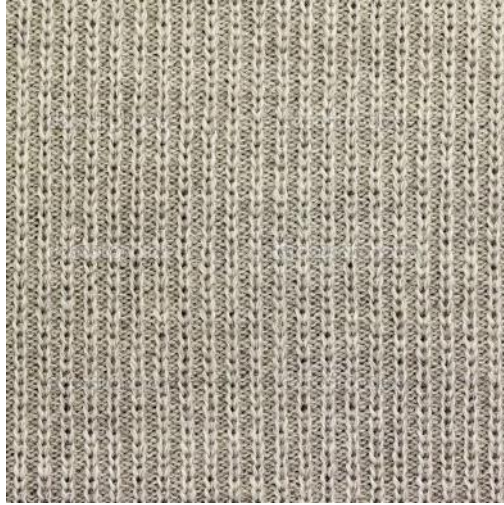
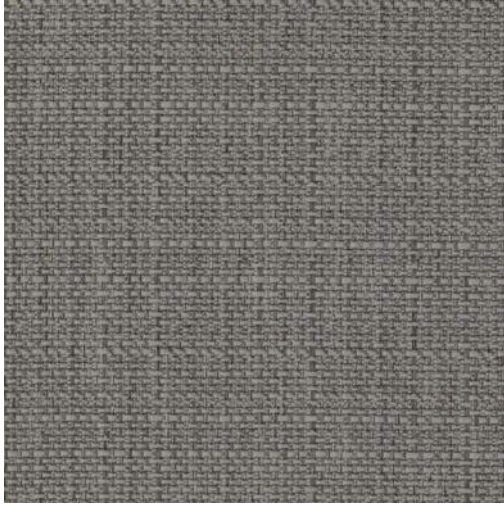


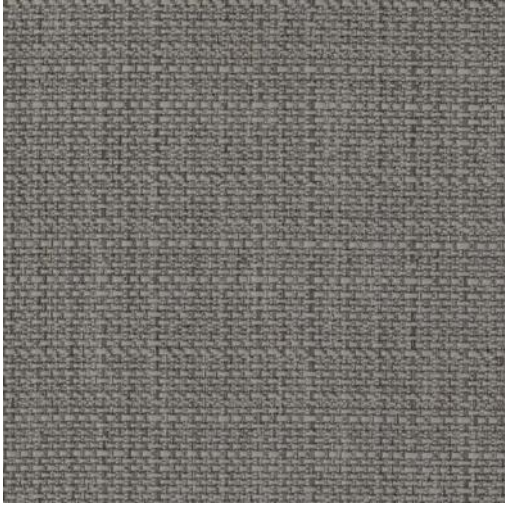


Felting, Knitting and Crocheting

Wovens, Knits & Nonwovens



Wovens



- woven on a loom
- consists of vertical (warp) and horizontal (weft) threads that cross each other
- stretches on the bias (diagonal)

Knits

- flexible
- can be constructed to size (hats or socks)
- warp knit (machine): lace, lingerie, tricot, hard to unravel
- weft knit : can be unraveled horizontally, cheaper to produce



Nonwovens

- long strands of fiber that are bonded together via heat, mechanical, chemical, or solvent treatment
- eg: filters, geotextiles, diapers, insulation, medical equipment (surgical gowns)



The Burn Test

make sure you have water close by in a metal container and are in a well-ventilated area

- **Cellulose** (cotton, hemp, linen, rayon, bamboo): lights quickly, smell like burnt paper, ash is light grey
- **Protein** (silk, wool, cashmere, alpaca, etc): burns slowly, smell like burnt hair, ash is dark and brittle
- **Synthetics** (nylon, polyester, acrylic): can burn and shrink quickly, may form plastic drip, black smoke

[Resource](#)

