

Identifying Handmade and Machine Lace

DATS in partnership with the V&A



DATS

DRESS AND TEXTILE
SPECIALISTS

V&A



RENAISSANCE
museums for
changing lives

Identifying Handmade and Machine Lace

Text copyright © Jeremy Farrell, 2007

Image copyrights as specified in each section.

This information pack has been produced to accompany a one-day workshop of the same name held at The Museum of Costume and Textiles, Nottingham on 21st February 2008. The workshop is one of three produced in collaboration between DATS and the V&A, funded by the Renaissance Subject Specialist Network Implementation Grant Programme, administered by the MLA.

The purpose of the workshops is to enable participants to improve the documentation and interpretation of collections and make them accessible to the widest audiences. Participants will have the chance to study objects at first hand to help increase their confidence in identifying textile materials and techniques. This information pack is intended as a means of sharing the knowledge communicated in the workshops with colleagues and the public.

Other workshops / information packs in the series:

Identifying Textile Types and Weaves 1750 -1950

Identifying Printed Textiles in Dress 1740-1890

Front cover image: Detail of a triangular shawl of white cotton Pusher lace made by William Vickers of Nottingham, 1870. The Pusher machine cannot put in the outline which has to be put in by hand or by embroidering machine. The outline here was put in by hand by a woman in Youlgreave, Derbyshire. (NCM 1912-13 © Nottingham City Museums)

Identifying Handmade and Machine Lace

Contents	Page
1. List of illustrations	1
2. Introduction	3
3. The main types of hand and machine lace	5
4. Six steps towards the identification of lace	7
5. Types of lace, single thread and multi-thread	9
6. Characteristics of main bobbin laces with grounds	11
7. Characteristics of machine made lace	18
8. Glossary	32
9. Bibliography	34

Identifying Handmade and Machine Lace

List of Illustrations

1. **Lace samples from a booklet prepared by Birkin and Co. Ltd. of Nottingham, 1900**
(NCMG 2005-121/4 © Nottingham City Museums)
2. **Lace curtain structure**
(Nottingham City Museums)
3. **Brussels 'duchesse' lace, 1850-60**
(NCM 1972-30/45 © Nottingham City Museums)
4. **Brussels needle lace, 1840-50**
(NCM 1972-30/17 © Nottingham City Museums)
5. **Honiton bobbin lace, 1880-1910**
(NCM 1967-202/2 © Nottingham City Museums)
6. **Lille bobbin lace, 1790-1810**
(NCM 1991-336 © Nottingham City Museums)
7. **Lille bobbin lace, 1840-60**
(NCM 1972-30/203 © Nottingham City Museums)
8. **Bedfordshire Maltese bobbin lace, 1860-80**
(NCM 1991-336 © Nottingham City Museums)
9. **Silk bobbin known as 'blonde', 1820-30**
(NCM 1972-30/530 © Nottingham City Museums)
10. **Alençon needle lace border, 1770-90**
(NCM 1981-509 © Nottingham City Museums)
11. **Alençon needle lace border, 1850-60**
(NCM 1972-30/179 © Nottingham City Museums)
12. **Single press point net with applied embroidery, c.1827**
(NCM 1907-190/1 © Nottingham City Museums)
13. **Double press point net, 1800-10**
(NCM 1926-166/63 © Nottingham City Museums)
14. **Bobbinet structure**
(© Nottingham City Museums)
15. **Needlerunning by hand on bobbinet, 1830-50**
(NCM 1972-30/522 © Nottingham City Museums)
16. **Leavers lace border, 1870-80**
(NCM 1991-231/477 © Nottingham City Museums)
17. **Leavers lace structure**
(© Nottingham City Museums)
18. **Leavers lace border, 1870-80**
(NCM 1991-231/454 © Nottingham City Museums)
19. **Pusher lace structure**
(© Nottingham City Museums)
20. **Pusher lace border, 1840-70**
(NCM 1907/174 © Nottingham City Museums)
21. **Part of a Chantilly lace cap, 1840-50**
(NCM 1931/60 © Nottingham City Museums)
22. **Pusher lace mat, white cotton, c.1920**
(NCM 1972-30/41 © Nottingham City Museums)

23. **Simplest warp frame lace structure**
(© Nottingham City Museums)
24. **Warp frame lace, 1810-30**
(NCM 1878-252/65 © Nottingham City Museums)
25. **Warp frame lace, 1810-30**
(NCM 1878-252/62 © Nottingham City Museums)
26. **Warp frame lace, 1804-1814**
(NCM 1878-252/56 © Nottingham City Museums)
27. **Allover pattern Raschel lace, 1970-75**
(NCMG 2007-56/13 © Nottingham City Museums)
28. **Barmen lace border, 1920-30**
(NCMG 2007-115/7 © Nottingham City Museums)
29. **Border embroidered by 'hand machine', 1870-80**
(NCMG 2006-239 © Nottingham City Museums)
30. **Chemical lace made on the Schiffli machine, 1910-20**
(NCM 2006-263 © Nottingham City Museums)
31. **Needlerunning on the Schiffli machine, border, 1920-40**
(NCM CTM 128 © Nottingham City Museums)

