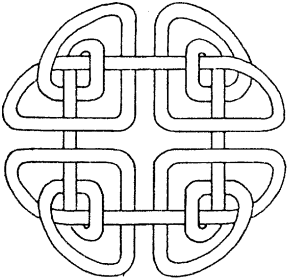


# Heraldic Knots

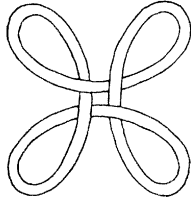
by Eric Franklin



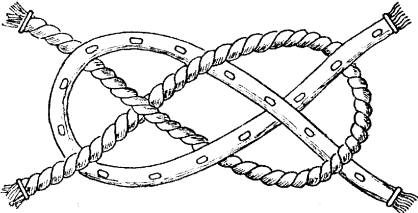
2. THE STAFFORD KNOT



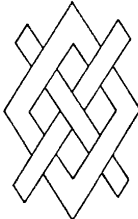
1. ANCIENT CELTIC KNOT



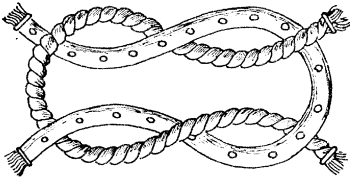
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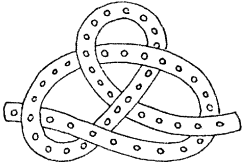
4. THE WAKE KNOT



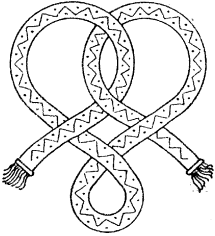
6. THE HARRINGTON KNOT



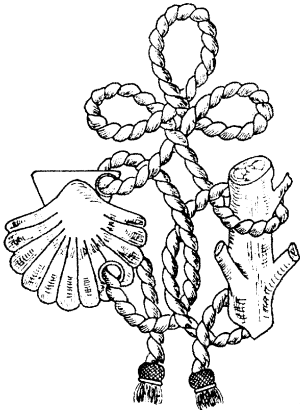
5. THE BOUCHIER KNOT



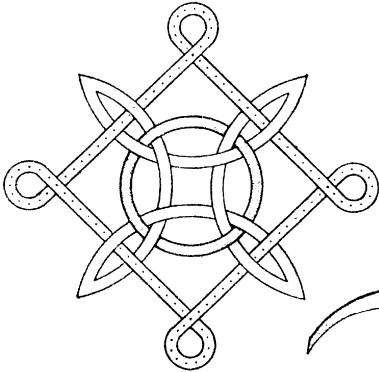
7. ANNE OF BOHEMIA



8. THE HENEAGE KNOT



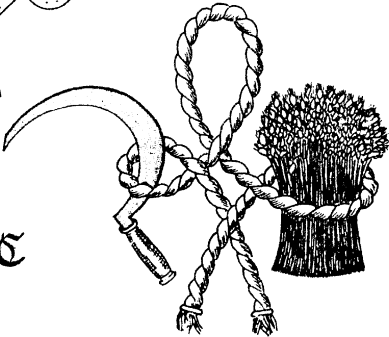
10. THE DACRE KNOT



9. THE LACY KNOT

## HERALDIC KNOTS

ERIC FRANKLIN



11. THE HASTINGS KNOT

'Knots in Heraldry' by Eric Franklin

In my researches into all aspects of knots I have found many odd legends, and stories from a wide range of different sources, and I am always looking for other interesting facets which will interest not only me (as a student of all aspects of knotting) but also the people who read the many articles I write about this subject. It was somewhat surprising, therefore, that it was a while before I even thought about the part played by knots in heraldry. In fact the thought occurred to me while talking to a Staffordshire Scouter and seeing his County Badge for the first time in a new light. The badge of Stafford is, of course, one of the Heraldic knots. Enquiries from a friend who is a student of Heraldry told me that I should consult 'English Heraldry' by Charles Boutell, and it is from this book, well known to all students of Heraldry, and an 1894 edition of 'Knots, Ties and Splices' by J. Tom Burgess in my collection that these notes have been made.

Boutelli defines a "knot" as . . . "An intertwined cord, borne as a badge", and, in fact, all knots used in Heraldry ARE technically called "badges". Knots were undoubtedly used as badges from a very early period, long before the science of Heraldry became established, and numerous examples have been found in Celtic and Anglo-Saxon ornaments, buckles and brooches which pre-date Heraldry as we understand it. One example (fig. 1) could well be copied to decorate a modern item of clothing. Many of the knots Used in Heraldry are not, in actual fact, knots in our understanding of the word but they do at least conform to Boutell's definition.

The simplest and probably best known of the heraldic knots is the Stafford Knot which is used as the badge of the County as well as of the House of Stafford. It is a simple thumb knot (fig. 2). In the standard of Sir Henry de Stafford, K.G., the second son of the second Duke of Buckingham, the knot appears no less than eleven times as represented by a drawing in the College of Heralds.

Probably the oldest of knots used in Heraldry is the Wake Knot; this is also used by the Ormonde family and so usually bears both names as the Wake and Ormonde knot. It is not certain whether or not it was the badge of Hereward the Wake but - if so - it becomes the most interesting of these knots. The knot itself is a Carrick Bend (fig. 4), the knot used more than any other in decorative work.

The Bouchier Knot is a Granny Knot and is found in the arms of the Bouchier family. It can be seen on the tomb of one of the family in Westminster Abbey (fig. 5).

It is only by courtesy that the Bowen Knot (fig. 3) and the Lacy Knot (fig. 9) can be called knots. These may have been a form of "rebus" (i.e. a charge or device alluding to some circumstances or event). The Lacy Knot, which derives its name not from a family but from the fact that its members are interlaced, can be seen in a fine sculpture at Whalley Abbey. The Heneage Knot (fig. 8) is interesting in view of the legend or motto which goes with it - "Fast, though untied".

It is a true knot, while the Harrington Knot (fig. 6) should never have been called a knot at all; it is a "frette" or a piece of trellis except that it is interlaced.

The interlaced knot shown in fig. 7 is said to represent a monogram and is found embroidered in the robe of the effigy of Anne of Bohemia which is in Westminster Abbey. The Dacre Knot (fig. 10) is more picturesque. It is formed by a cord or rope entwining and linking the Dacre scallop shell with the famous ragged staff of the Beauchamps and the Nevilles. The knot of Lord Edward Hastings, again by the aid of a cord or rope, combines the Hungerford sickle with the garb of the Pelhams (fig. 11) (a "garb" in Heraldry being a sheaf of wheat).

These are, apparently, all the knots used in English Heraldry. Whether or not other knots are known in the heraldry of France or other parts of the Continent I have been unable to find out. There is, I think, sufficient here in any case to throw light on one other fascinating aspect of my favourite subject - knots.

## **Quotation**

"After trying various modes of securing the canoe in a springless cart for long journeys on rough and hilly roads, I am convinced that the best way is to fasten two ropes across the top of a long cart, and let the boat be on these, which will bear it like springs, and so modify the jolts. That painter is then made fast fore and aft, so as to keep the boat from moving back and forward. All plans for using trusses of straw, etc., fail after a few miles of rolling gravel and coarse ruts."

