

1997

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LONG & LINK STITCH BINDINGS
PAMELA SPITZMUELLER

Long and Link Stitch Bindings Outline

1. General Considerations

a. Materials

*scoring board - right angle at bottom
heavier paper, 8-12 pp. Thick sigs, stays*

b. Background

2. Archival Long Stitch

3. Slotted Spine

4. Link Stitch - Diagonal

5. Link Stitch - Skip Station

6. Link Stitch - Circle

7. Long and Link Stitch

8. Other Variations

9. Wrapping the Binding Up

a. Secondary Sewing

b. Flaps and Ties

c. Buttons

LONG AND LINK STITCH BINDINGS FROM THE HERZOG AUGUST
BIBLIOTHEK, WOLFENBUTTEL, GERMANY



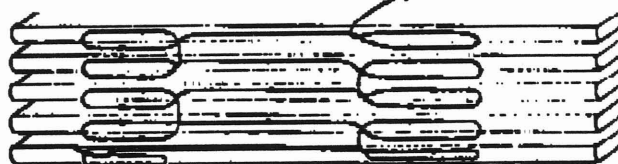
LONGSTITCH - ARCHIVAL STYLE

Pamela Spitzmueller



Geographic locale - predominately found in archives and records collections, and manuscripts. Often seen in Italy and Spain, but common in other parts of Europe.

Time - 16th (?) - 19th c.



Characteristics -

Simplicity and speed of execution; utilitarian; strong and durable; supple; friendly handling properties

Adaptable to small books as well as large sketch books

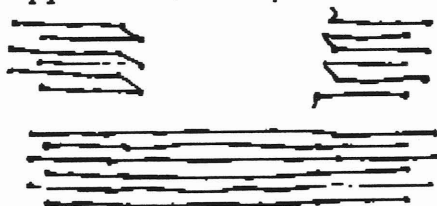
Few tools and no equipment needed; little or no adhesives used *embroidery/crewel (thin)*

Covers can be of any limp material - vellum (reused or blank), paper, leather

Historical Features -

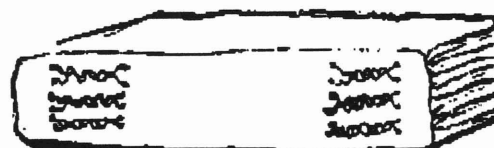
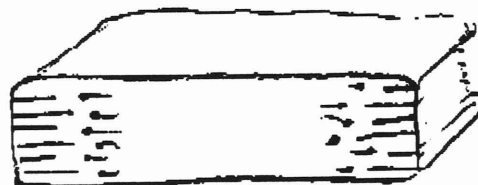
Freehand Style - punching and sewing simultaneous. Can have a hurried or haphazard appearance or be extremely neat.

Planned Style - punching and sewing sequential. Will have a very regular appearance, even placement of sewing holes and length of stitches.



Variations -

- staggered stations and diagonal change-overs
- even stations and vertical change-overs
- even stations and invisible change-overs
- over the head and tail, two needles and two threads
- twisted pairs of threads
- longstitches linked by chains, two needles and two threads



LONGSTITCH - SLOTTED SPINE

Pamela Spitzmueller

Not a historic technique, but developed at the Library of Congress as a rebinding technique adapting principles and structures from the past.