Identifying Handmade and Machine Lace

Introduction

Lace is basically a fabric in which the pattern is surrounded by air, with bars of net holding the various elements of the pattern together. The two types of hand-made lace, needle and bobbin, developed from cutwork embroidery and the plaiting and twisting of fringes in the 16th century. Except for laces made of metal thread most fibres were worth little, the cost and the exclusivity of the lace depending on the complexity and fashionability of the pattern and the weeks, months, even years it took to make. From the start it was a luxury fabric, rather than a necessity, and luxury goods can set their own price.

Almost from the beginning there were attempts to make cheaper copies of expensive laces but most of these copies failed because the originals were so densely patterned that there was no easy way of copying them on the weaving loom or the stocking frame, the only textile machines then available. However the coincidence of innovations on the stocking frame, a slight slump in the hosiery industry, the increasing airiness of fashionable laces and an increasing market for cheaper laces lead to experiments to make lace on the stocking frame. The first surviving piece of machine made lace, made by Robert Frost of Nottingham in c.1769 using a carved wooden cylinder to transfer loops from needle to needle, bears little relationship to a hand-made lace. But in a few years passable copies, in appearance at least, of certain types of bobbin lace could be made. In 1809 John Heathcoat in Loughborough invented a machine which could make an exact copy of the net of East Midlands laces. His invention lead to the Leavers, Pusher and Curtain machines.

From the mid-19th century huge quantities of machine-made lace of all sorts were being made in England and France. The quality had improved to such an extent that machine-made lace was extensively used on dresses made by Worth and other couture houses. At the end of the 19th century hand-made lace makers counteracted competition by producing new types and varieties of lace and by marketing all hand-made lace, from the most exquisite to the plainest, as 'real' lace.

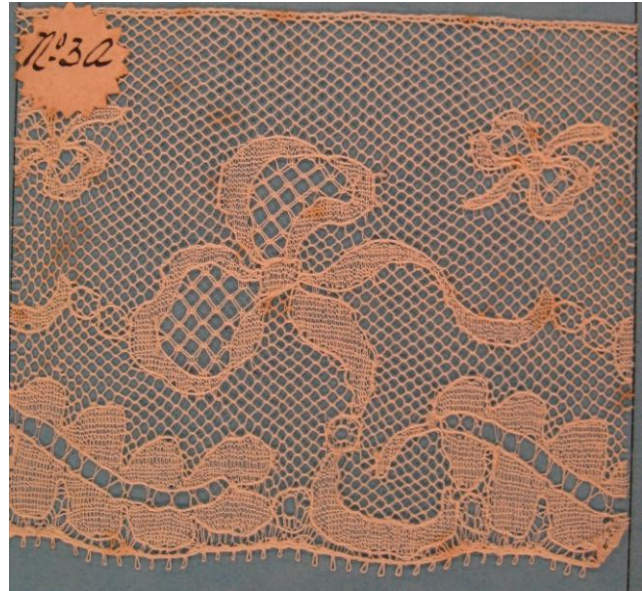
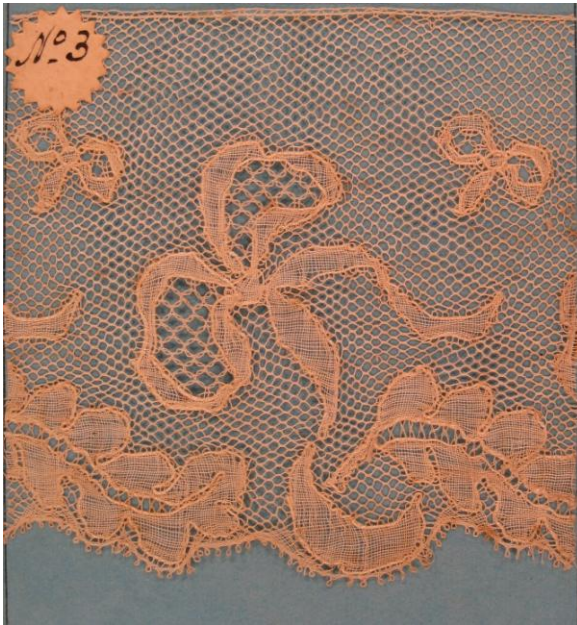
The First World War devastated the European hand-made lace centres. Increasingly other countries, Armenia, India and China, to mention but three, took up lace-making and it becomes increasingly difficult to tell from the lace itself where it was made. The making of machine lace had recovered by the 1920s and Leavers lace was a popular fabric for evening and wedding dresses into the 1950s. The industry contracted after the Second World War. Traditional Leavers dress lace was often regarded as dowdy by the young and faced competition from the faster Raschel warp knitting machine which, initially at least, worked more easily than the Leavers machine with the new synthetic fibres nylon and polyester. Today, although some Leavers lace is still being made, most dress, lingerie and furnishing laces are made on Raschel machines, especially the computerised Jacquardtronic and Textronic versions.