'A THOUSAND MILES IN THE ROB ROY CANOE'

by J. MacGregor, M.A.

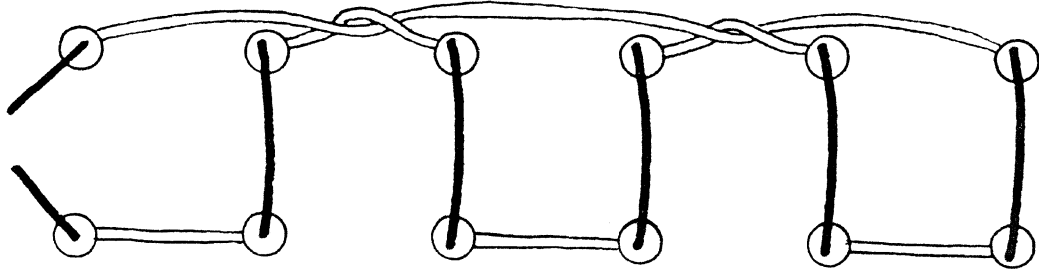
pub. Sampson Low, Marston & Co. (1891)

## **Lacing Boots & Shoes**

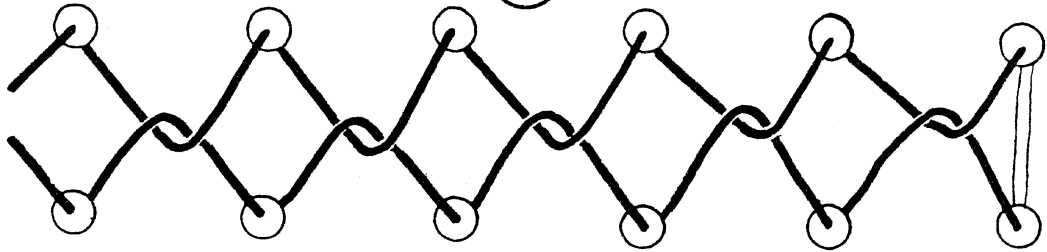
### described by Rob CHISNALL

I wrote this in response to Colin WALLACE's request for information on shoelaces that appeared in 'Knotting Matters issue No. 12, page 15. One of the best source books on knots, 'The Ashley Book of Knots', has a few pages on lacing shoes and tying shoelaces (pages 220, 221, 332). I have enclosed two pages of rough illustrations describing some other methods not covered therein. Figures 1 through 6 depict various methods of lacing shoes. The circles represent eyelets, the black lines represent the visible portion of the shoelaces, while the white lines represent that portion of the shoelace that is concealed.

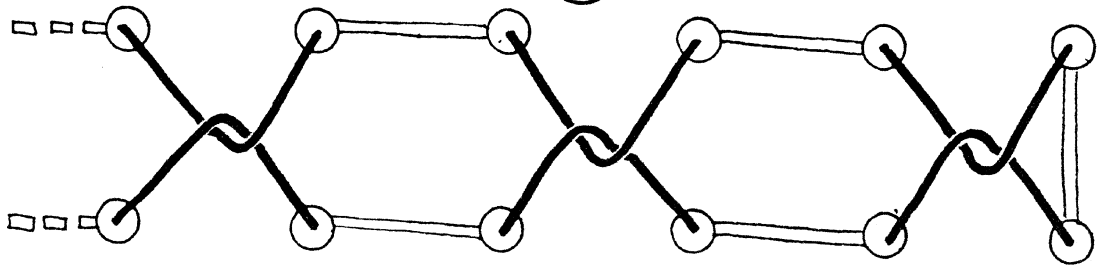
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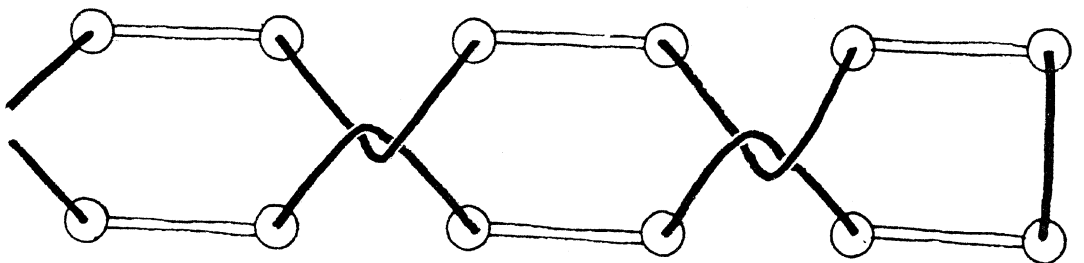


Fig. 1 represents a method of lacing boots worn by people in the Canadian Armed Forces. This may be used in the U.S. and elsewhere. Only horizontal bands of shoelaces are visible between the eyelets and these visible segments are often polished on parade boots for show. This method of lacing also facilitates rapid lacing and tightening and I have seen some athletes use this system on rare occasions.

Fig. 2 illustrates a method I came up with and employ sometimes when rock climbing. This system also facilitates rapid lacing and permits me to tighten my rock shoes sufficiently. Modern climbing shoes, like E.B.s and Fires, are nothing more than glorified running shoes with extremely adherent rubber soles. It is critical that they be snug to the point of discomfort so that the shoe will not roll around the foot when you're standing on tiny holds (one or two millimetres in width). This system may or may not be original. I've never seen it anywhere else.

Fig's 3 and 14 show other lacing techniques that utilize the system depicted in Fig. 2. They can be tightened down quickly and the gaps permit some comfort and freedom of movement. Fig. 14 in particular allows for extra toe movement. This basic system of alternating gaps and crossovers can be applied to the standard lacing technique, as in Fig. 5.

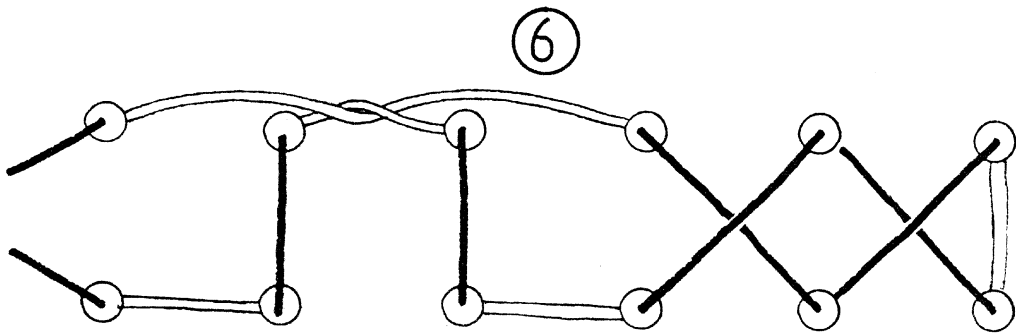
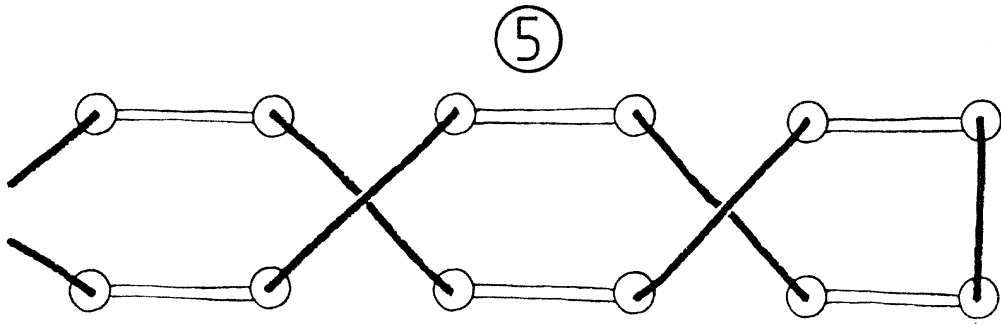
Fig. 6 illustrates a system for lacing jogging shoes and the like. I saw this described in a popular jogging or athletic magazine some years ago, but the actual name and issue escape me. It was suggested that this is a superior method with which athletes should lace their runners because they can leave their toes slightly loose and tighten the upper part of the shoe. Other variants have been offered over the years and I've seen people employ several peculiar combinations to produce a comfortable fit that will not loosen up.

