Introduction

Celtic knots are complete loops without any beginning or end, this unending style is called pure knots. The knots vary from simple to complicated ones. The use of only one thread highlights the Celts' belief in the interconnectedness of life and eternity. They strongly believe in the symbolism reflected in Celtic knot works from the old Celtic myths and legends.

In earlier times, the elaborate designs were mainly used for decorative purposes. However, overtime, people began to come up with their own interpretations, and began to understand the designs at a deeper level. They saw the constant interlacing as the physical and the spiritual crossing of paths, expressing permanence, and the endurance of life, love and faith.

History

origins of Celtic knotworks

The Celtic knots were the creation of Celts in the early Celtic Church who resided mainly in Ireland. Around AD 450, Christian Celtic artwork was influenced by pagan Celtic sources which incorporated an additional knotwork category of life form motifs. The Celtic knots then spread to the Scottish Highlands and Europe via missionary expeditions. This traditional culture of knotworks in manuscript painting was passed down orally with non-existent written records.

Many groups of people began to embrace the Celtic art form. These groups included the Irish, Picts, the Scots of Dal Riada and the Northumbrians. Celtic knotwork then underwent some form of

adaptation and assimilation with other cultures. An example of this would be the Anglo-Saxons, Welsh and other religious communities who created the "Hiberno-Saxon" tradition, which incorporated Saxon and Pictish abstract beast forms into the early Celtic knotwork. The early Irish works were consistent in the concept of unending loops, while Germanic and Roman adaptations had loose ends in some occasions. Celtic knotworks became the style of that time.

This Celtic golden age of the 7th to 10th centuries began its decline after the Normans' invasion. In the more Gaelic areas, the Celtic tradition continued, as these Gaelic aristocrats continued to patronise Celtic decorated ornaments. The Celtic culture was looked back as the glory of the ancestors of these people, with the knotwork becoming to an extent the symbol of political and cultural identity.

Why was it created and which group of people used it

Celtic knotworks were created for secular and religious purposes. It was meant for decorative aims to ornate Bible manuscripts and monuments like Celtic crosses and jewellery. The early Celts began this legacy of knotworks that consisted of animals and spirals, drawn with such detail that they became known as the "work of angels". Each knot meant a virtue like strength or love.

Celtic book like the book of Durrow illustrates the early Irish style where ribbons are coloured in a certain way. The book of Kells is renowned as an indispensable source of classic Celtic knots and ornaments, decorating the four Gospels. These books show many variations of Celtic knot works such as interlacing, spiral patterns, key patterns, ropework and plaiting, which are geometric patterns.

Meanings of knotwork

Researchers have been trying to discover the secret of knotwork patterns, to find out if there is any particular significance behind each intricate design. In actual fact, the Celts did not assign special ideas or concepts to the patterns but used them mainly as decorations on sculptures and jewellery or to fill up empty spaces in illuminated manuscripts.

However, the interlaced patterns reflected the belief of the Celts in the interconnectedness and continuity of life. Over time, modern meanings have been attached to certain designs but these are based mainly on personal interpretation and may vary between countries and between individuals.

General patterns

Knotwork Interlace- The pattern shows the interconnection of life and mankind's place within the universe. For instance, the Trinity knot represents the Holy Trinity or the Triple Gods/Goddesses of the ancient Celts; and the Lover's Knot represents the concept of two become one (resembles intertwined infinity symbols).


Spirals- Spirals shows the accomplishment of an individual to balance his inner and outer self and reflects on his personal spirit. The pattern also symbolizes the Cosmos, Heavens and Water (waves). An example is the Triskel, the pattern is believed to stand for the Holy Trinity or the

Triple Gods/Goddesses of the ancient Celts which is similar to the Trinity Knot (above).

Maze and Step Patterns- It represents the learning process and experiences of an individual as he goes on his journey through life.

Geometric motifs
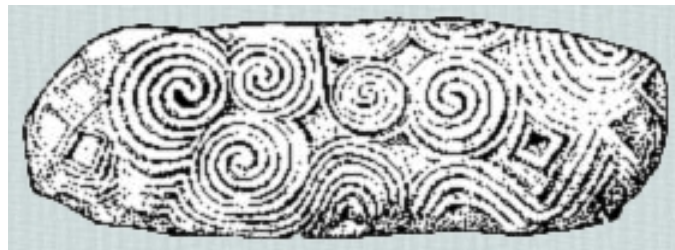
Celtic artwork has always been famous for its geometric motifs. Some of these outstanding works date back to 3000 BC and can still be found on stone carvings today.