Characteristics -

Strong and durable; utilitarian; friendly handling properties

Precise cutting and prepunching

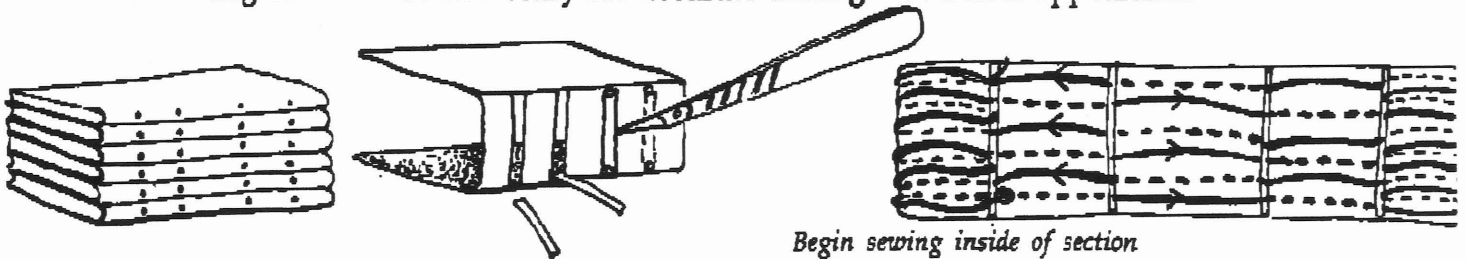
Adaptable to different size texts

Few tools and no equipment needed; little or no adhesive needed

Covers can be of any limp material; sometimes spine needs reinforcement because of the cuts

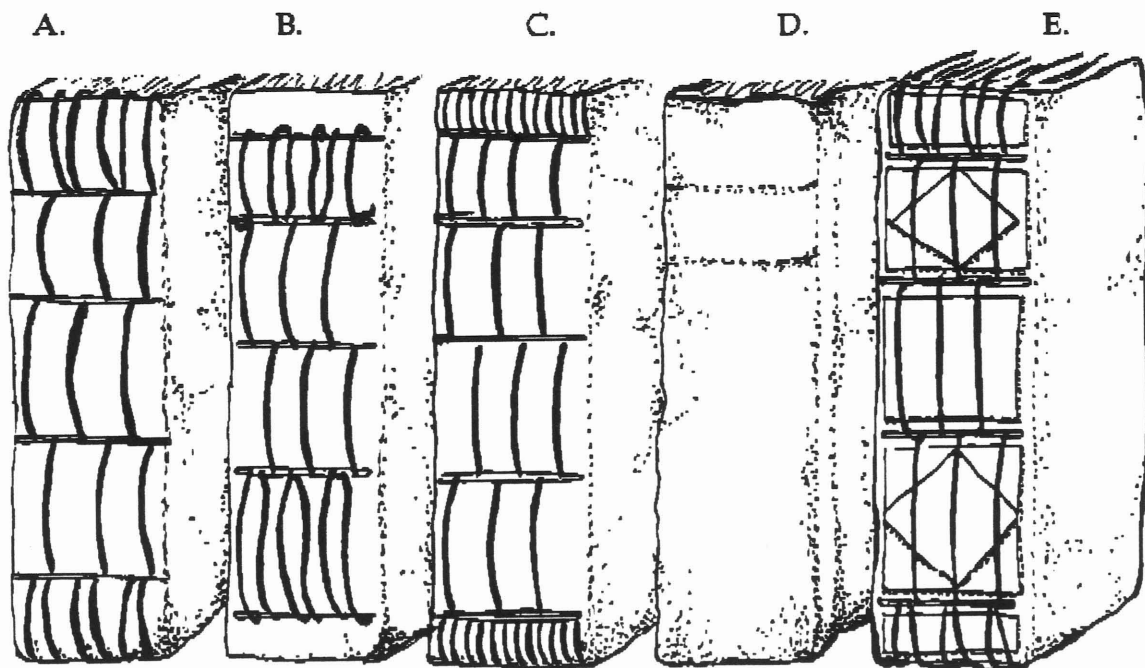
Features -

Planning of structure necessary for accurate cutting and a neat appearance



Variations -

- A. full length sewing
- B. skip head and tail wrapping
- C. change thread color for head and tail wrapping
- D. use as the under structure for another covering style
- E. change flexibility and look of spine by adding other elements



LONG STITCH/LINK STITCH BINDING or THE MECHANICAL TIGHTBACK

Pamela Spitzmueller

Functions:

