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Date: 6 July 2019
Spinning Thread for Bobbin Lace

by Ruth Blzenko
Olds College July 1997

This in-depth study is presented as a partial requirement for the
Master Spinner Certificate at Olds College.

Dedication to my husband Lionel Blzenko and my friends who supported me with their on going cheerfulness.
Summary.

I have spun line flax, cultivated and tussah silk and wool and silk into very fine threads. I then applied them to bobbin lace projects that follow in this book.

I have since found that this has helped me to understand the above fibres and how they are applied to Bobbin Lace.

I would encourage the reader to try and spin their own yarns, so they can reproduce threads for Bobbin Lace that are not manufactured at this time. Bobbin Lace is less expensive. A spinner does not need great lengths of thread, generally, for Bobbin Lace projects.
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**Definition of Bobbin Lace.**

Bobbin Lace is a form of off-loom weaving. The lacemaker uses a pillow to make the lace on, and bobbins are used to hold the thread. The lace is made using the combination of Twist and Cross to move the threads, with pins holding the thread in place on the pricking or pattern. (Definition by Judy Sexton. Lace digest)

Spinning fine has always captivated me. It was this interest in fine spinning that helped me choose my in-depth study. This project proved to be challenging, physically and mentally.

I started researching the history of Bobbin Lace and Tatting from the 18th century to present day. However I found that by the 18th century the area of Bobbin Lace was already declining. Therefore I had to begin my research 200 years earlier. The inclusion of tatting was not feasible at this time.

**Introduction: a Short History**

Bobbin Lace from the early 16th century until now has enjoyed its ups and downs in popularity. Bobbin lace is credited to have been started in two different places, "Flanders and Belgium". Both of these areas are known for their growing of flax which is an important fibre in bobbin lace making. Italy was also involved in Bobbin Lace making and spinning.

"Legend has it that a young girl, (perhaps Belgian) as she sat resting under a tree pondering how to support an ailing mother, became startled by a spider that had dropped suddenly into her lap. Before she could dispose of the creature it had spun an elaborate
web, the symmetry of which caught her attention and gave her an idea for remedying her financial dilemma. Taking needle and thread from her apron pocket, she proceeded to retrace the intricate lines, but finding that a single strand was insufficient to the task, she added others as the work progressed. Then when a gusty breeze threatened to tumble the delicate creation, she wound small pieces of wood around the thread ends to hold them in place. Thus the story goes was how bobbin lacemaking was conceived.

(Norris, 24, 1979)

The knowledge and the skill of lacemaking with bobbins spread rapidly by the end of the sixteenth century. A great deal of lace was being used for decoration e.g. clothing. The only class that could afford the lace was the rich. When looking back at the paintings of that period one will see a lot of ruffled lace. Stiffening and underpropper (a device so the lace would stick out from the neck) were used. Then came the period of cascading collars without stiffening. Wide ruffles and tiered lace were used at the wrist and knee. Many a nobleman is said to have sold acres of land to buy lace. The Roman Catholic Church used exquisite laces in great profusion to embellish the robes of bishops, priests and its altar linens.

This usage of lace was not only bobbin lace but other laces as well e.g. needle lace. It became fashionable for queens and ladies of the court to make lace, although they could never produce enough to wear. They bought lace from a lace merchant, who made a fortune reselling the lace. The lace merchant would go to the lace makers.
He controlled the yarn they would have to buy from him. Then later he would receive the completed lace. He then resold the completed lace at a considerable profit.

Many thousands of lace workers were employed at the height of the industry during the seventeenth and eighteenth centuries. The condition of the lace makers was one of poverty and near starvation. Often making lace was the difference between starving or eating enough to get by. Although lace making is thought to have been primarily a women’s job, men would sometimes make lace when work was scarce or in winter when farming was at a standstill. Bobbin lace was very popular in the 16th century. Many philanthropists seized the opportunity to open lace making schools, as a way for the poor to learn a way of becoming employable.

The working conditions at the schools left a lot to be desired. The girls were started at age five and were given simple laces to make and a quota to produce. They often sat nearest to the light then a second or third row of more experienced older girls would also be added. Often the only source of light was from a candle that was placed in a candle holder around which were placed globes of water called flashes which helped to magnify the light. The light would radiate on to the piece of lace that was in progress.