The picture shows a single clockwise spiral. This design has the oldest history and is the most recorded of the motifs. In some culture, the single spiral may symbolize growth, expansion and even cosmic energy. For instance, the ancient inhabitants of Ireland used the spiral to represent the sun and a tightly wound, clockwise spiral to signify their shrinking winter sun.

This loosely wound anti-clockwise spiral is a symbol of the large summer sun.

The dual centered spiral is also frequently used in stone carvings. It has associations with motifs from other cultures such as the Yin Yang symbol. It signifies the duality of nature and balance.
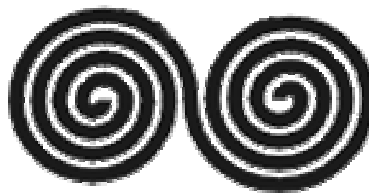
A double spiral is used to represent the equinoxes, the period of the year when the length of the day and night are the same and they occupy twelve hours each of the entire day.
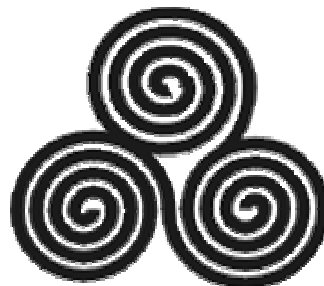
The Christian monks in earlier times used this Triple centered spiral in their illuminated manuscripts. The design originated as a symbol of the Triple Goddess, pre-dating Christianity.
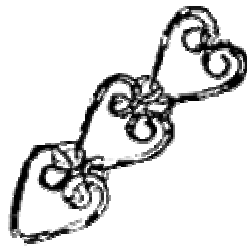
This pattern is known as Chevrons. It resembles the arrowheads used by hunters and warriors and was a symbol of power among the Celts. The motif looks almost heart shaped and occurs in repeated patterns in ornaments.

Flowing scroll patterns were mainly used for decorative purposes. Many examples of such patterns can be found in the Book of Durrow, an illuminated manuscript.

Known as the Ulbster Cross, the design is an illustration of knotwork interlace pattern. A single thread is used to finish the entire design and it symbolizes eternity.

Knots

The Eternity Celtic knot symbolizes the never-ending eternal circle of life.

This Shield Celtic knot has protective significances. Found on shields of warriors, children's clothes, the ancient Celts also believed that the knotwork can protect the sick.

The Triquetra Knot is also known as the Trinity Knot. It is used by the Christians to stand for the Father, Son & Holy Spirit. However, this information may not be entirely accurate because the Catholics of Ireland were the first to use the design to as a symbol in reference to the Trinity.

It is believed that Celts use this Celtic Cross as a symbol of faith.
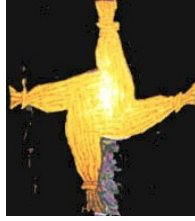
This is known as Brigit's Cross. These Irish crosses are made with wheat weavings and can be found all over the Irish countryside.

According to Irish legends, there was a heroic warrior named Fionn who had courage, intelligence and strength. This Celtic knot has been linked with some articles that are reputed to have belonged to him.

The Irish Shamrock is the traditional symbol of the Trinity.

This knotwork shows 8 hearts bounded by a Celtic circle. On looking closely, one will find the rune of love "X" hidden within the design. The Celtic Love Knot is believed to be able to enliven relationships, heighten passions and to attract true love.

A sacred symbol of the Celts, The Triscele represents the eternal rhythm of life that mankind are a part of. This ancient symbol represents the trinity of life and was adorned at their most sacred. The main significance of it was that it symbolizes the Goddess in all her forms ~ Maiden, Mother and Crone.

This amulet design symbolizes peace. Ancient Celts wear it, hoping to attain peace in oneself and in relationships with others.

The Sailor's knot is also known as the lover's knot. The design is made up of two separate knots which are intertwined. It is a trend among Celtic sailors to use this knot in their artwork intended for their sweethearts.