The aim of the workshop will be firstly to learn how to distinguish hand-made from machine-made laces, secondly to ascribe machine-made laces to the machines that made them, and thirdly to identify the main types of hand-made lace. As a corollary some whitework embroidery will be looked at but the main emphasis will be on lace and in general the emphasis will be on those laces which survive in greatest number trimming 19th and 20th century dresses and accessories. Where possible hand and machine versions of the same lace will be shown side by side.

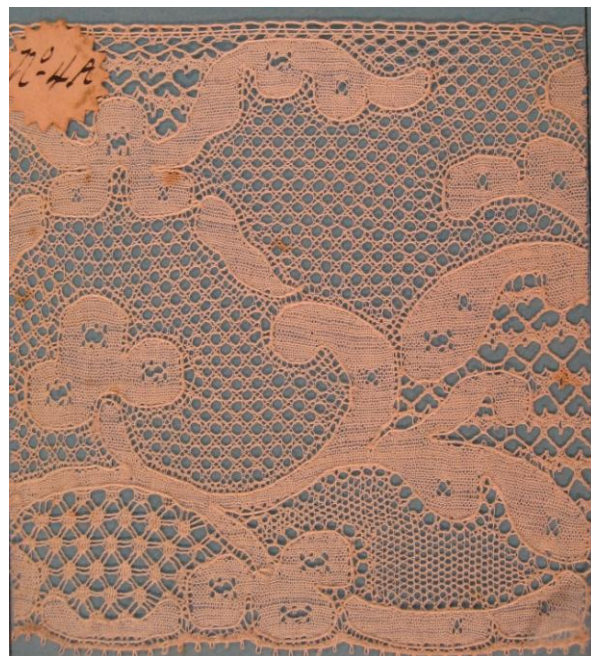
Identifying Handmade and Machine Lace

Illus.1a,b,c,d

Hand-made lace and Leavers lace copies side by side from a booklet prepared by Birkin and Co. Ltd. of Nottingham in about 1900. (NCMG 2005-121/4 © Nottingham City Museums)



Mechlin lace – left-hand version is hand-made, right-hand version machine-made.



Point de Flandre lace – left-hand version is hand-made, right-hand version machine-made.

Identifying Handmade and Machine Lace

The main types of hand and made machine lace

There are two basic types of **hand-made lace**: needle lace which is created by using a needle and thread and variations on buttonhole stitch and bobbin lace which is made by twisting and plaiting a large number of threads, each wound onto and weighted by a bobbin, on a stuffed pillow (the terms bobbin and pillow lace are interchangeable).

There are four families of **lace machine**:

1. **The stocking frame**, invented by William Lee in Calverton, Nottinghamshire, in 1589, to knit stockings. Unlike the hand knitter who knits one loop at a time, the stocking frame knits a row of loops in one operation on hooked needles. In the 1760s, with various adaptations, the stocking frame made lace by transferring stitches from one needle to another. Robert Frost made the first surviving piece of Nottingham lace by using a carved wooden cylinder to dictate the transfer of stitches. Later, a perfect net was made on the stocking frame and embroidered for sale.

A cousin of the stocking frame is **the warp frame**, invented in the 1770s. Instead of the stocking frame's horizontal row of needles and loops, it had vertical columns of loops which zigzagged to interconnect. It proved a very versatile machine; modern equivalents making not only fabrics but 'string' bags for fruit and vegetables.

The Raschel machine was invented using the principles of the warp frame by A Barfuss in Germany in 1859. The Jacquard apparatus (see under Pusher machine below) was adapted to it in the 1870s. The Raschel machine could work at higher speeds than the Leavers machine and proved the most adaptable to the new synthetic fibres, such as nylon and polyester, in the 1950s. Most contemporary machine-made lace is made on Raschel machines.

2. **The bobbinet machine**, invented by John Heathcoat in Loughborough, Leicestershire, in 1809, makes a perfect copy of Lille or East Midlands net (fond simple, a six-sided net with four sides twisted, two crossed). The machine uses flat round bobbins in carriages to pass through and round vertical threads. John Heathcoat moved his factory to Tiverton in Devon in the 1820s. Much expanded, it still makes net.