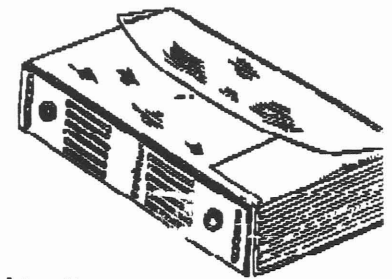
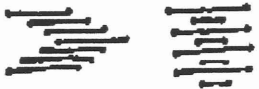
1. Link stitch

- builds chains
- creates vertical, curved or diagonal elements
- attaches textblock to cover



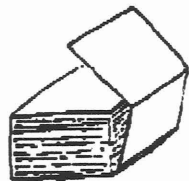
2. Long stitch

- builds horizontal, parallel elements
- attaches textblock to cover
- acts as a base for secondary sewing



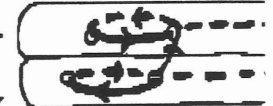
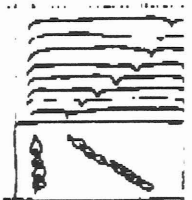
Materials:

Cover/wrapper (tough handmade paper, folder stock, parchment); Spine support piece (paper, plastic, wood, leather, parchment); Textblock (flexible paper); Thread (heavy, waxed); Needles (large eyes, thin diameter, crewel and darning); Drill with small bits; Nail set and hammer, Awl, punch (screw punch or Dremmel tool optional); Double-sided tape or PVA



Planning Guidelines:

- Fold textblock. Thicker sections are better since the sewing holes in the spine will be further apart, to avoid tearing into each other. Begin with an even number of sections until you gain experience with calculations.
- Select wrapper/cover and cut height to fit textblock. The strip should be long enough for a fore-edge flap, if desired.
- Measure the spine width from the stack of sections and cut spine support piece. Allow for a slight amount of swelling but not much. These are flat, rigid spine books with little swelling, no rounding or backing and little spine movement. Adhere support piece to cover, either with PVA or tape (for later removal). Fold cover paper along edges of support piece. Support piece may be inside wrapper or dispensed with if cover is heavy enough to support sewing alone.
- Plan a diagram of sewing using straight or curved elements (zigzags and circles work). Vertical, diagonal, and curved elements will be link stitches and horizontals will be long stitches. Keep in mind that each section needs cover attachment at the ends and middle to hold it securely to the cover.
- When designing a pattern, allow for the change-over from one section to the next in either long or link stitch scheme. Normally the change-over in link stitch is at the end of the section. It uses the spine support sewing hole twice - once for the exit from one section to make the link and then for the entry into the next section to be sewn. In books with an even number of sections, the number of holes needed at a change over is $1/2$ the number of sections plus one. Change-overs occur at alternate ends of the book. With an odd number of sections, calculate by adding 1 and then dividing by 2. Visible long stitch change-overs occur at the second to the last sewing hole stations. They use straight or diagonal stitches to move from one section to the next. In the invisible method, the change-over can be made by skipping the penultimate section, exiting to the final station and then entering at the penultimate hole and angling the needle up to enter the next section.

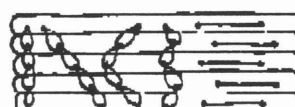
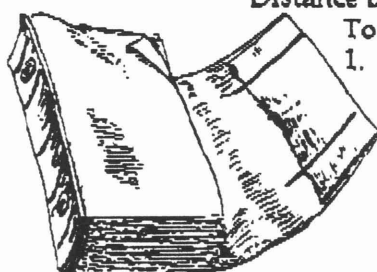


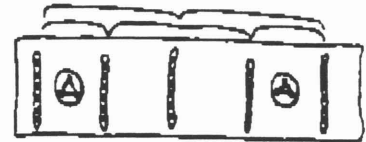
6. Determine location of sewing stations and number of sewing holes needed.