Felting



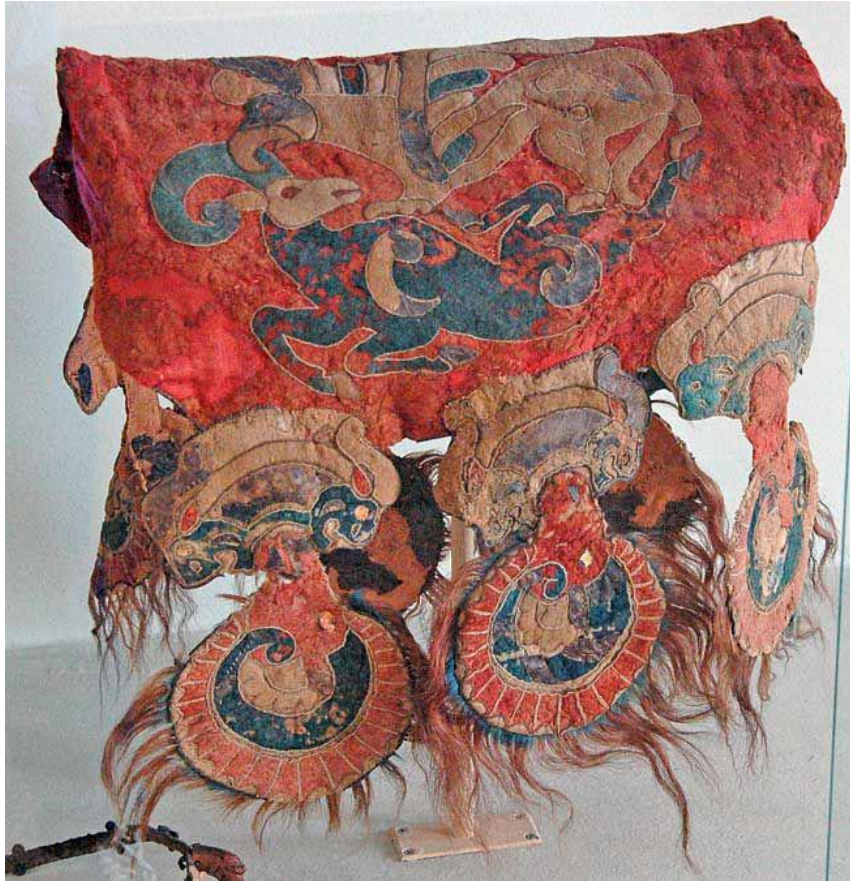
Process of creating objects
using bonding fibers.

Felting



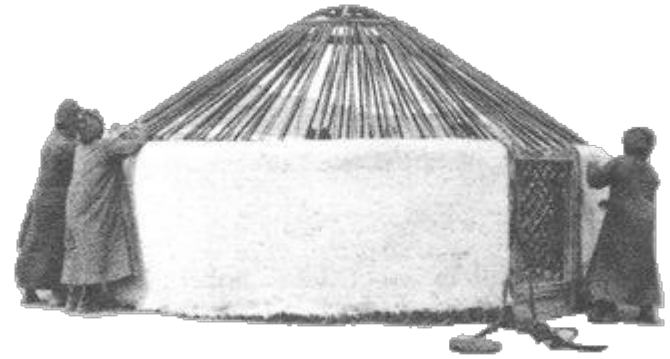
making a robe for Bakhitari shepherds
(Iran)

- earliest examples found in 6000 BCE, origins primarily in Europe and Asia
- used for insulation and protection
- [long thorough article](#)



Horse saddle cover, Siberia, 300 BCE

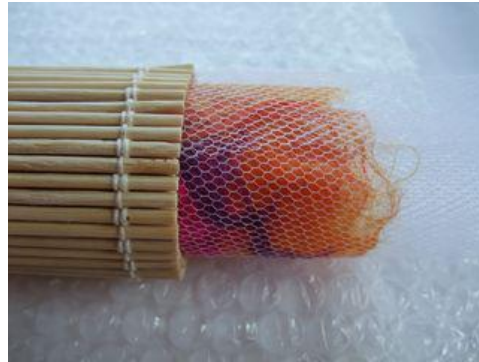
Yurts!





Wet Felting

Using water and soap to create felted objects. [Tutorial](#)





Felting other
objects!



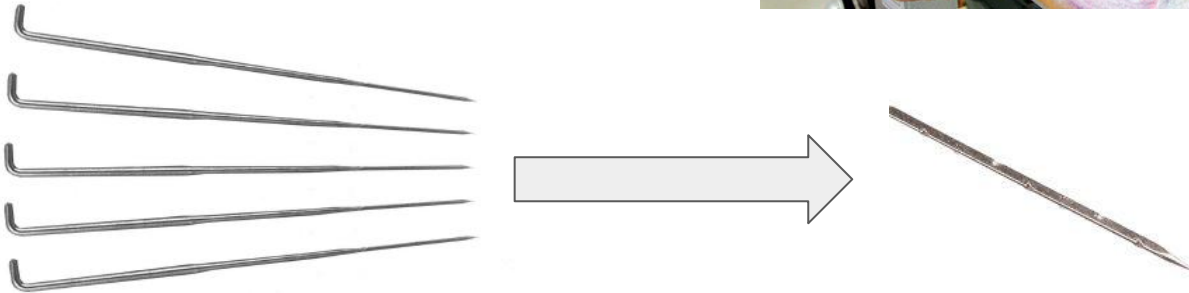
Fulling

Felting a knitted or woven object after it is made.