The finest laces required gossamer linen threads which would easily break if not kept damp. The best place to spin and work the lace would be a basement that was moist. These places were dank and unhealthy.
Patterns:

Each area has different lace patterns that were invented at different towns

A. Brussel and Honiton: Pillow-made sprigs, leaves etc, joined with bobbin net or needle point, or appliqued onto machine-made net

B. French Bucks: Lille, Chantilly, Mechlin. Fine net with sprigs etc, in cloth work surrounded by a thicker thread called a gimp or trolley woven into the piece, coming off the pillow complete.

C. Torchon, Cluny: A coarser lace with Tallies, leaves, plaited Maltese, bars, various whole stitch and half stitch net Bedfordshire.

The above areas had become famous for their lace making abilities, although nothing was written on lace making patterns until later. Everything was memorized and handed down from one generation of lace makers to another. Patterns from each lace maker were distinctive and could have been copied by someone else if they had be written down. Therefore the lace maker would lose her advantage over another.

The first laces were fairly coarse threads and designs were geometric in character. As skills developed finer and finer thread
was used to make interlacements of floral designs, scrolls, tendrils, leaves, trees, figure of people and animals. Religious motifs were used by the church. Figures of the design were connected with brides (braids) and bars. Later flowers and figurines were woven with a mesh or net background instead of brides. Old pieces are recognized by the pattern, which can identify where the lace was made and in what time period. There are so many different styles of bobbin lace.

The one that I choose to do all of my samples in is called Torchon. Torchon Lace typically has a regular geometric ground

a. fan shaped scallop
b. 1/2 st trail
c. spider
d. whole stich diamond
e. tally

Torchon patterns are charged on graph paper with eights squares per inch and use thread size 35/2, 40/2, 50/3 linen.

Ten squares per inch use thread size 60/2 to 80/2 or maybe 90/2.

How to decided what pattern your yarn would fit before or after spinning your yarn? Wrap it around a pencil with each wrap placed close together with no spaces but not squashed either, ten times. Measure the warped area to determine how may cm or inches e.g. 46 lea measured one eighth of an inch therefore it would be used on a eight by eight square graph.
Pillows used:

Pillows are as diverse as the countries that produced the lace. There are bolster pillows, cookie pillows, pillows with rollers in the middle so the lace can be made in one continuous strip. The bobbins lay on the front of the pillow. All of these types of pillows would have been stuffed with either barley straw or sawdust. The pillows would have been pounded to pack it in as much as possible so that they were compact. Compacting enables the pins to be pushed in as far as possible and hold the lace in place. As they are very heavy, bolsters had stands to support them. I made my own bolster from a tomato can. I cut off both ends, washed and dried it very well and wrapped towels around it that were the same width as the can. The pillow was placed in a small box so that it was stable and could not roll off balance. Now I can sit with it on my knees which is easier than propping up my cookie pillow with books, to get the right slant. It is much easier to work at a slight angle rather than right on top of a cookie pillow.

Pins used:

Brass is the preferred type of metal for pins. The reason for the brass is that it will not rust when exposed to moisture and leave a rust spot on the lace in progress. Different thicknesses of pins are used with different threads e.g. fine yarn, thinner pins. I used a #3 pin which is a medium numbered pin.
Bobbins used:

Bobbin lace was also called pillow lace or Bone lace. The first weights used were made from small bones from pigs or sheep feet, (hence "Bone Lace") followed by other materials such as wood and ivory. Bobbins are used to carry the thread for lace making. They started simply with no engravings or inlays or precious stones or metal. At the height of lacemaking (with bobbins), they have been found to have had messages from lovers, husbands or fathers inscribed into them. Inscribing was usually done with a hot wire. They also were inlaid with precious metals and some were painted.

There are two different types of bobbins used. One is the continental which most of Europe uses. Both types of bobbins had the same top but the continental bobbin has no spangles on the bottom and is more bulbous which helps with the weight control of bobbins. The other bobbins are spangled at the bottom and are finer and thinner. Without spangles on the bottom they would flip all over the place. The spangles are attached by a thin wire on the bottom of the bobbin and onto that wire are threaded stones or beads. There are advantages and disadvantages for using either of these styles. I used the continental bobbin when making my projects.
Thread used in Lace making.

Although other fibres are used now, it was flax that was the important fibre used in spinning the fine yarns that bobbin lace requires. Linen gives the lace a clear and crisp look and washes and wears well. Linen thread would be used for clothing, household items and other lace embellishments.