- If holes are too close together, tearing of spine material can occur. Distance between holes is determined by thickness of sections.

To decrease the number of holes in a given area

- stagger the holes by making zigzags, curves or diagonals.





2. share holes

3. skip the sewing station and do not punch a hole at all. This can only be done in limited ways because enough points of attachment need to be made to hold text to cover safely.

b. For link stitch sewing the number of holes at non-change-over station equals the number of sections used. For a circle it will be 2 times the number of sections minus 2. At change-over points it is 1/2 the number of sections plus 1.

c. For a long stitch binding, the number of holes at a given station equals the number of sections. Or 1/2 or 1/3 the number of sections if the sections are sharing sewing support holes.

d. False patterns can be created by punching and sewing designs with link stitches through the spine piece before the primary sewing is done, like embroidery. This sewing is ignored in the actual sewing of the textblock.

7. Drawing the pattern on graph paper may help (or confuse if the grid is not the same scale as the thickness of a section!).

a. Make a sample if uncertain of sewing (sewing card method).

b. Make templates for pre-piercing of spine and sections (as many variations as there are in the sewing hole configuration). It helps to label the head of template as well as which sections they correspond to. Number the sections so they can be sewn in proper order and right side up in the upper right corner.

8. Sewing Thread

a. Thicker than normal so the design will appear strong and the exposed threads won't wear and break.

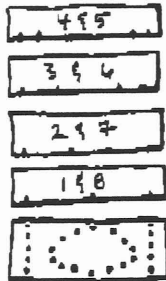
b. Swelling should be avoided. Flatten thread with folder after the section is sewn and tightened to diminish the build-up of swelling.

c. Waxing prevents fraying and stiffens thread so it holds the design.

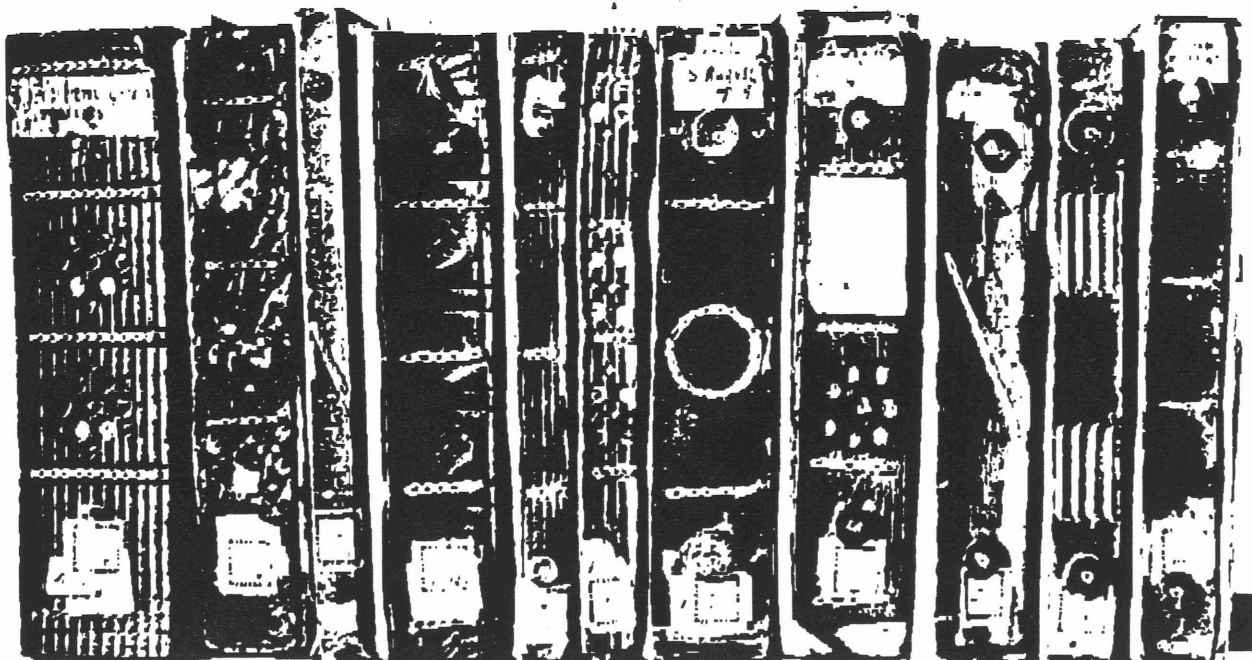
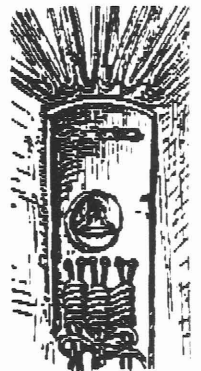
d. Test that the needle and thread can pass with ease through a sewing hole the prescribed number of times. If it won't or is too difficult to pull, change the needle and/or thread or enlarge the sewing holes.