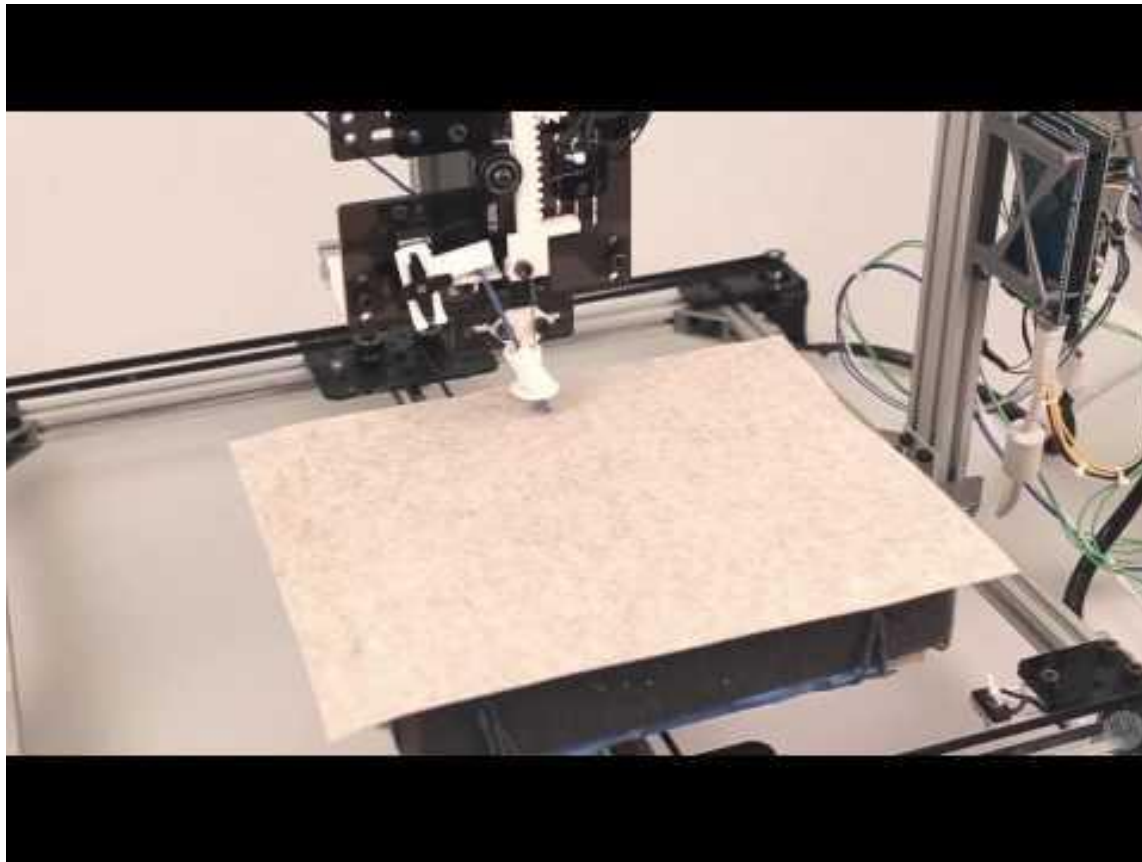


Needle Felting

- 19th c. industrial felting machines used rows of sharp barbed needles
- 1980's became tool for home crafting







[Printing Teddy Bears: Disney Research \(Scott Hudson\)](#)