Fig. 7 shows a method of tying laces around the foot and under the sole of rock climbing shoes. Since mainly the toes of the shoes are used and one rarely walks in climbing shoes (because they're so tight), the laces will not necessarily wear out all that quickly under the foot. This system allows one to tighten the body of the shoe around the foot so that it will not roll. This is important in the newer models that fit a little looser, like Fires, Camas, Skywalkers, and so forth.

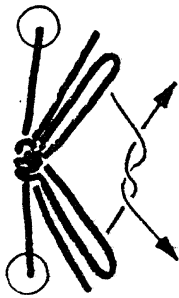
Illustration 8 shows a method of tying laces around or above the ankle on work boots and hiking boots. You have probably seen this many times. Like the previous system, a tighter fit is afforded and any excess shoelace is tied out of the way.

I've seen people use method number 9 to start their bow. This is like a surgeon's or ligature knot and keeps the shoe snug during the tying of the bow knot. I've seen many folk use an extra half knot, as in number 10, to secure their completed bow knot. I prefer to tie only the loops, as in Fig. 11. This is the shoe clerk's knot





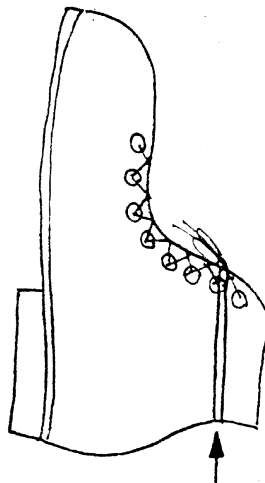
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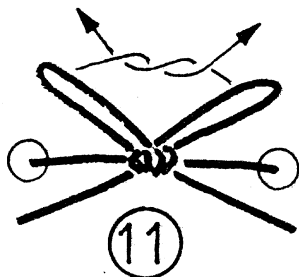
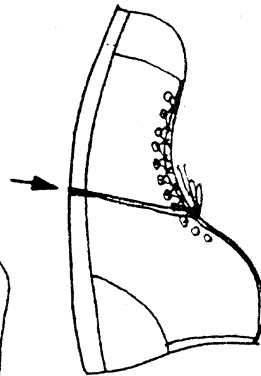
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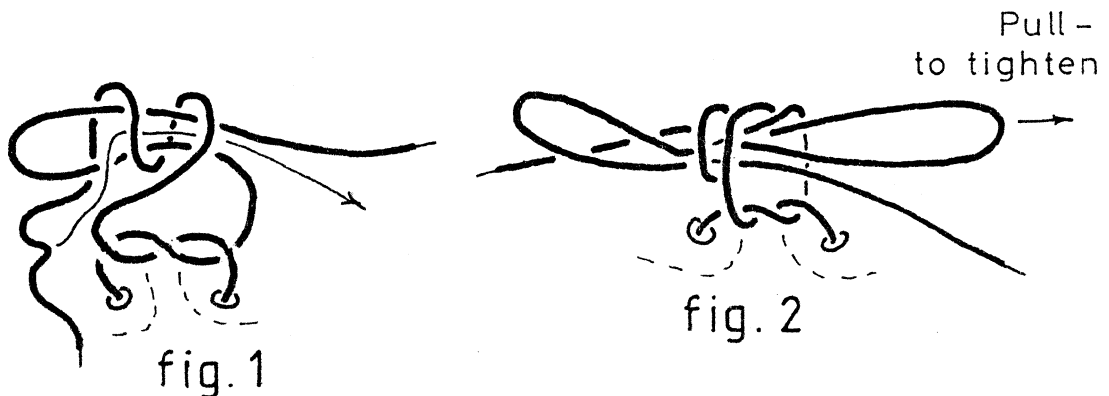
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(Ashley No. 1215). You have probably seen this somewhere before. There is one detail about this knot that I have never seen mentioned in any text or article before. It will come undone, just like the bow knot, if you pull on one of the ends! It is secure but a convenient tying method and I use it when I go climbing or running. That's all I have for now.

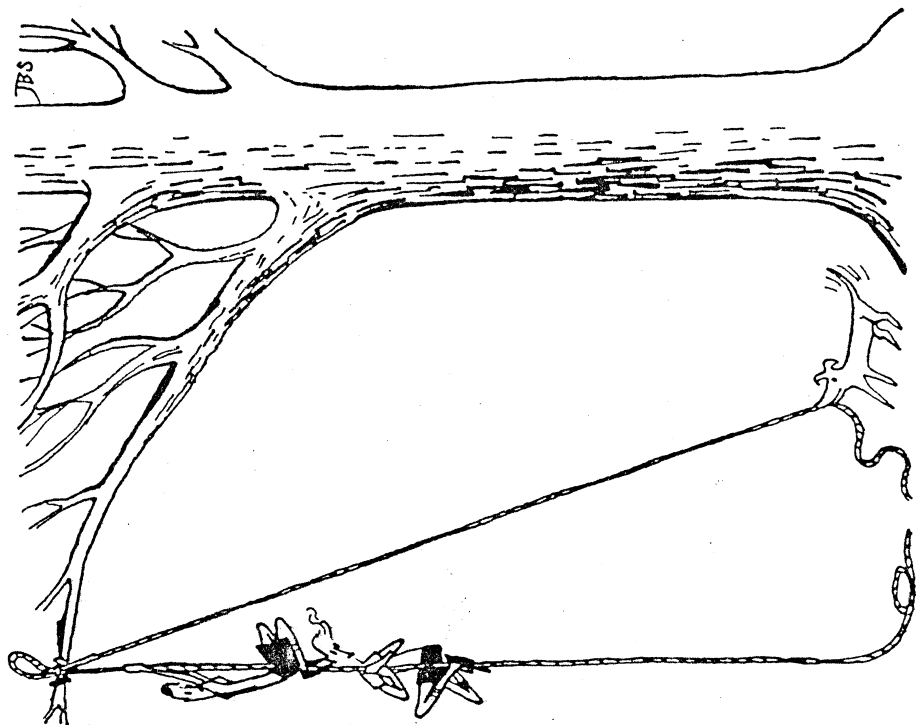
## **A Double Bow**

by Pasco W. RAY



Start (fig. 1) as if making a REEF bow, but take an extra turn around the loop held in one hand. Then put the bight of the second loop formed through both turns; pull right through and then draw tight the resulting double bow (fig. 2).