The Pusher machine is a variation of Heathcoat's machine, created by Samuel Clark and James Mart in 1812. It takes its name from the rods which pushed the carriages through the machine. The Jacquard apparatus (a system of cards punched with holes invented for the weaving loom by J M Jacquard in France in about 1800) was adapted to it in 1839 but it could only make the pattern and the net. The outline had to be put in by hand or later, by embroidering machine. Nottingham stopped making Pusher lace probably in the early 20th century but it continued being made in France.

The Leavers machine is an adaptation of Heathcoat's machine by John Levers (the 'a' was added to aid pronunciation in France) in Nottingham in 1813. The original machine made net but it was discovered that the Jacquard apparatus (invented in France for weaving looms by J M Jacquard in about 1800) could be adapted to it. From 1841 lace complete with pattern, net and outline could be made on the Leavers machine. The Leavers machine is probably the most versatile of all machines for making

patterned lace. Leavers lace was Nottingham's chief lace product until recently. Now there is only one British firm (not actually in Nottingham) which still makes it.

The lace curtain machine, invented by John Livesey in Nottingham in 1846 was another adaptation of John Heathcoat's bobbinet machine. It made the miles of curtaining which screened Victorian and later windows. Nottingham stopped making lace curtains in the 1980s and curtain lace in the 1990s.

3. **The hand-embroidery machine** was invented by Joshua Heilman in Mulhouse, France in 1828. It used pincers both sides of a piece of fabric, needles pointed at both ends, and single lengths of thread. A hand-operated pantograph dictated the movements of the needles which were grabbed by the pincers and pushed through the fabric. It makes a perfect copy of hand embroidery except that all the pattern repeats are identical. Lace is made by embroidering on machine-made net or on a fabric which is dissolved away by chemicals ('chemical' lace) or burned away by heat ('burnt out' lace).

The Schiffli embroidery machine was invented by Isaac Groebli in 1865. It uses two lengths of thread one on one face of the fabric, one in a shuttle on the other, to make a lockstitch. Like Heilman's machine it's movements were originally dictated by a hand-operated pantograph. Most embroidered laces are made using the Schiffli machine either on net or a soluble fabric. Nottingham, Plauen in Germany and St Gallen in Switzerland make a lot of machine embroidered laces.

4. **The Barmen machine** was developed in the 1890s in Germany from a braiding machine. Its bobbins imitate the movements of the bobbins of the hand-made lace maker and it makes perfect copies of torchon and the simpler hand-made laces. It can only make one width at a time and does not have the pattern potential of the Leavers machine.

Other techniques used for making lace

Crochet; made with a hooked needle, the basic stitch is a chain; used for all sorts of dress and furnishing trimmings; the finest is known as 'Irish crochet' no matter where it was made; imitated by Schiffli machine

Knitting; by hand; made by dropping and picking up loops; used occasionally for children's dress and underwear trimmings; sometimes used for furnishings

Tatting; made with a shuttle and sometimes a pin and ring; it is characteristically made in rings or ovals, often edged with small loops; rather limited in pattern, usually used for collars and cuffs, but sometimes also as mats

Identifying Handmade and Machine Lace

Six Steps to Identification

1. Equip yourself with a good magnifying glass, at least X8 or X10 magnification.

2. Decide (by sight) as far as possible on the thread:

nylon or polyester	post 1950
cotton	early 19 th century onwards, in machine lace often used with another fibre
silk	early 17 th century onwards, nearly all black laces are silk; matt black silk is called grenadine
rayon	from 1915 onwards, often very difficult, if not impossible, to tell from silk (by sight anyway)
linen	16 th century onwards, in spite of the popularity of cotton in the 19 th century linen seems to have been used for the finer laces, and also for peasant laces in the 19 th and 20 th centuries; often used as a gimp (outlining thread) with cotton
wool	used for very few laces, mostly mid 19 th century or 1920 – 40

The fibre will decide, more or less, what you are looking at: if linen, cotton, silk or wool could be hand or machine made (all machines except Raschel)

rayon	machine made, most likely to be Leavers
-------	---

nylon or polyester	machine made, Leavers or Raschel
--------------------	----------------------------------