Linen being the traditional choice, the threads are evenly and tightly spun plus smooth.

Thread is expressed by two numbers e.g. 20/2, 50/3. The first number indicates size of single thread (larger the number the finer the thread). The second number is how many strands of that size are plied together to make the yarn. Wool and reeled silk thread were available to a few bobbin lace makers who where commissioned for the wealthy class.

I found with the flax that I obtained that it was not fine enough for spinning. The individual fibres were coarser than what I needed. I rehackled and used only the finest of what I had. I am surprised to see how little flax it takes to spin yardage required for bobbin lace. The finest flax was reported to have been spun so fine that you could not feel it in your fingers.

In my research I have found that wool, silk and linen threads were the preferred choices for bobbin lace.

In my duplication efforts I have found that a wool and silk blend of fifty fifty works very well. Silk is suitable for fine
clothing that will not be washed a lot as it will not hold its shape and must be blocked each time it is washed. Linen is my preferred choice as it retains its shape when washed. The weight of the spun thread determines how it is used. I tried singles and found that it drifted apart after a short time, even after waxing.

Cotton did not come into bobbin lace making until machinery was invented that could spin the yarn fine enough to be used for mass production of lace. By this time bobbin lace had undergone a change. Some thought this change was for the better; others thought for the worst. When cotton was introduced, bobbin lace became a commodity that the middle class could afford. Since the middle class could afford it, there needed to be an increase of production. One could also make more money with the lace being coarser as it could be produced more quickly. The mechanical spinning of cotton thread flooded the market and basically ended the making of very fine lace. Gradually, at the same time, the bobbin lace maker slowly disappeared.

Bobbin lace is used mostly for embellishing. It gives the final piece a finished touch. The ideas are endless in its application. To add lace to any item is to enhance the look and feel of the finished product.
The fibres used for the following samples are cultivated silk, Tussah silk, line flax and silk and wool blend.

**Characteristic of silk both Tussah and Cultivated.**

Silk is strong, has good drapeability, will absorb 20% of its weight in moisture, cleanliness, wearability, little shrinkage, sensitive to heat, weakened by direct exposure to sunlight, resistant to mildew and weak concentrated alkaline, mineral acid will dissolve silk, damaged by perspiration, affinity for dyes, lustre, light in weight, non conductive of heat.

**Characteristics of linen.**

Two to three times stronger than cotton, it has no elasticity. Linen has little resilience, and is a good conductor of heat. It launders well and gives up stains easily, and does not stain as easily as cotton. Linen drapes better than cotton and does not shrink. Heat can scorch linen. It is more resistant to light than cotton, but does not have as good an affinity to dyes. Linen is susceptible to mildew, but resists moths and alkalies; damaged by hot dilute acids and cold concentrated acids, while perspiration will deteriorate linen.

**Characteristics of wool and silk blend.**

Wool’s elasticity would be counteracted by silk’s lack of elasticity. Silk would add lustre and more shine, drapeability (it might not need stiffening as silk would). Shrinkage rate would also be changed (lessened), while absorbency would also be affected (enhanced), the blend would dye well
Exercises

WT 3-4 #1. WT
SE #2.
HT 11-7 #3
HT 7-11 #4
HT 11-8 #5
HT 8-11 #6
HT 11-9 #7
HT 9-11 #8
HT 11-9 No pin leave.
NOW WORK THE SQUARE
T 1x each 3, 4, 5, 6, 7, 8
CS 5-6 #9
CS 6-4 #10
CS 4-7 #11
CS 7-3 #12
CS 3-8 #13
CS 8-4 #14
CS 4-7 #15
CS 7-5 #16 CS
SE #17

HT 9-5 #1
HT 5-9 #2
HT 9-6 #3
HT 6-9 #4
HT 9-7 #5
HT 7-9 #6
HT 9-7 No pin.
TG 3-4 #7.
SE #8
TG 4-8 #9
TG 3-4 #10
SE #11
TG 5-6 #12
TG 4-5 #13
TG 3-4 #14
SE #15
T once each pair.
12, 13, 14 before wedging
#16 CS #20.
Spinners Record:

Title:  Sample 1.