**Cartoon**  
from the 'Scouter'  
(Feb., 1954)



## ***I.G.K.T. Video Archives***

In the near future video may prove to be THE medium for making sense of knots and ropeworking. Already there are more video shops in town than public libraries.

The Guild is lucky to have as its adviser Howard DENYER, who is a professional in this field working at a well-known T.V. studio, and he is conserving our small accumulation of 625 VHS tapes:-

- (1) 'KNOTS & CRIME' an (extended) Thames News item - duration 03.34 minutes;
- (2) 'IN THE MAKING - ROPE' a B.B.C. documentary - duration 19.44 minutes
- (3) 'KNOTS & CRIME' a Met. Police introduction to knots in forensic investigation - duration 19.45 minutes
- (4) 'KNOTS' elementary topological knot theory for Open University students - duration 24.27 minutes

(We also have from the San Francisco Sailors' Union of the Pacific a knot video of theirs - kindly sent by local Guild member Tommy ZEE - which, unfortunately, is not compatible with U.K. equipment. We're working on a conversion.)

Anyone with further video tapes to do with knotting, who is prepared to lend them for us to copy, should contact our 'Video Archivist' Howard DENYER at 23, Oakfields, Guildford, Surrey GU3 3AS, England.

Any member wishing to borrow a tape, please write to Howard stating your requirements (enclosing 50p for packing and postage) (U.K. rate only) so that he can send it to you.

## ***Canal Craft***

There is not much data published about traditional rope-work linked with Britain's Inland Waterways; yet the information is no doubt still around waiting to be collated, and it's time the Guild made a move to preserve the facts.

Our specialist is Penny BODGER, who is a biologist with an abiding interest in canals and things, and she would be pleased to hear from anyone with a fragment to add to the story. Pictures are especially sought.

Write to Mrs. Penny BODGER at 33, Main Street, Osgathorpe, Loughborough, Leics. LE12 9TA.

## ***Knot so Clever " And whose knitting is this?"***

These words were spoken by H.R.H. Prince Philip, Duke of Edinburgh - according to a British Sunday newspaper which appeared on Sunday, 10 Dec 85 - when he encountered a dinghy tied up inexpertly by a friend determined to do a secure job.

# ***Surgical Threads***

by David A CROSSLEY

B Vet Med M P C V S

This article is intended to give an outline of the suture and ligature materials used in modern surgery. It is based largely on the

author's personal experience and information supplied by Ethicon Limited\*, suture manufacturers. I.G.K.T. member David CROSSLEY is a practicing, British, small animal veterinary surgeon.

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(Note - A suture is a surgeon's name for a stitch. A ligature is a constricting tie, e.g. around an artery, to prevent bleeding. A micron is one thousandth of a millimeter.)

- - - oOo - - -

Of the many thousands of different fibres known, only a very small number come near to satisfying the needs of modern surgeons. Different tissues have different properties so there is a need for a wide range of suture and ligature materials. The different materials used vary in the way they handle, requiring modification of knot technique. The two knots most frequently used are the reef knot and the surgeon's knot but they are rarely reliable with modern materials so an additional throw or two are placed on top of the basic knot. These knots are easily tied using aseptic (i.e. surgically sterilised) technique as described by Ashley (No's 463, 463). This ease and speed of tying is the main reason that other knots are not used. Even incorrectly tied knots rarely slip provided the suture is correctly placed.

Another important factor in the choice of knot is its size. The greater the amount of "foreign" material left in the body, the greater the risk of complications. If a sufficient length is available, some vessels can be ligated by tying a knot in themselves rather than the more usual method of tying a thread around them.

An ideal suture material would be totally inert in living tissues, as strong as the tissue in which it was to be used, easy to handle and knot, of consistent strength and diameter, sterile, attached to needles ready to use, and cost very little.

Suture materials are divided into two main types according to what happens to them within the body. Absorbable materials are used where the tissues only need temporary support. The sutures are gradually absorbed and eventually no trace is left. Non-absorbable sutures remain in the body unaffected by the tissues. They are frequently used in the skin, where they will be removed once healing is under way, and also within tissues where prolonged support is required.

\* The author would like to thank Ethicon Limited, Bankhead Avenue, Edinburgh, for their help in preparing this article and for permission to reproduce sections from their catalogue.

## Non-absorbable sutures

### Linen

Fine twisted flax thread, usually undyed. Stronger when wet than dry. Causes a slight tissue reaction. Knots well. Linen is eventually absorbed into tissues over 1-2 years. Good feel similar to sewing cotton.

### Silk

Extremely fine twisted thread, fine braided thread, dyed or undyed. Causes a tissue reaction. Knots well. Treated to improve handling and reduce tissue reaction.

### Polypropylene

Available as extremely fine-up-to-thick coloured mono-filament thread. Practically no tissue reaction. Rather springy but knots well. Surgeon's or reef knot with extra throw added. Extremely smooth surface. Has a good feel.

### Polyester

A wide range of thicknesses of coloured braided thread with or without a waxlike coating to reduce the already minimal tissue reaction and improve handling. Surgeon's knot + 1.

### Polyamide (Nylon)

A vast range of thicknesses, coloured, monofilament and braided threads and tapes are available in different grades of polyamide.

Monofilament - Very springy, little tissue reaction, knotting requires care + 2 extra throws in many cases.

The finest micro-surgery materials are produced from monofilament polyamide as thin as 14 microns with needles 3mm long and 30 microns diameter attached. Operating microscopes are needed to use these.

Braided - Handles much better. Coated to reduce tissue reaction. Knots need an extra throw.

Tapes - Extremely strong (25-50kg), not much used in human surgery.

### Stainless Steel

A wide range of sizes both braided and monofilament wire are available. Very little tissue reaction. Monofilament kinks easily, so care needed with knots. Braided easier to handle. Strong but tendency to cut through soft tissues. Unpleasant feel but widely used by some surgeons.

Special monofilament 'twisting' wire used in orthopaedic surgery.

### Carbon Fibre

Carbon fibre has a high tensile strength but like glass fibre is also rather brittle making it unsuitable as a suture material, but it has been found to promote healing in fibrous tissues. The fibres are now being used to aid healing in tendons and ligaments.

## Traditional Absorbable Sutures

### Catgut

Twisted strips of material produced from animal intestine with a monofilament appearance. Produced in a wide range of sizes. Treated in various ways to reduce rate of absorption. Loss of strength within days. Tissue reaction can be severe. Handles well and knots hold well but extra throw advisable in some locations.

### Collagen

Purified and reconstituted animal collagen protein. Monofilament suture similar to catgut but with little tissue reaction.