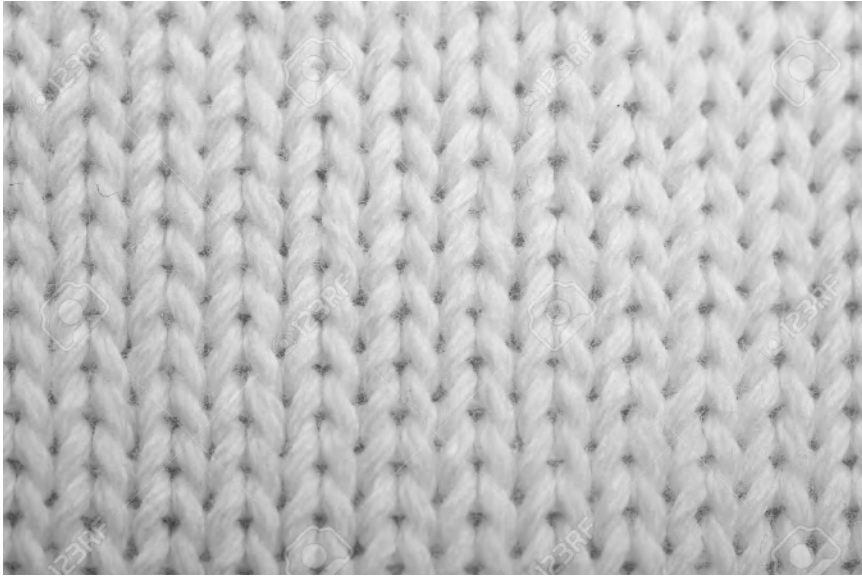
DEMO:
needle
felting

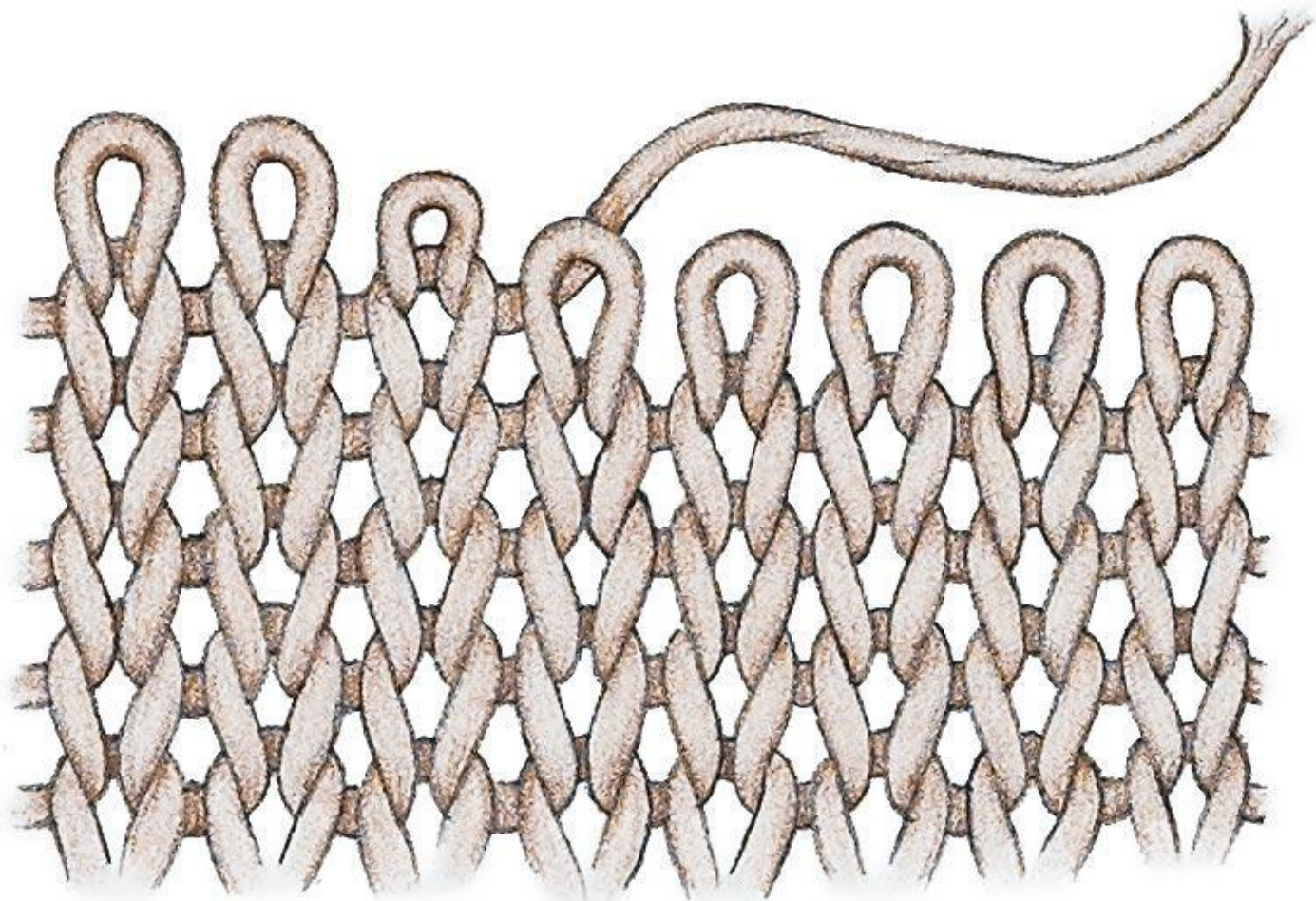
Demo project

Make an object out of needle felt.

Knit vs. Crochet

Creating interlocking loops using a continuous strand of yarn





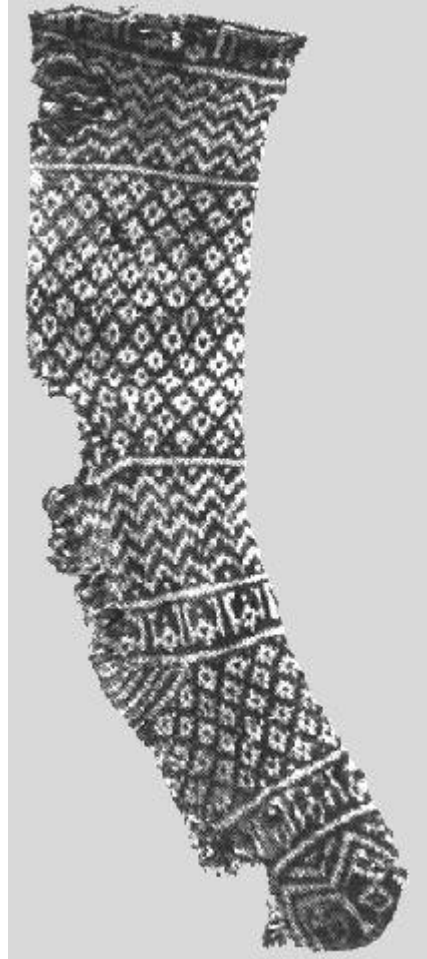








3rd century sock, Egypt using
naalbinding technique (one needle
knitting)