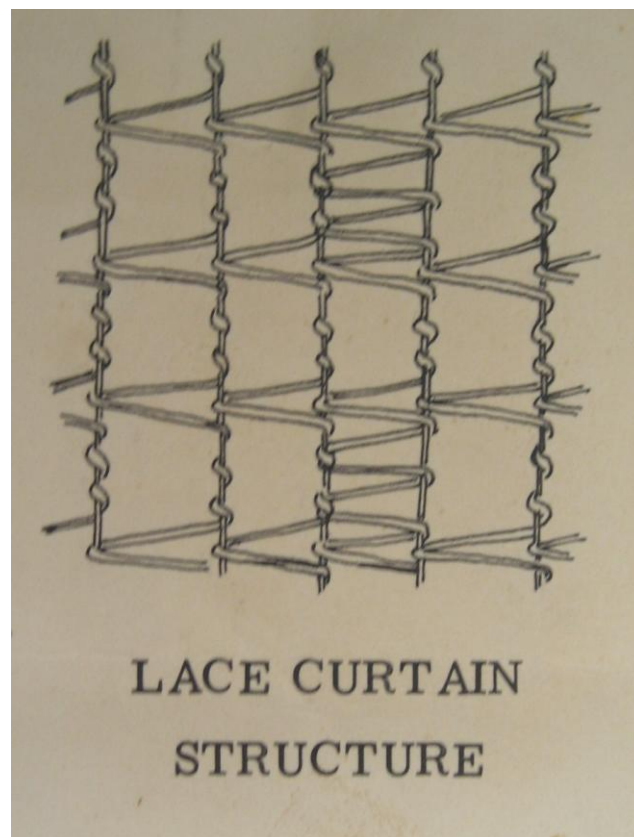
3. Decide whether the lace is hand or machine by studying the ground, the pattern, and what the gimp (outline) does.

If hand, what type?	needle, bobbin, crochet, embroidered?
---------------------	---------------------------------------

If machine, which machine?	Leavers, Pusher, Warp-frame, Stocking-frame, Raschel, Barmen, Hand-embroidering machine, Schiffli, Cornelly
----------------------------	---

4. Decide on date, through studying portraits and reference books (see bibliography)

5. Decide on country of origin. This is **very difficult**, especially from the mid 19th century onwards as there was a lot of copying of hand made lace in unlikely places, Armenia and China in the 20th century for instance. Machines were exported from one country to another.
6. If you are doubtful, make a note of your reasons for the attribution or dating. This can be very useful if there is disagreement or later on you wonder 'Why did I think that?' There is no shame in changing your opinion; lace is still a very fluid subject.



Illus.2

Identifying Handmade and Machine Lace

Types of Lace – Single and Multi-thread

NB. Dates below are only approximate. There are exceptions to every rule.

Single Thread

Needle	cutwork, reticella,	late 16 th -early 17 th C
	punto in aria	late 16 th – early 17 th C
	flat laces	late 17 th – early 18 th C
	raised laces	mostly 1650 – 1700 but some into the 18 th C in Venice. Revived in the late 19 th C in centres other than Venice
	point de France	1685 – 1710 (similar to Venetian needle laces but more regular ground)
	Alencon and Argentan	mid 18 th C to mid 19 th C with stops and starts
	Brussels needle laces	1700s into 20 th C
	Brussels point de gaze	1850s to 1 st World War
	Brussels point de gaz appliqué	mostly from 1860s to 1 st World War. As insertions in bobbin lace (duchesse) 1870s to 1 st World War
	Burano	18 th C, revival at end of 19 th C
Points de Venise a reseau (often however made in Brussels)	1700s to 1750s	
Tape	Branscombe	1850 – 1920s
	Luxeuil	late 19 th C
	Renaissance	1870s – 1910s
	Battenberg	1890s – 1920s
	Princess	1890s – 1920s
Crochet		mostly from 1850s into 1920s
Tatting		mostly from 1850s to 1920; revival in 1950s
Knitting		as lace from 1840s to end of 19 th C; 1950s revival
Embroidered nets	hand embroidery	late 18 th C into 1920s
	machine embroidery	mostly from 1880s

Single Thread cont'd

Machine	stocking-frame	1760s to 1850s(mostly as point net)
----------------	----------------	-------------------------------------

Multi thread

Bobbin*

continuous

Binche
Valenciennes
Mechlin
Lille
East Midlands
Genoa
Maltese
Flemish and Dutch early laces, Flemish, Belgian and Dutch Peasant laces, eg Antwerp, Bavaren-Waes

non continuous

(i.e the ground is made as a separate operation to the pattern elements; the ground can be needle or bobbin made mesh or bars [guipure])

Brussels
Milan
some 19th cent. Valenciennes
some Flemish
Honiton
some Northamptonshire

*dates not given for these as they change character so much. Good reference books will help

Machine**

(** see pp.18-19)
for details)

warp frame
Raschel
Leavers: bobbin fining
 independent beam
Pusher: hand run
 machine embroidered
Barmen
hand-embroidering machine
Schiffli embroidering machine

Applied

hand made lace on net	Brussels Honiton Northamptonshire inlay
fabric on net	Carrickmacross Brussels
net on net	