## Synthetic Absorbable Sutures

Until the production of the new synthetic absorbable sutures, it was often necessary to use non-absorbable sutures internally as the available absorbable sutures were not strong enough, or lost their strength too soon. Polymerisation techniques have now been used to produce absorbable fibres which have minimal effects within tissues and retain their strength for a predetermined length of time.

### Polyglycolic Acid ("Dexon Plus" Davies + Geck)

Green or undyed braided thread produced in a wide range of sizes. Produces a slight tissue reaction. Handles well but has a rough surface, Coated to improve properties. Care needed with knotting as quite springy. Surgeon's knot + 1 or 2 extra throws. Strength halves in about 21 days. Absorption is quoted as 60-90 days but often takes much longer.

### Polyglactin 910 ("Vicryl" Ethicon)

Produced in a wide range of sizes of either violet or undyed braided thread with a waxlike coating. Minimal tissue reaction. Has a good feel but care needed with knotting. Reef or surgeon's knot + 1 or 2 throws. Strength halves in just over 1~ days and absorption takes 60-90 days.

### Polydioxanone ("PDS" Ethicon)

A good range of sizes of clear or violet monofilament thread which produce practically no tissue reaction. Handles rather like polypropylene with a slight tendency to kink and weaken suture. Knotting easier than braided absorbables but extra throws still required. Retains half its strength for about four weeks with absorption taking about six months.

## Tests used on Suture Materials

The European Pharmacopea specifies the standards required of sterile suture materials, and the methods to be used in testing them. The labelling of all materials should, of course, be accurate so the sterility, length and diameter of materials are three of the tests. Another test is for breaking load, which, within a batch of samples, must not fall below the set standard. In practice, products from many manufacturers greatly exceed the standard required. For example, 2,0 gauge Ethicon monofilament polyamide suture has a process average of 1.48kg, with a minimum of 0.96kg., both values being more than twice the minimum values permitted.

The breaking load is determined on five separate strands knotted with a "simple knot" (overhand knot, Ashley No. 46, not 4). The results are averaged and this and the lowest value obtained must be above the relevant values in the standard table.

Minimum breaking load, test description  
(taken from the European Pharmacopea)

"Determine the breaking load using a suitable tensilemeter. The apparatus has two clamps for holding the strand, one of which is mobile . . . . . The clamps should be designed so that the strand being tested can be attached without any possibility of slipping. At the beginning of the test the length of strand between the clamps is 12.5 to 20 cm and the knot is midway between the clamps. Set the mobile clamp in motion and note the force required to break the strand. If the strand breaks in the clamp or within 1cm of it, the result is discarded and the test repeated . . . . . "

Minimum Breaking Loads  
For Non-absorbable Sutures

Minimum breaking load, simple knot, (kg)

Metric Gauge	Diameter mm		Linen Thread	Monofilament Polyamide	Braided Polyamide	Braided Silk
0.3	0.030 - 0.039	-	-	0.04	0.04	-
0.5	0.050 - 0.069	-	-	0.08	0.08	0.05
1.0	0.100 - 0.149	-	-	0.14	0.20	0.20
2.0	0.200 - 0.249	0.80	0.80	0.60	0.65	0.70
4.0	0.400 - 0.499	2.20	2.20	2.00	2.20	2.30
6.0	0.600 - 0.699	4.50	4.50	3.50	4.50	4.00
8.0	0.800 - 0.899	6.80	6.80	-	7.00	6.50

(Simplified table taken from Ethicon Ltd. Catalogue 1984)

At least 80% of strands tested have breaking loads greater than the figures quoted above. None have breaking loads less than a second value which has been excluded from the above table to simplify it.

# Yarn's super Spin-off

AMERICAN scientists have developed a new fibre which is 10 times stronger than steel, but is light enough to float. The breakthrough product, developed by Allied Corporation of New Jersey, may eventually be used for artificial limbs, oil rigs and bulletproof vests.

The Spectra 900, the strongest fibre for its weight ever produced, is made from high molecular-weight polyethylene, which is dissolved in a solvent. Where normal fibres fold on themselves like wet spaghetti, Spectra 900 retains its rigid strength through gel spinning, the key proprietary process that allows the fibre to be both light and strong. When the dissolved gel fibre has some or all of the solvent removed, depending on the final use, it consists of highly extended parallel polymer chains immensely strong yet with the density of balsa.

Already, Spectra 900 is being used in high-performance sails and marine ropes. It has industrial uses in conveyor belts, hoses, communication and power cable reinforcement, and webbing. It can be combined with graphite for golf clubs and tennis rackets and with fibre-glass for fishing rods.

Besides bulletproof vests, it can also be used in rocket casings, pressure vessels and helmets in what the company expects to be a \$220m business over the next five years. Allied expects to capture two-thirds of the superfibre market.

Frank Lipsius

# **Long Turk's Heads ●● ●● ●● ●●**

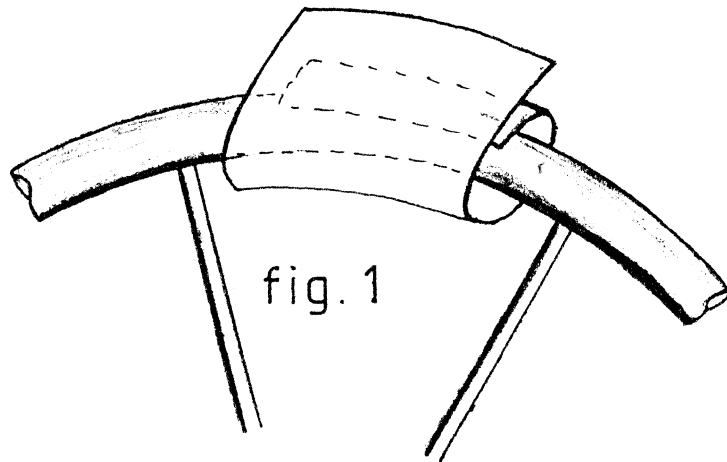
## **2- "Origami" Method**

by Capt. C. Allan McDOWALL

In my first article we used a "series" which I called "The Magic Number Method" to solve the 4-bight Turk's Head of any length. It was not really magic but the title makes the method memorable. Similarly here, "The Origami Method" is not truly concerned with origami; but it uses paper, strong white paper, so the name should help you remember it. For that is what fancywork is about . . . memory. You need a little (very little) intelligence and some dexterity but, above all, you must be able to recall how the thing is done!