- ~10th century,
Egypt
- knitted Khufic
(Arabic) blessings
in pattern
- cotton yarn

- 1275, Spain:
liturgical gloves
- considered luxury
items reserved for
royalty or wealthy





- by 1400's, demand rose and knitting guilds and cottage industries established
- knowledge of technique spread



British sailors, WWI



Estonian socks

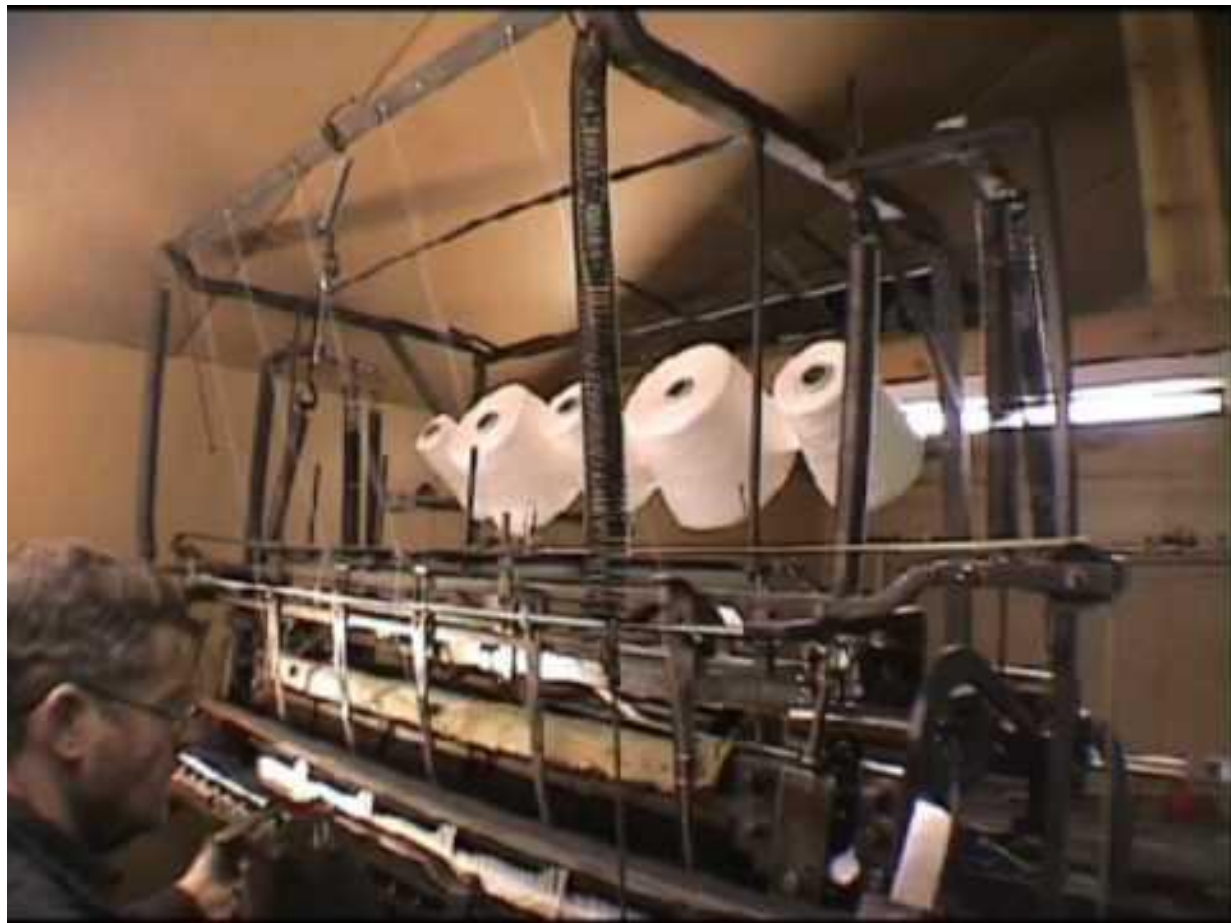
Unraveling for material reuse

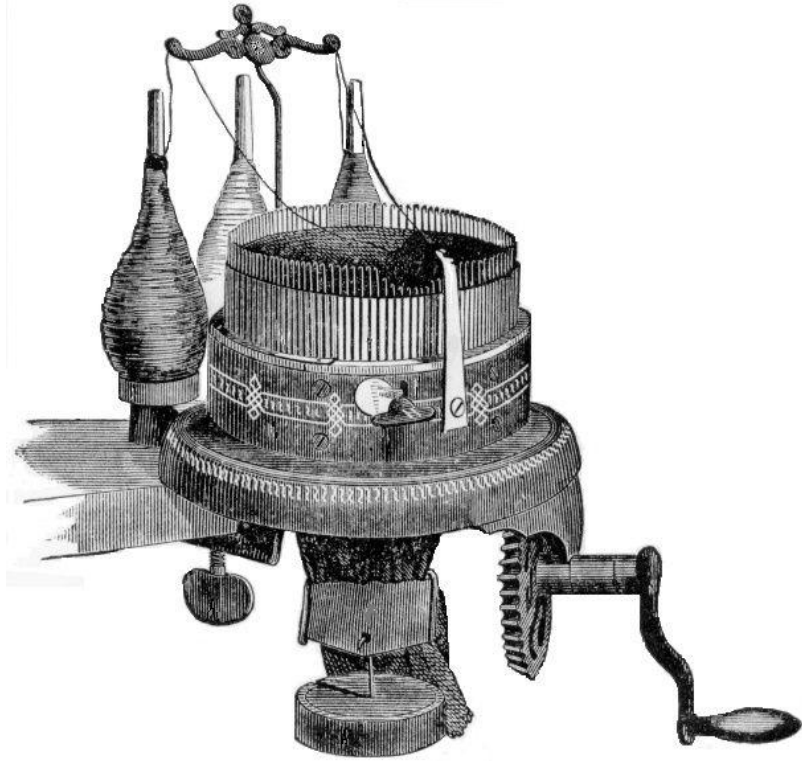


Stocking Frame

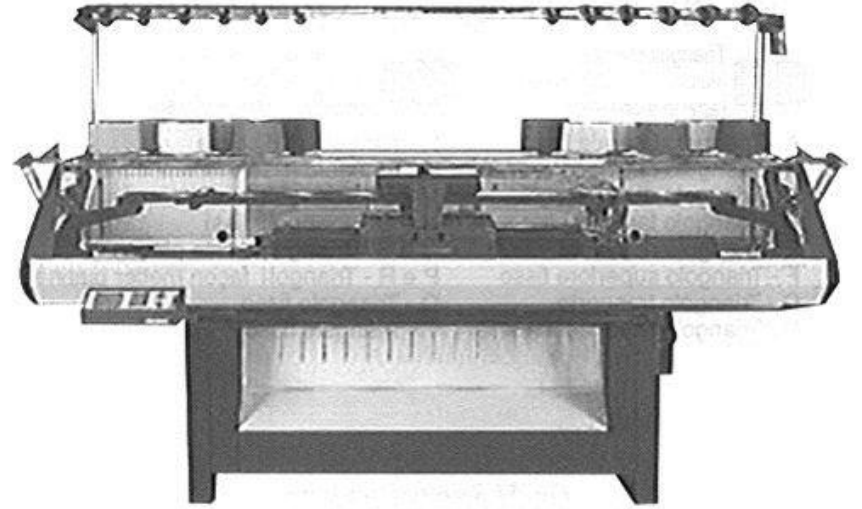
- 1589, Nottingham
England: William Lee
- imitates handiwork of
hand knitters