Identifying Handmade and Machine Lace

Characteristics of main bobbin laces with grounds

Type	ground	pattern	gimp
Valenciennes	diamond, four plaited sides; also round	dense, mostly clothwork but sometimes half stitch	none
Mechlin	hexagonal; two sides plaited, four twisted	clothwork, some very elaborate fillings	thicker linen thread
Brussels	hexagonal; two sides plaited (shorter than Mechlin), four twisted	clothwork, usually very fine	woven as the lace is made, later bundles of thread
Honiton	hexagonal; two sides plaited, four twisted; sometimes with bars; needle made ground sometimes used mid 19 th cent.	clothwork, some half stitch	as Brussels, late 19 th cent. often with thick linen thread
Lille	hexagonal, four sides twisted, two crossed	clothwork	thicker linen thread
Buckinghamshire	as Lille, rose ground used as filling	clothwork	thicker linen thread
Northamptonshire, very similar to Buckinghamshire	as Lille; often with square spots in groups	clothwork, in slight patterns often almost omitted and the gimp forms the pattern	thicker linen thread
Chantilly	as Lille	usually half stitch	usually bundles of threads
Point de Paris	star shaped, twisted sides, popular 1840 – 60 and at end of 19 th C	clothwork	thicker linen thread
Point de Paris (genre espagnole) (19 th & 20 th cent.)	as Point de Paris but with Lille as filling at bottom edge	clothwork	thicker linen thread
Point de Flandre (19 th & 20 th cent.)	<i>cinq trous</i> (five hole)	clothwork, sometimes with holes	thicker linen thread; often without any

Identifying Handmade and Machine Lace

Characteristics of main bobbin laces with grounds – Brussels lace



Illus.3
Brussels
'duchesse' lace
(bobbin lace with
needle lace
details), 1850-60,
part of a bonnet
veil. (NCM 1972-
30/45 © Nottingham
City Museums)



Illus.4 and 4a (detail)

Brussels needle lace applied to three twist net, 1840-50, part of a bonnet veil.

(NCM 1972-30/17 © Nottingham City Museums)

Identifying Handmade and Machine Lace

Characteristics of main bobbin laces with grounds – Honiton



Illus.5 and 5a (detail)

Honiton bobbin lace, 1880-1910, white cotton. Honiton lace is most often found applied to machine-made net but it sometimes has a needle-made ground or is a guipure as here. The pattern is linked by bobbin made bars with picots. (NCM 1967-202/2 © Nottingham City Museums)

Identifying Handmade and Machine Lace

Characteristics of main bobbin laces with grounds – Lille



Illus.6 and 6a (detail)

Lille bobbin lace, 1790-1810, white linen.

(NCM 1991-336 © Nottingham City Museums)

Identifying Handmade and Machine Lace

Characteristics of main bobbin laces with grounds – Lille



Illus.7 and 7a (detail)

Lille bobbin lace,
1840-60, white
cotton.

(NCM 1972-30/203 ©
Nottingham City
Museums)



Identifying Handmade and Machine Lace

Characteristics of main bobbin laces



Illus.8

Bedfordshire Maltese bobbin lace, 1860-80, black cotton. This example has the characteristic bars with picots, wheatear plaits and nine pin edge. (NCM 1991-336 © Nottingham City Museums)



Illus.9 and 9a (detail)

Silk bobbin known as 'blonde', 1820-30, probably made in Caen. (NCM 1972-30/530 © Nottingham City Museums)

Identifying Handmade and Machine Lace

Characteristics of main needle laces with grounds – Alençon



Illus.10 and 10a (detail)

Alençon needle lace border, 1770-90, white linen. The cordonnet (outline) is closely buttonhole stitched. The mesh is 'tortille' whipped over. (NCM 1981-509 © Nottingham City Museums)



Illus.11 and 11a (detail below)

Alençon needle lace border, 1850-60, white linen. The cordonnet (outline) is closely buttonhole stitched. The net is made from left to right by making a loop, twisting the thread around the side of the loop before making another loop and so on. At the end of the row the thread is taken back to the beginning through the loops making a new square mesh. **Brussels point de gaze** is similar but the thread is not returned to the beginning but makes another row of loops. (NCM 1972-30/179 © Nottingham City Museums)