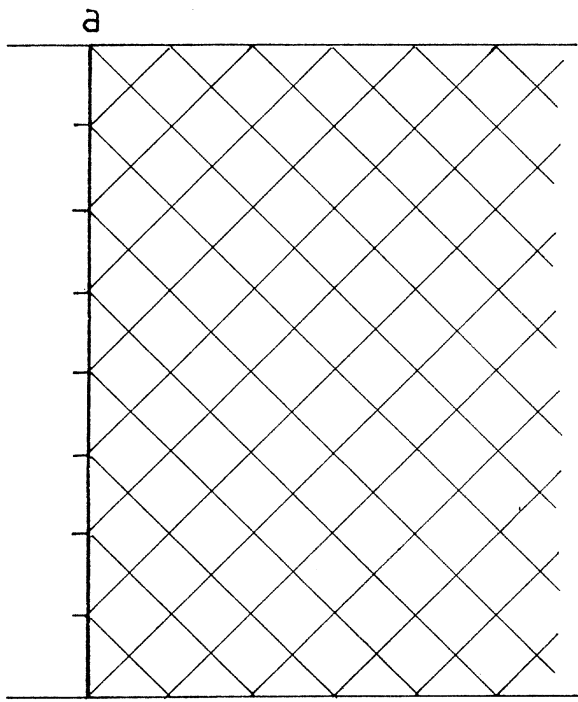
As a first demonstration you can easily make an 8-bight Turk's Head of 9 parts, as distinct from the 4B x 9P knot you made last time.

1. Wrap a sheet of stout paper loosely around the object to be covered, leaving about 1/4" slack, and mark the circumference on the paper (fig. 1).

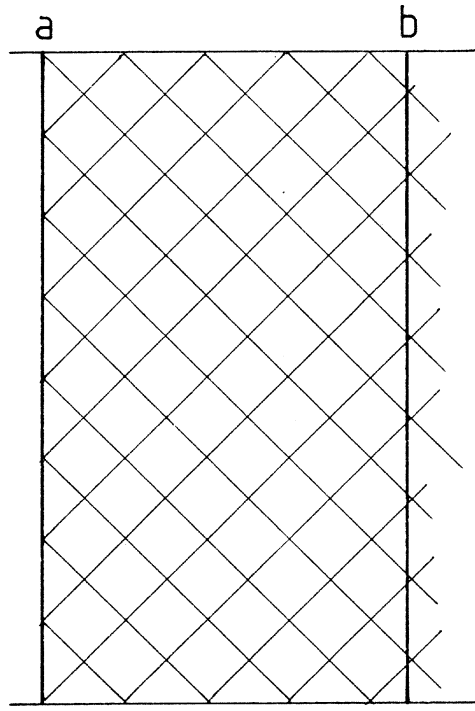


2. Lay the paper on a flat surface and (fig. 2) divide one side into a number of equal spaces, in this instance (line 'a'-'a') the number of bights(8) you have chosen. From each dividing mark lightly draw straight pencilled lines going off at 45 degrees in each direction. Use a soft-ish pencil so that erasing mistakes is easy. Any ruler or other straight edge will do; and, unless you have the use of parallel rules or drawing board instruments, a sheet of graph paper visible beneath your actual drawing paper will help you produce a quick and accurate pattern.
3. From the lefthand margin, count 9 parts and draw a line (fig. 3, 'b'-'b') which is parallel to line 'a'-'a' and passes through intersections of the 45 deg. lines at all points. Erase the excess pencil lines to the right of





a  
a fig. 2



a b  
a fig. 3 b

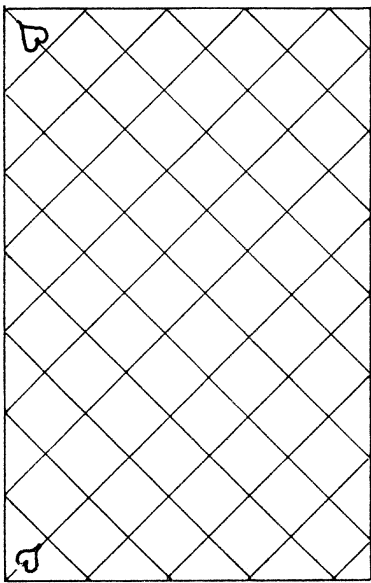


fig. 4

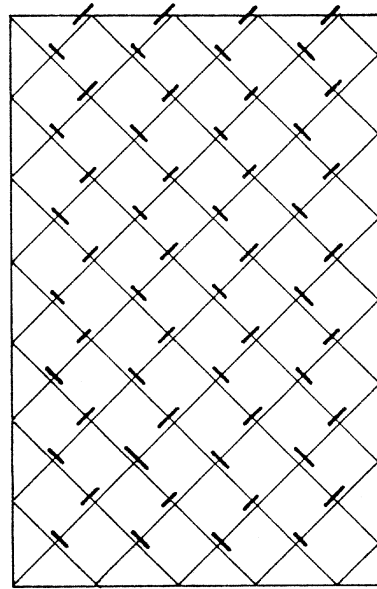


fig. 5

this righthand line to avoid confusion later.

4. Starting at one end of the diagram (fig. 4, bottom left-hand corner), lightly trace your way around the layout until you reach an end. In this example you should cover all the lines in one non-stop journey (arriving at the top lefthand corner). If not, you have gone wrong. Check stages 2, 3 and 4.

(Some knot patterns can only be fully traced over in two separate operations, using different coloured pencils. They produce, when tied, TWO intertwined Turk's Heads and we shall do this deliberately in the next article.)