Circular sock machine



Flatbed knitting machine



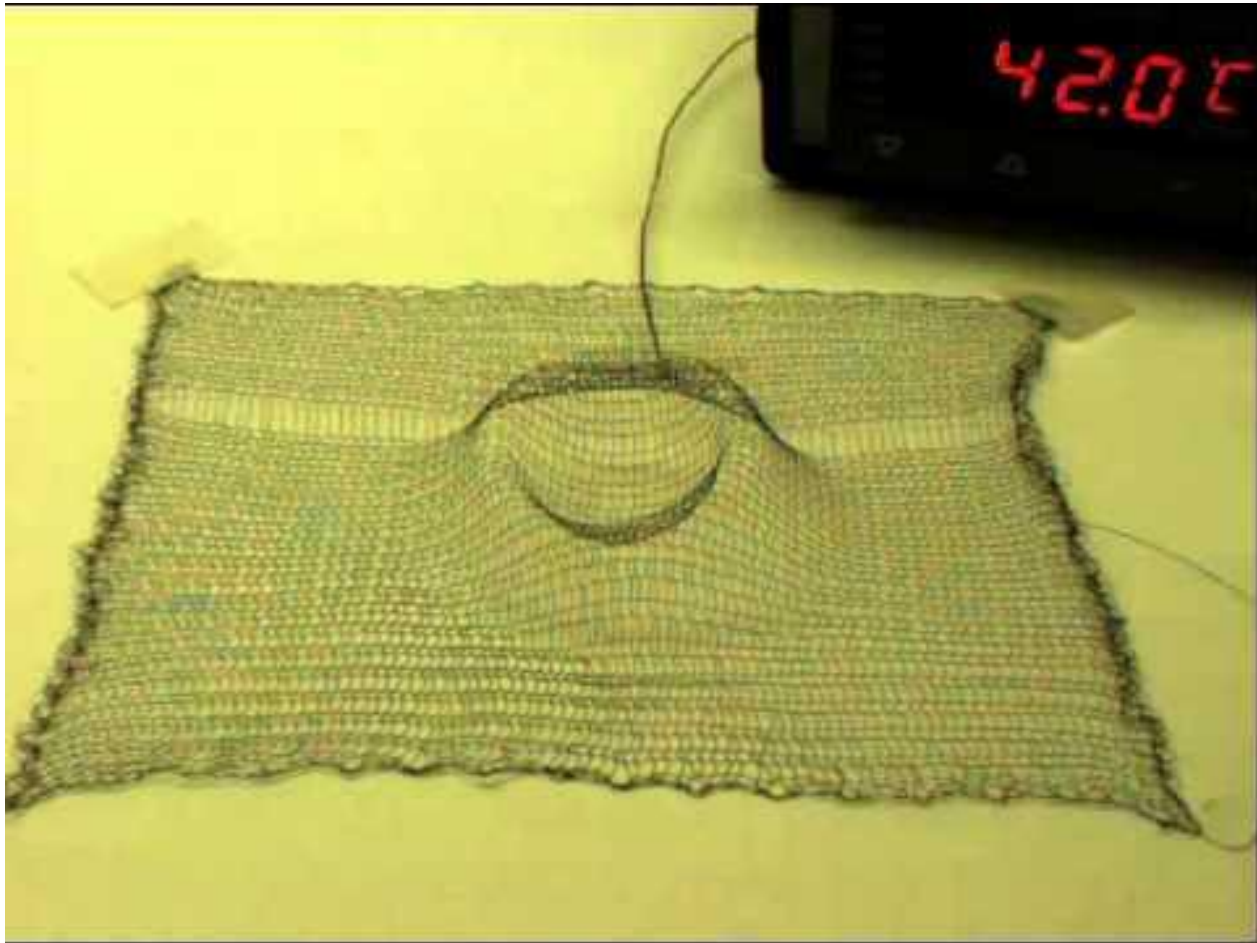


re-creation of first
crochet pattern from 1823



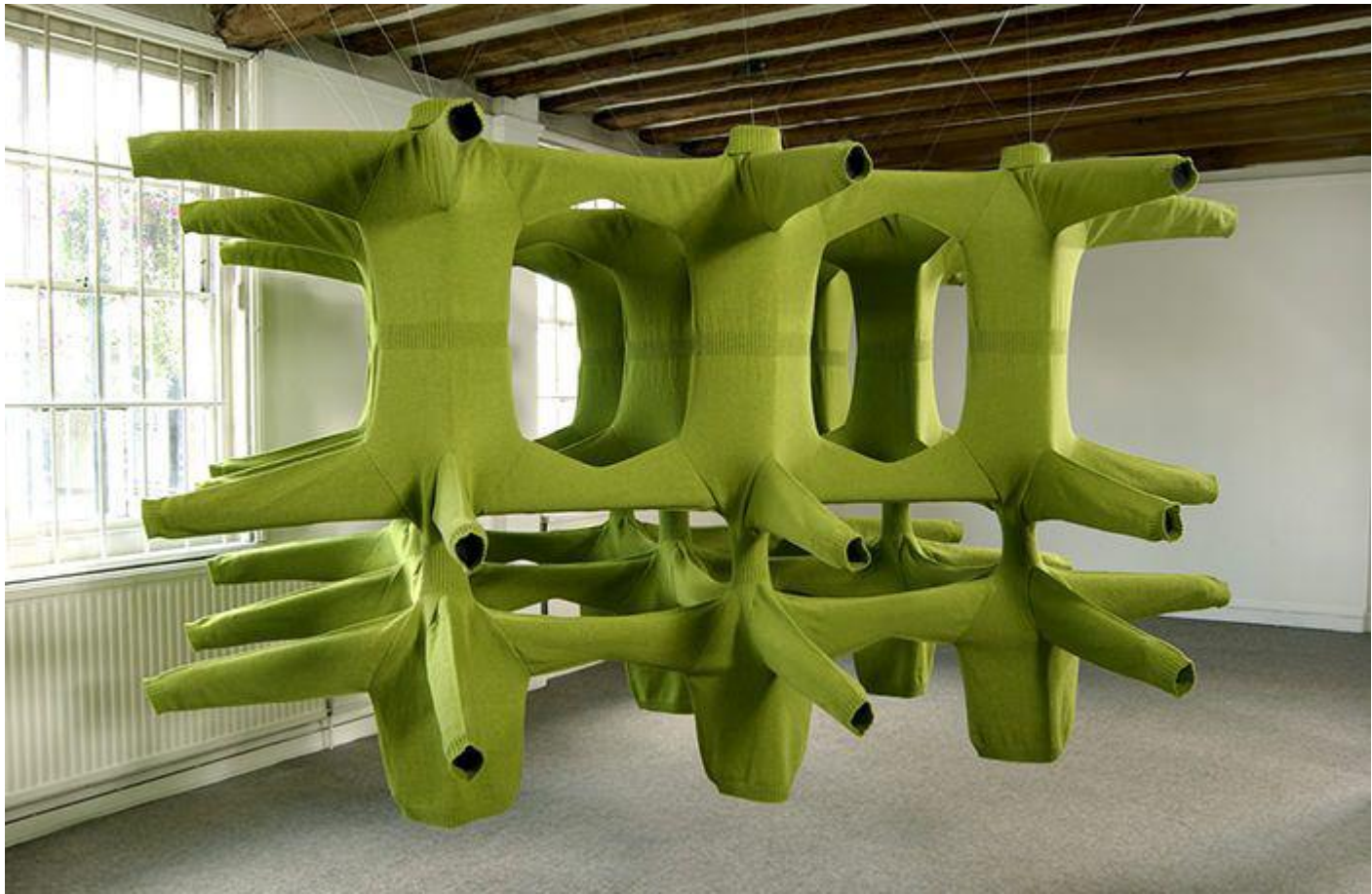
19th century crocheted lace



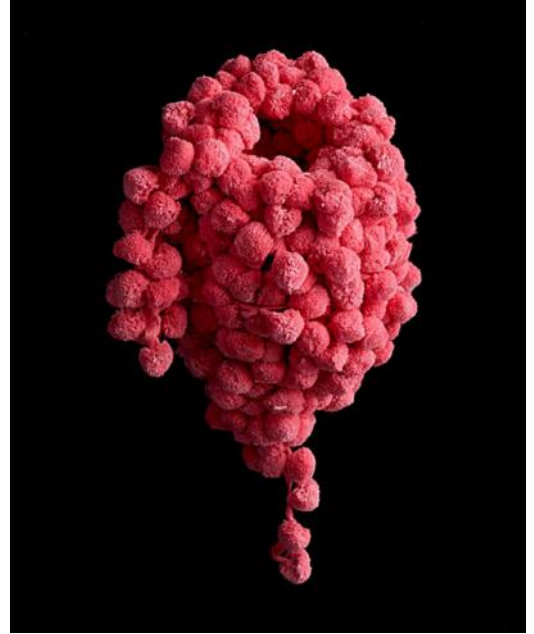
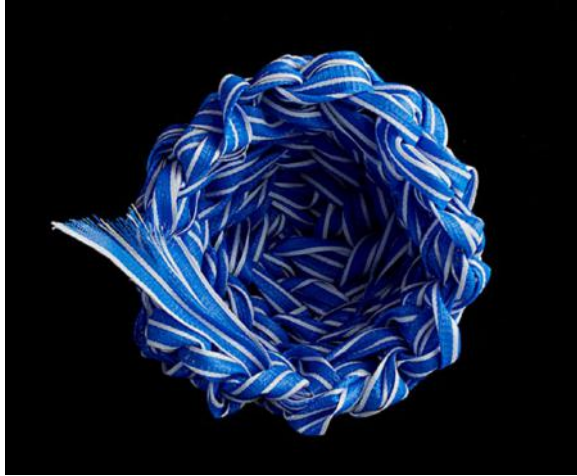




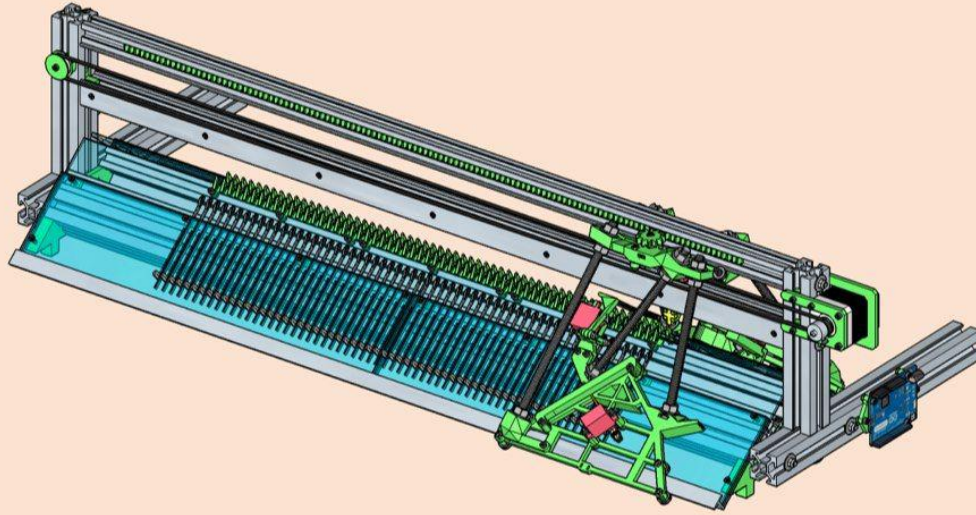
Sandra Backlund



Freddie Robbins - Anyway



Pate Conaway



OpenKnit - Gerard Rubio

SOURCE : [OPENKNIT.ORG](https://openknit.org)



<https://vimeo.com/86987828>



Kniterate Kickstarter

DEMO :
Knitting Loom







DEMO:
crochet

Demo Project

- crochet a line
- crochet a 2D shape
- crochet a 3D shape