More knots

 Warrior spirit   Shield of Destiny

Love Knot

Inner Strength

Eternity of Nature

Wisdom

Strength

Sexuality

Relationships

Luck

Love

Artistic

Mathematical observations

There are many types of knotwork in various religions or groups. However, below are the observations that distinguished celtic knots from others:

1) The strong diagonals in celtic knots are based on the 3:4:5 triangle, otherwise known as the right-angle triangle.

2) At almost every corner of any celtic knots, we can see pointed spades. This is done so as to connect the cord element to fit a corner.

3) The interlacing of the cords is consistent; they alternate between "overs" and "unders", which ultimately contributes to an overall spiralling look.

4) The basic pattern repeats.

5) The path of celtic knots is continuous. To explain, this means that if we cut a single cord, pull the two ends, and the panel tightens, then it is a Celtic knot. If it unravels then it is interlace.

Drawing celtic knots :

1a) Iain Bain's 3-cord design

Step 1   Step 2
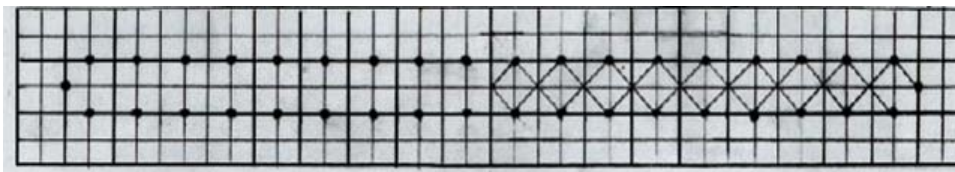
Step 1:

Draw a 20cm by 3cm rectangle. (Only a suggested dimension). Draw lines(horizontal and vertical) in between so that the intervals between the lines are 0.5cm. Put small dots at the intersection of dark horizontal and light vertical lines, like what is shown in the figure below. (To check, there should be 2 rows of dots with a height of 1cm.)

Note: Do all these very lightly with a pencil.

Step 2:

Connect the dots diagonally(45degrees), forming crosses between the 2 horizontal lines.

Step 3   Step 4
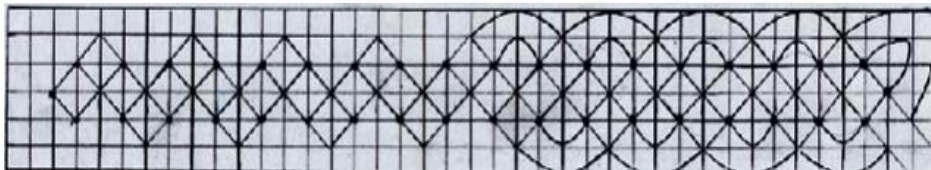
Step 3:

Extend the set of diagonal lines to form points above and below the initial lines. If you number the top row of dots 1, 2, 3, 4, and so on, from left to right, your peaks should be between 1 and 2, 3 and 4, etc. **Not** between 2 and 3, 4 and 5, etc. (To check, you will get a zig-zag path-like figure.)

Step 4:

Connect the points with arches. The points that move into the corners are shaped with points. Make sure that the arches are of constant width.

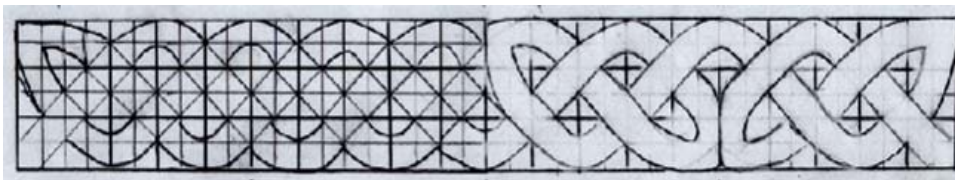Step 5   Step 6
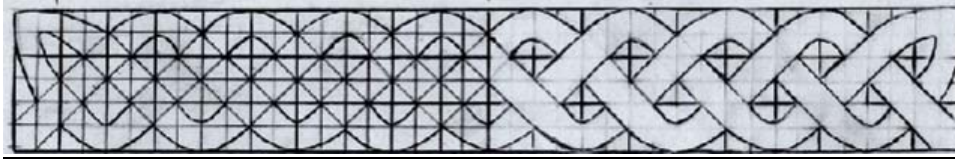
Step 5:

Erase the dots.

Step 6:

Erase the cord lines from each intersection so that one cord goes over the

other. Remember that you must alternate between "overs" and "unders"

to create a weaving effect.