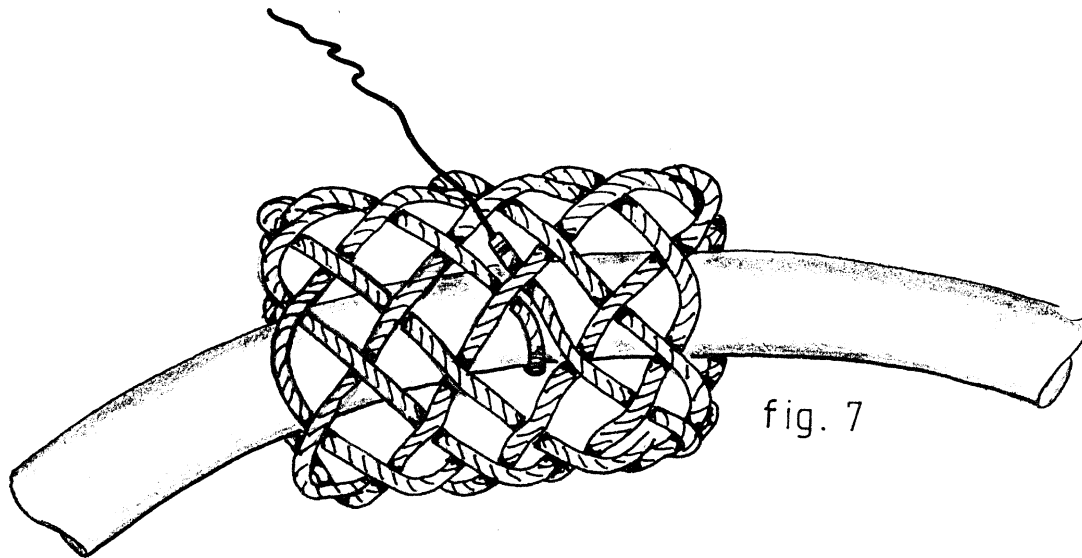
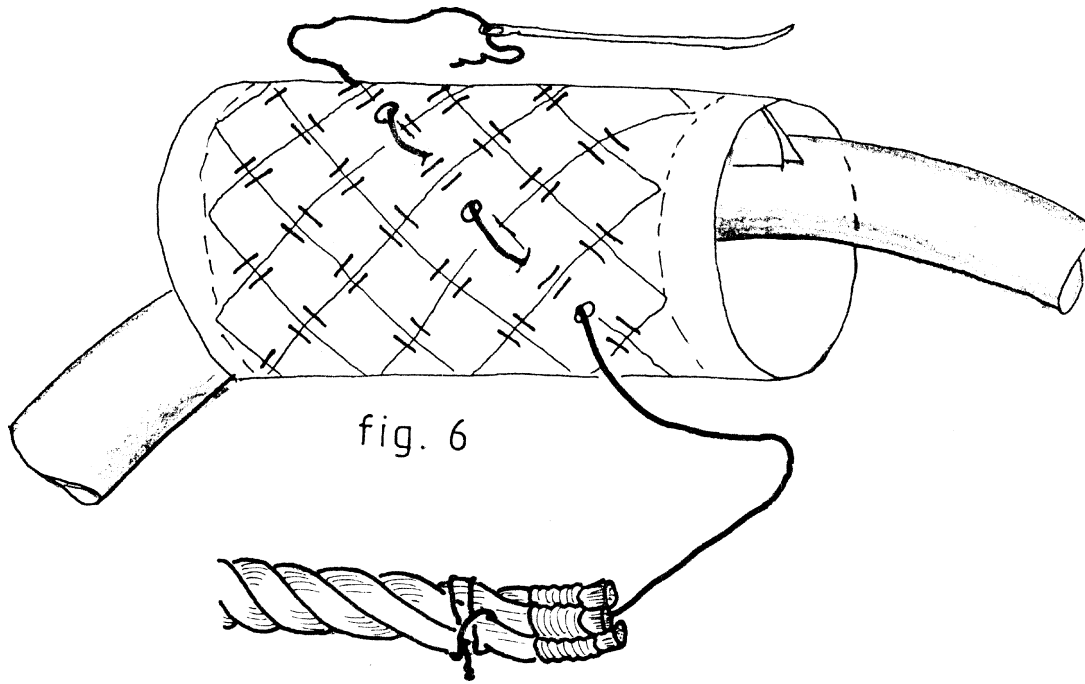
5. Decide whether you want a righthanded or lefthanded knot. When the covering knot, like this one, has an odd number of parts then simply turn the knot pattern around because each end is the opposite hand. Mark each crossing point (fig. 5) how the cord will pass OVER the intersecting strand. I generally use two lines - like a bridge on a map - but for simplicity in the newsletter's small-scale diagram - only one short mark is shown.
6. Transfer the paper pattern to the object which is to be covered, wrapping it around and lining up the ends to form a continuous knotted layout, glueing it in place.
7. Using a darning needle and strong thread (or, better - because they are easier to work with - try a sailmaker's needle and twine) follow around the pencilled lines of the prepared knot pattern, stitching under all the "bridges" (fig. 6) until you arrive back where you started.

(Handy tip:- Blunt the needle's point and you will avoid irritating snags in the twine at crossing points...as well as safeguarding your fingers!)

8. Attach the standing end of your twine or thread to the working end of the cord or rope which will make the actual Turk's Head knot. Insert the cord so as to duplicate the twine knotted layout, removing the displaced twine as you go. Tear off the paper diagram (which ends up in small bits, so PHOTOCOPY it if you need to tie more than one knot.) (fig. 7).
9. Cut off the twine from the cord and follow the knot around twice for a traditional 3-plait effect.

This method can be used to make any knot but it is best for Turk's Heads and mats. Make sure at the outset that your twine and cordage is long enough to complete tying the desired knot in its SLACK state.

THE NEXT ARTICLE will show you how to make a two-coloured, interlocking knot of two intertwined Turk's Heads. Then, in article No. 4, you can use the method to solve (from first principles . . . not by slavishly following a book) the Crucifix Turk's Head. After that, we will explore the designing of mats, letting our imaginations really soar!



## **Quotation**

"With a bit of string and a modicum of topological ingenuity it was possible to convert my long-sleeved sweater into an impromptu rucksack

"OSSIAN'S RIDE" by Fred Hoyle, pub. Heinemann (1959)

## ***Lore & Ordure*** from Cy CANUTE.

Knots were once - long ago - seen as symbolic of one thing or another. Primitive and ancient cultures (who believed, remember, that the universe was alive, able to feel and think) are rich in such superstitions.

Magic knots were used to gain power, which could be for good or evil, over other folk . . . or wind and rain, sickness or disease. The Romans thought wounds bound with a Hercules (reef') knot healed quicker. Lovers' knots, amulets, etc., bound the wearers by more than just the cord. The three knots on the waist-tie worn by monks and nuns today represent their vows of poverty, chastity and obedience. They are thus bound to their vocation, held to their celibacy.

Iranians have a sacred waistcord, too, which - knotted 3 times, represents good thoughts, words and actions (Was Baden-Powell, I wonder, ever in Persia?); while the Hindu version depicts many acts of devotion performed. The Buddhist 'Mystic Knot of Vishnu' represents the continuity of life, infinity, immortality, never-ending wisdom and awareness.

To the ancients cordage was often a metaphor for life, which was broken at death. The universe was supposed to hang on the Golden Cord of Zeus, the rope upon which all depended. Plato spoke of " . . . the sacred cord of reason" (and, incidentally, proposed the death penalty for knot sorcerors!).

All races and faiths had gods who were depicted holding nets or nooses, chains or fetters, halters or manacles, to ensnare and bind the unworthy or simply unwary human. Whether Buddhist or Teuton, Hebrew or Hindu, Jap or Slav or Scandinavian, there was a mythology in which bonds symbolised submission, slavery, imprisonment. It follows that the regalia and insignia adopted in both civil and military life in modern times all, actually, symbolically bind the wearers to their roles and duties.

Whips and lashes were carried by those who ruled, governed, dominated or punished others. Such paraphernalia was also perceived as enhancing masculine virility and (oddly) feminine fertility . . . hence, I suppose, all those saucy magazines, Freudian psychiatry and advert's in newsagents' shop-windows! Not only did young Roman chaps dash about starkers at the Lupercalia whipping young women who chanced along, they also did it to poor old fruit and nut trees (fruit and nut cases for Freud themselves, I say).

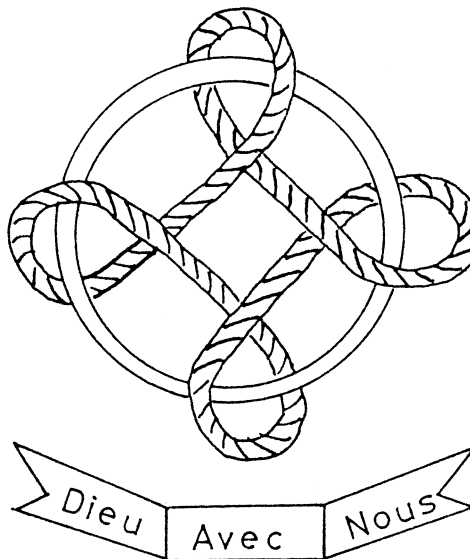
Spinning and weaving were, naturally, abundant sources of symbolism. The Primordial Weaver, the Great Weaver, creator of the universe, wove the loom of life and the fate of all; he was the Cosmic Spider whose umbilical thread attached humanity to its divinity and its destiny. The Chinese saw the alternations of the "yin" and the "yang" as the to-and-fro of the shuttle on the cosmic loom. A relatively recent commentator (judge by the gobbledegook) stated; "Night and Day are two sisters weaving the web of Time, the spatio-temporal fabric of cosmological creation".