Spun by:  Ruth Blazenko  Date:  January 1997

Fibres used:  Tussah Silk  Form of Fibre was:  Roving

Source:  Fibre Hut  Cost:  $11 for 100 grams

Preparation:  None needed

Spinning Technique:  Worsted split roving into thinner lengths and spun from these lengths

Wheel used:  Lendrum  Ratio  22:1
(Super fast flyer)

Twist per inch:  14  2 Ply. 10.6 tpi

Yards spun:  102  Yards per pound:  16,296 or

19.4 denier

Finishing:  Washed with Orvis paste. When still wet ran through flax jelly mixture to coat yarn and reduce the "fuzziness". This worked very well.
SAMPLE #1.
PATTERN: Half-stitch
YARN: 2 ply
FIBRE: Tussah Silk

SAMPLE: #1.
FIBRE: Silk
TWIST: zzs
TPI: 14 singles
TPI: 10.6 plied
Spinners Record

Title Sample 2 Cultivated Silk.

Spun by: Ruth Blazenko Date Sometime in Jan 1997

Fibres used Cultivated silk Form of Fibre was Brick

Source Treenway (Victoria Island) Cost $16 per 100 grams

Preparation None

Spinning Technique Split into thinner lengths and undulated lengths so they were even thinner. Found little bits of garbage in spinning easy to pick out. Worsted.

Wheel used Lendrum Ratio 22:1

Super fast flyer

Twist per inch 17 Ply 2 @ 11.5 tpi

Yards spun ? Yards per pound 22,680

count 27 denier

Finishing. Washed in Orvis and dried. Did not use flax jelly. Worked fine, but had to wash lace after it was made. Had used red pencil to mark pattern with, it transferred to the lace. Came clean but lace distorted even when pined to dry.
Sample #2.
PATTERN: Kimberly
YARN: 2 ply
Cultivated Silk

Sample #2.
FIBRE: Silk
TWIST: zzS
TPI 17 Singles
TPI 11.5 Plied
Spinners Record:

Title: Sample 3 Linen

Spun by: Ruth Blazenko Date: August 1996

Fibres used: Line flax Form of Fibre: Strick

Source: Fawcett Cost: $8 per lb

Preparation: Rehackled and used finest fibres to spin.

Spinning Technique: Warped thin lengths in a towel and placed over my shoulder and spun from end. Did not use ends bits left in towel these where too tangled up. Used flax jelly to join ends.

Wheel used: Lendrum Ratio: 22:1

Twist per inch: 24 2 Ply @ 16 TPI

Yards spun: ? Yards per pound: 13,620 45.4 Lea

Finishing: Boiled in water softener and dish washing soap, hung to dry and bleach in the winter sun, for a week.
SAMPLE #3.
PATTERN: Net Stich Edging
YARN: 2 ply Linen

SAMPLE #3.
FIBRE: Line Flax
TWIST: ssZ
TPI: 24 Single
TPI: 16 Plied
Spinners Record:

Title Sample: #4.

Spun by: Ruth Blazenko              Date: Sometime in 1997

Fibres used: Line Flax            Form of fibre: Strick

Source: Fawcett                  Cost: $8 per lb

Preparation: Rehackled and used the finest fibres

Spinning Technique Used over the shoulder in towel. Used flax jelly to join ends together.

Wheel used: Lendrum             Ratio: 22:1

Angle: 27 degrees              Ply: Singles

Yards spun: ?          Yards per pound: 9,000 or 30 lea

Used 2 yards to figure out count.

Finishing: Boiled singles in liquid soap and water softener then waxed when dried hoping to prevent individual fibres from becoming tangled when using.
SAMPLE #4.
PATTERN: Kimberly.
YARN: Linen

SAMPLE #4.
FIBRE: Line Flax
ANGLE: 27 Degrees
PLY: Single
Spinners Record:

Title: Sample #5

Spun by: Ruth Blazenko

Date: Summer of 1996

Fibres: Used lamb’s wool & Silk.

Form of fibre: Combed top

Source: Louet

Cost: ?

Preparation: None required

Spinning Technique: Split the top length wise and proceeded to spin very finely. Worsted

Wheel used: Lendrum

Super fast flyer.

Ratio: 24:1

Twist per inch: 19

2 ply @ 12.5 tpi

Yards spun: ?