Identifying Handmade and Machine Lace

Characteristics of machine-made lace

Name &/or machine	date span	Ground	pattern	outline(when used)
Stocking frame	1760s-1780s	transferred loops	rows of horizontal loops	hand run
Single pressed point net made on stocking frame; largely superceded by double pressed, continued in France	1770s- mid 19 th C	hexagonal, made by transferring loops; relies on dressing to keep its appearance	hand embroidered	hand run
Double pressed point net; finished in Britain in 1810s, continued in France; made on stocking frame	1786 – 1840s	hexagonal, made by transferring loops; relies on dressing to keep its appearance	hand embroidered	hand run
Bobbinet made on Heathcoat's bobbinet machine	1809 to present	hexagonal ground made by threads transferring from side to side, very like Lille or Bucks grounds	hand embroidery (needle-running or tambouring), machine embroidery (from 1828), applique	hand run; or tamboured; machine embroidery (from 1828)
Leavers, made on adaptation of Heathcoat's machine; Jacquard patterning device adapted to it in 1830s	1813 to present; patterned lace from 1830s on	all sorts; very versatile; most hand made grounds have been copied	ribbed (bobbin fining) imitation of clothwork (independent beam)	hand run (to 1850s) made with the ground and pattern 1841 onwards
Pusher, also an adaptation of Heathcoat's machine	1813 to e.20 th C (GB); to present (?) in France	hexagonal; ground made by threads transferring from side to side	imitation half stitch (as in Chantilly); threads pushed up together	hand run (to 1860s); by Cornelly machine from 1860s

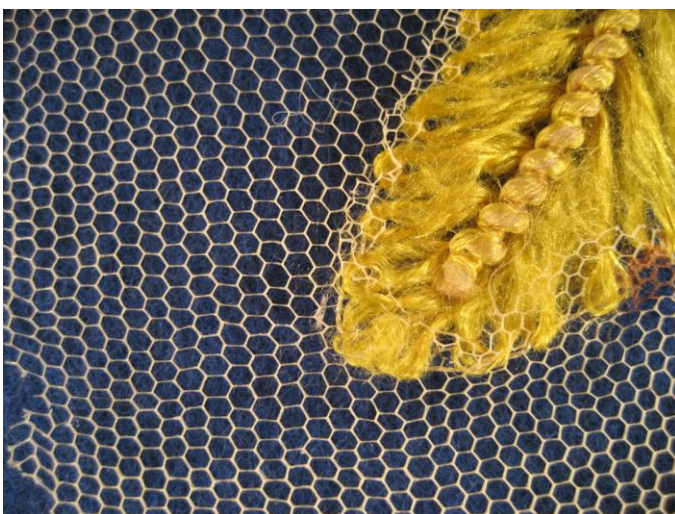
			(imitation of blonde/Spanish)	
Warp frame	1773 onwards	hexagonal, as chains	vertical chains of loops in zigzag	hand run to mid 19 th C
Raschel, development of warp frame	1859 to present, chiefly from 1950s for lace	hexagonal, as chains	“inlay” threads trapped between chains	made with the lace
Barmen	1890s to present	twisted, very good imitation of hand, especially in narrow borders	as hand	made with lace but usually not used
Machine embroidered: 1 & 2 often referred to as <i>chemical</i> or <i>burnt out</i> : 1. hand-embroidering machine	1828 – 1920s	machine bobbinet or dissolvable fabric (after 1883)	pattern repeats using only one thread, usually small and each one identical	rarely used
2. Schiffli	1860s to present	machine bobbinet or dissolvable fabric (after 1883)	two threads, above and below fabric, forming zigzag lockstitch	rarely used
3. Bonnaz or Cornelly	1860s to present	machine bobbinet	close chain stitch in various thicknesses of thread	chain stitch thicker than filling stitch; also used for stitching down muslin onto net

Identifying Handmade and Machine Lace

Characteristic of Machine Lace – Single pressed point net

Illus.12

Single press point net with applied embroidery, from an evening dress of c.1827, probably French; the silk net has one loop per vertical side and is very light and fragile; it relies upon its dressing (starch or gum Arabic) to keep its shape. (NCM 1907-190/1 © Nottingham City Museums)



Illus. 12a

Single press point net (detail)

(NCM 1907-190/1 © Nottingham City Museums)

Identifying Handmade and Machine Lace

Characteristics of Machine Lace – Double pressed point net



Illus.13

Double press point net with hand embroidery, 1800-10; more than one loop is used to make each side of the silk net and they bunch in the angles; again it relies on the dressing (starch or gum Arabic) to keep its shape.