Step 7   Step 8

Step 7:

Clean up any stray marks. This stage is known as the knotwork plait.

Step 8:

Break the plait at every 5cm horizontally by erasing the lines where they

cross so that we get 3 rectangles each measuring 5cm by 3cm. Then

reattach the lines so that the corners are shaped with points, like what we

did in step 4. (To check, see that each cord goes back on itself instead of

continuing along the plait.)

1b) Iain Bain's 4-cord design

Step 1   Step 2
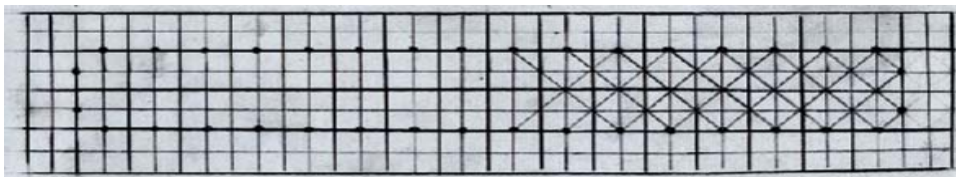
Step 1:

Draw a 18cm by 4cm rectangle. (Only a suggested dimension). Draw

lines(horizontal and vertical) in between so that the intervals between the

lines are 0.5cm. We will label the dark horizontal lines as 1cm, 2 cm,

and so on for easy reference; the same goes for the vertical lines. Put small dots at the intersection of even-numbered horizontal lines(2cm and 4cm) and odd-numbered vertical lines. Then put 2 dots on the line: one 3/4 down the square and the other 1/4 down. (To check, there should be 2 rows of dots with a height of 2cm.)

Note: Do all these very lightly with a pencil

Steps 2 to 7 are exactly the same as the above.

Note: Instead of 1 pointed spade each at the top left and right corners only , there should be 1 pointed spade each at the bottom left and right corners as well.

Step 8:
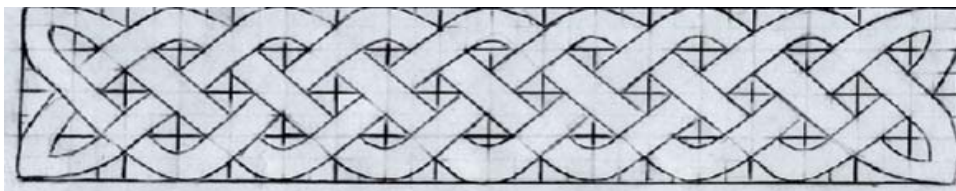
Break the plait at every 6cm horizontally by erasing the lines where they cross so that we get 2 rectangles each measuring 6cm by 2cm. Then reattach the lines so that the corners are shaped with points, like what we did in step 4. (To check, see that each cord goes back on itself instead of continuing along the plait.)

2) Marc Wallace's simplified construction of a knot

Step 1:

Draw a grid with even number of squares in both directions. For example, you can draw a 6cm by 6cm grid with 1cm intervals. Put dots at the midpoints of the sides of each small square, where the sides are 2cm.
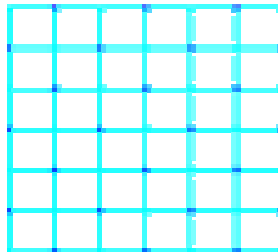
A splitting is a line through which the knot is not allowed to pass. These lines are drawn slightly shorter than 2cm, and are centered on the dots drawn in the previous step. Place splittings on all the dots along the border of the grid(external spittings).
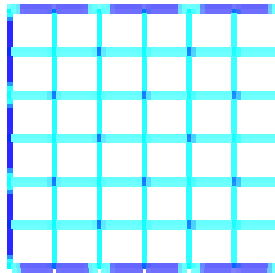

Step 3:

All internal splittings are either horizontal or vertical, and only 1 splitting can be placed at each dot. Draw the internal splitting as shown:
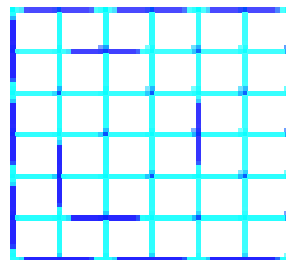
PS: This is only one example of an internal splitting.