Yards per pound: 38,304 or 45.6s

Finishing: Washed skein in warm water and Orvis paste. Then rinsed and laid to dry. No weighting of skein.
SAMPLE #5.
PATTERN: Kimberly
YARN: 2 Ply Wool & Silk

SAMPLE #5.
FIBRE: Wool and Cultivated Silk
TWIST: zzS
TPI: 19 Singles
TPI: 12. Plied
Conclusions.

As with anything that is woven, the finer the threads, the thinner the finished piece. In bobbin lace which is off loom weaving, thread thickness plays an important part in the production of lace. The samples used in the presentation have the following characteristics. They are finer and smoother than any yarn that I have produced to date. This in-depth study stretched my ability to produce yarn that would be fine and even enough with no bumps (usually produced by uneven drafting of fibres and poor preparation of fibres).

Sample 1.

Tussah Silk was used to produce this sample. This was the first sample that I spun for bobbin lace. I would now spin it much finer in diameter and add more twist per inch. Tussah is the coarser of the two different silks we generally spin with cultivated silk being other. Working from the sliver divided into thin lengths worked very well. The joins were not a problem when plying later. They did not break or fray. This sample could be used for lace inserts in clothing, pillow case edging or book marks for gifts.

Sample 2.

Kimberly edging was made with cultivated silk. I applied the same principle to spinning this yarn as to the tussah (used long lengths them split them into thinner sections). This time I did add more twist per inch. This is a pretty edging that would do well on a
slip, collar or a sleeve of a garment that would not be washed too much as this is a lace that will not hold its shape with repeated washing. It must be blocked after each wash. Next time I would use a whole stitch for the lacer boarder.

Sample 3.

Net Stitch edging was made with line flax. Although a more traditional fibre for making yarns for bobbin lace, this presented its own set of challenges to spin. Find the finest flax possible then either spin from a dressed distaff or split the length into as thin a sliver at possible. This helps to prevent tangles when drafting two to three fibres at a time. This edging is much more rugged and will withstand more washing and abuse than samples 1 and 2. A suitable edging for use in table mats, table cloths, hand towels or heavy weight dress material.

Sample 4.

The Kimberly edging made with a single yarn. My attempts at using a singles for bobbin lace leaves a lot to be desired. In years past singles were used to make beautiful lace shawls and edging for baby wear for very special occasions. The lace makers who worked with singles were very skilled in twisting their bobbins, adding extra twist when needed. I am sure these yarns were coated with either flour and water or flax jelly to prevent fraying.

Sample 5.

The Kimberly pattern was used again but this time with a wool and silk blend. I applied the drafting and spinning method that I had learned from samples 1, 2 and 3. Although this edging is stronger
than sample 1 and 2, take care in washing this lace as I am sure it will collapse like sample 2 did. This lace would be appropriate on a fine blouse with the edging stitched in place and the scalloped edge sewn down as well; A pillow edging; a fine scarf in a different pattern would work well.

Suggestions for a successful exploration of spinning thread for bobbin lace.

1. The materials used should be of the finest quality. Spinning fine yarns takes lots of time.

2. Fine yarns require anywhere from five to 8 times more twist than would a knitting yarn say of 3-5 twists per inch.

3. Choices have to be made at this time regarding spinning equipment. A spinning wheel that can produce a high tpi at every treadle is a must unless one is willing to move their hands and feet at a very quick rate. This tires the individual quickly. The older flax wheels and walking wheels have the high ratios needed to produce fine yarns. High speed drop spindles could also be used.

4. The fibre must be able to withstand abrasion but be stiff enough not to collapse when taken off the pillow e.g. rayon.

5. *Trochon Lace Workbook,* I would highly recommend. It has easy book markers to make using any size cotton, linen or silk.
6. **Pillow Lace in the East Midland.** From the Luton Museum in England. An excellent history book on bobbin lace, lots on different bobbins and also history about the thread used.

7. **Bobbin lacemaking.** Would get anyone started in bobbin lace.

8. **Flax jelly recipe.**
   
   1 teaspoon of flax seed to 1 cup of water.
   
   Boil for 10 mins. Let sit for a while to cool.
   
   Either strain or pour out carefully keeping seeds in pot.
   
   Put in container labelled flax jelly and keep it in the fridge.
   
   Put flax seed in garden or compost pile.
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Wright Doreen, *Bobbin Lacemaking*, Published by G. Bell & Sons Ltd. 1971, pg 15.