e. Punch or drill spine support and cover simultaneously so all the holes will align.

9. Finish by folding fore-edge flaps, adding buttons to the spine or front cover, and strings/straps to wrap around buttons. Many variations are possible. Secondary basketweave sewing can be done over longstitches.



templates



LONG STITCH FOR CONSERVATION STRUCTURE OR SKETCH BOOK

Pamela Spitzmueller

Textblock at least 4 sections

Endpapers

2 sheets which wrap around the entire textblock

Concertina

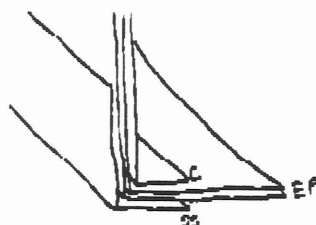
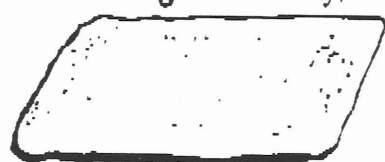
Thin paper cut to height of textblock

Sewing Support

laminated tyvek, height of textblock x thickness of textblock plus 2"

Paper Cover

tough and sturdy, folds well

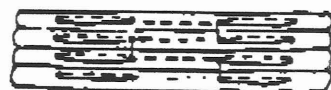


Procedure:

1. Make vertical fold in sewing support (ss), endpapers (ep), concertina (c) to form a nest.
2. Prepierce all new sections using trough and templates. For old books, irregular or alternate patterns can be used to accommodate existing sewing holes. Insert first section into the above "nest".
3. Pierce sewing holes through first section and nest using a piercing trough. Nest will fit nicely into the 90 degree angle of the trough. Concertina may be prepleated entirely or folded as the sewing progresses. Pierce the nest just before sewing to keep holes aligned.

Sewing Diagrams:

regular:

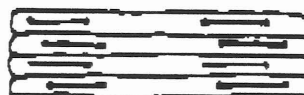


alternates:

use holes in ss twice (for thin section books)



stagger



4. Thread needle and start at penultimate station inside the first section (as in archival long stitch). Continue sewing until section complete. Close pages and bone swelling.
5. Pleat concertina using jig (layers of board made up in thickness to twice the dimension of the desired pleat size). Insert 2nd section in nest, move to sewing trough and piece section and nest simultaneously. Sew to end of book, pleating the concertina as you finish each section.
6. Fold endpapers and sewing support along spine edge and the end of text. Trim as necessary.
7. Fold a paper wrapper to fit text height and width (a limp leather case could also be made). Using sewing support as a hinge, miter to and bottom. Glue approximately 3/8" away from spine edge and adhere textblock into paper wrapper or case.
8. Tip with PVA the fore-edge of the outer endpaper to the cover. The outer endpaper may have an optional fold at the fore-edge for this final adhesive tip.