Many - like me - will find such mystical intuition hard to stomach; but people closer to their origins than we now are thought it made obvious sense at the time.

## Letters

Dear Geoffrey,

This lunchtime I spent a few minutes in an intriguingly named country pub... ..the 'Berkeley Knot'. It lies on the Evesham-to-Worcester Road (A.Lt08LI.), near to the Northern edge of what used to be the Berkeley family estate. Their lands stretched from Berkeley Castle over 30 miles away in Gloucestershire where King Henry II was murdered. Also, there is still the Gloucester and Berkeley ship canal which makes a healthy profit for British Waterways and the Berkeley Nuclear power station.

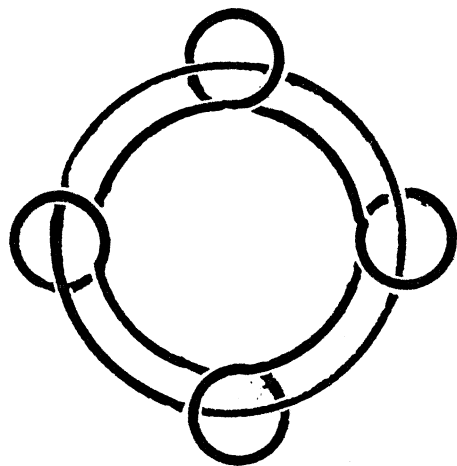


I attach a sketch of the sign-board. Sketching is NOT my strong point; but, if I've got it right, it would appear to be simply three(?) round turns. It was probably laid out this way to give it the central over/under regular pattern.

I imagine that the name of the pub comes from the Berkeley family motto "Dieu Avec Nous" (God With Us); which, if your French is as rough as mine, seems a very good pun (God With Noose!) . . . perhaps we should adopt it for the I.G.K.T. (Ho, ho!).

Kind regards,  
Rob JACKSON

Birmingham  
1 Oct 83



CROYDON  
COLLEGE

Dear Robert,

You may be further intrigued to know I recently spotted this badge on a plastic carrier bag in Wellesley Road (named after the dear old Duke of Wellington), Croydon, in South London.

As well as being able to portray heraldic "knots" which could never really be tied, another of their attractions is here demonstrated; they can be rearranged, in this instance so as to emphasize the wholly circular nature of the device.

Geoffrey BUDWORTH

LETTERS (continued)

Dear Geoffrey,

I was glad to hear the news of the current plans for the Knotting Extravaganza. I've just sent Frank Harris my list of knotting preferences, and will be awaiting my assignment with interest.

The idea of having the knots tied in advance by any interested members, regardless of location, is, I think, a very good one, providing a most satisfying opportunity for all of us overseas to have a sense of participation in this unique event. I'm looking forward to it with enthusiasm.

I've just had a very nice and lengthy letter from Stuart Grainger, together with photographs of his work and a copy of the publication on the single-strand star knot. He mentions that he is interested in the possibilities of using computer graphics as a mechanism for producing instructional videotapes on knotting, and, since I'm heavily involved in one aspect of the microcomputer area, I may be able to pass along some suggestions or references.

It will be interesting to see what happens to Dan Lehman's suggestion for the development of some greater communication among North American members. I'm planning to drop him a line and see what might be developing. Perhaps I can assist in some way.

Sincerely,  
Eric DAHLIN

Santa Barbara,  
California  
12 Jan 86

Dear Mr. Budworth,

Thank you for your letter about knots. Unfortunately they are not kept here. They are all with Mr. Stan Seaman who shows them to the public once a year at my Buckler's Hard Village Festival, when we turn back the clocks to the 18th Century.

Next year's festival will be held on July 20th. starting at 10 a.m. to 6 p.m. If a group of your members plans to attend, please arrange it by 'phone (Buckler's Hard (0590 63) 203); or write to me at Montagu Ventures Ltd., Buckler's Hard, Beaulieu, Brockenhurst, Hampshire SOLI~ 7XB. The village and maritime museum are just part of a unique combination of attractions including a riverside walk, cruises afloat and display cottages. It's worth a visit anytime.

Yours sincerely,  
Eric WALTERS, Manager

Dec 9, 85

Dear Geoffrey,

After reading in Issue No. 8 Brion Toss' comments regarding the "No Name Knot" (page 17), I was inclined to agree with him as to it's use in tying down aircraft. I finally managed to contact the gentleman who showed me the knot. He explained that the line was first attached to the wing, using the "Innominknot" (I prefer your name for it), then led to a stake where it was attached with a hitch allowing it to be tensioned. In the dark, the line could be quickly released at

LETTERS (continued)

the wing. Although I served 27 months in the S.W.P.A. as a medical officer in a field combat unit, I never saw the knot used.

Recalling my internship days (daze?), I devised a suture tying contest requiring hand-tying knots in the bottom of a tall, narrow, tin can. A second contest involved instrument ties through a simulated bronchoscope and simulated tracheae and bronchii. Having practised with my contraption, I was ruled out of the rather intense competition among my fellow internes. The device was borrowed for succeeding interne parties, and even appeared at a staff meeting.

(Subsequent developments in anaesthesia, endoscopic instruments, laser and other modalities, have lessened the need for some skills.)

Yours truly,

L.F. OSBORNE, . M.D.

Vashon, Washington,

U.S.A.

22 Jan 86

## ***S.O.S. (Second Opinion Sought)***

Two Dutch medical men (and Guild members) question whether surgeons are as clever as they could be at surgical knotting. Writing and lecturing, Dr. J.M. Trimbos, M.D. and Mr. Pek van Andel seek to encourage a new look at what might be the best knots for modern suture materials.

It would - perhaps - be impertinent for any layman or woman to tell surgeons to change their ways; but we can muse about the sort of knots which could prove handy for them. Surgeons' knots should be easily tied, non-slip and small (not bulky). Strength is not generally very important. David Crossley (whose article 'Surgical Threads' appears in this issue) suggests that likely knots should be twirled in a washing machine for 15 minutes. They'll get wet, warm and tugged about . . . much as they would in living tissue. Only those surviving the treatment merit further study.

Pek van Andel seeks in particular knots suitable for use in fine, slippery (polyethylene) suture material with an oval or ribbon-like cross-section.

I.G.K.T. members qualified to make suggestions should contact David Crossley, B.Vet.Med., M.R.V.S., at 1, Henley Drive, Timperley, Altrincham, Cheshire WA15 6RY, who is in touch with the Dutch medicos.

## ***Quotation***

"Turn him to any cause of policy,

The Gordian Knot of it he will unloose . . ."

Shakespeare: Henry V, Act i, scene 1, line 43