Step 4:

Connect the remaining dots diagonally. However, do not connect them completely from dot to dot so that we have a small distance between the connecting lines and dots.
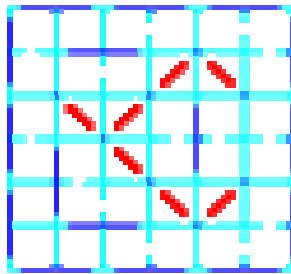

Step5:

Going diagonally outwards from each dot, if the dot is approaching a splitting, draw a short curve out from just past the dot to the edge of the grid square, making sure not touching it. The curve should go straight towards the dot, and should be parallel(at the peak of the curve) to the splitting where it meets the grid edge. Take note that the curve should not touch the dots.
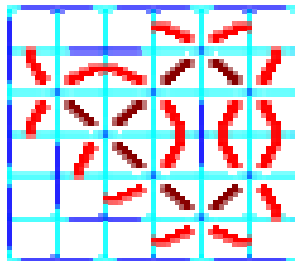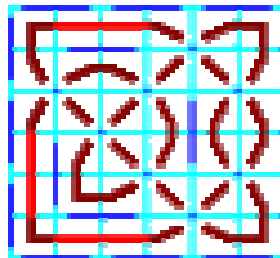
<u>Step 6:</u>

Wherever a horizontal splitting and a vertical splitting meet in a corner, the knot will also have a sharp corner. Draw these corners in a way such that they join the short curves smoothly.
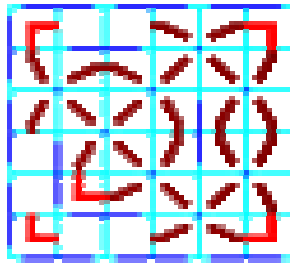
<u>Step 7:</u>

Notice that there are disjoints(ignoring the spaces between dots) in the figure. Fill in the disjoints by drawing straight-line segments.
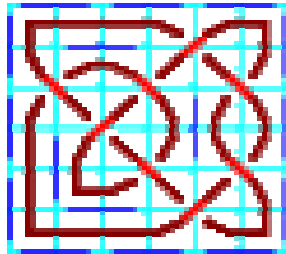
Step 8:

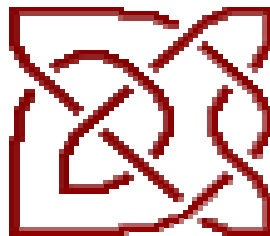Wherever there is a dot, fill in the space as follows:

--On odd rows, let the right piece overlap the left piece.

--On even rows, let the left piece overlap the right piece.

Step 9:

Erase all construction lines and the knot is complete.

Uses

There are a wide variety of uses for Celtic knots. Its complicated and yet, intricate designs have enabled artists to incorporate them into their works. Celtic knots can be used to decorate simple merchandise and also be used to bring about a dignified elegance to every occasion.

The Celtic knots have graced many different types of jewellery. For instance, the Celtic love knots have been used on many occasions to celebrate the union of two individuals with Celtic designed rings. The uniqueness of using only one cord to weave a complicated pattern implies the continuity of paths, by which one could interpret to mean eternal love in a relationship.

Rings.

Bangles

Star Amulet
1.5" x 2.5"

Knotwork
Amulet
1.5" x 2.5"

Triskel Amulet
1.5" x 2.5"

Spiral
Amulet
1.5" x 2.5"

Amulets

Pendants

Earrings

7274   Cuff Links

Jewellery Sets

The Celtic knotwork designs are also used when food is concern.

It can be found on kitchenware as well as on the food itself!

Cake Motifs

Mugs

Plates

Celtic knife and cake server

Amazingly, Celtic knots has also found its way onto our clothes and bags.
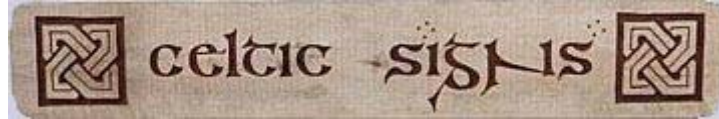

Celtic dresses

Apron

Tote bag

Celtic knots are often used for decorative purposes, such as ornaments, stationeries, wall arts, tapestries, cross stitch designs and many more. There isn't a lack of places where you can apply the knowledge of Celtic knotworks.

Wooden Signs

Wooden ornaments

Money pins

Cards

Illustrations

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