(NCM 1926-166/63 © Nottingham City Museums)

Illus.13a

Double press point net (detail)

(NCM 1926-166/63 © Nottingham City Museums)



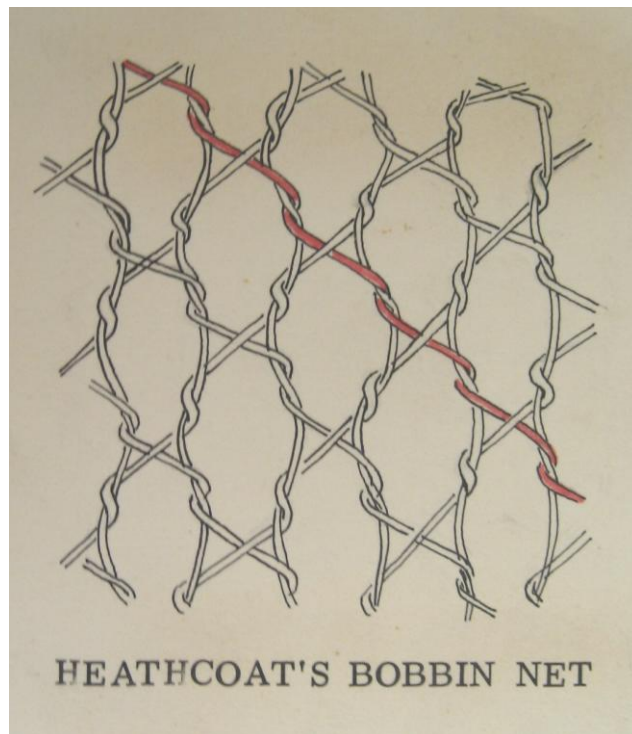
Identifying Handmade and Machine Lace

Characteristics of Machine Lace – Bobbinet

Illus.14

Bobbinet structure.

(© Nottingham City Museums)



Illus.15

Needlerunning by hand on bobbinet; part of a woman's cap, 1830-50.

(NCM 1972-30/522 © Nottingham City Museums)

Identifying Handmade and Machine Lace

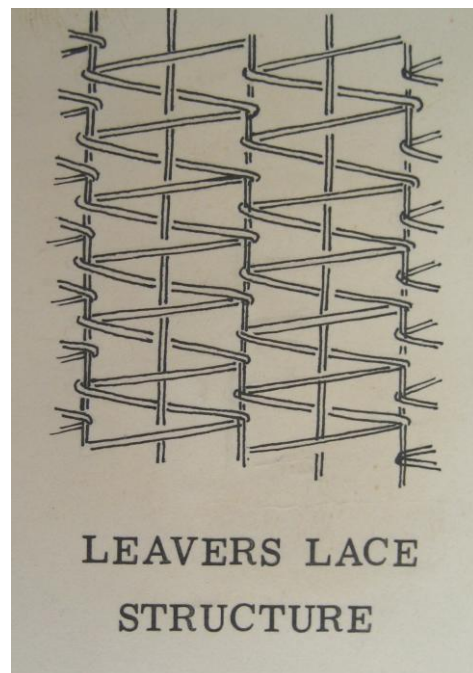
Characteristics of Machine Lace – Leavers



Illus.16 and 16a (detail below)

Leavers lace border, 1870-80, white cotton; a complex pattern with a variety of fillings, not a copy of a hand-made lace. The ribbing in the solid areas (clothwork in hand-made lace) is clearly seen, running horizontally here as it would be worn. Ribs run vertically when the lace is on the machine.

(NCM 1991-231/477 © Nottingham City Museums)



Illus.17

Identifying Handmade and Machine Lace

Characteristics of Machine Lace – Leavers



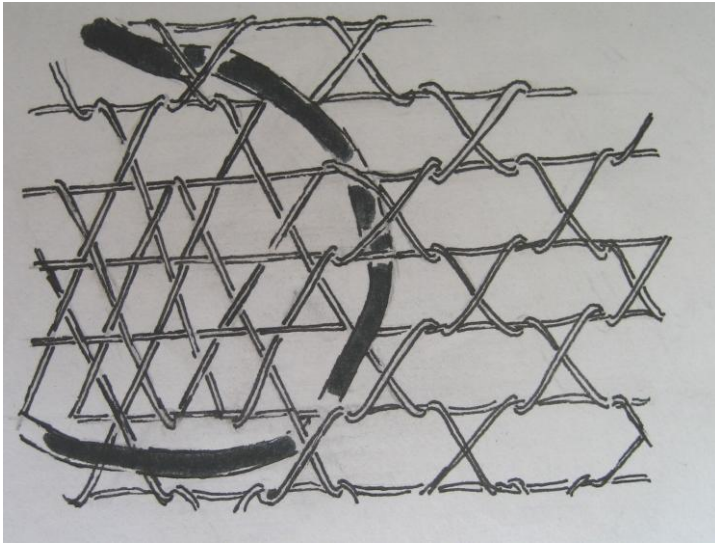
Illus.18 and 18a (detail below)

Leavers lace border, 1870-80. White cotton, imitating Cluny lace; the thick threads which form the pattern are held together by thinner binding threads. In a piece of hand-made Cluny lace all the threads are of the same thickness. (NCM 1991-231/454 © Nottingham City Museums)



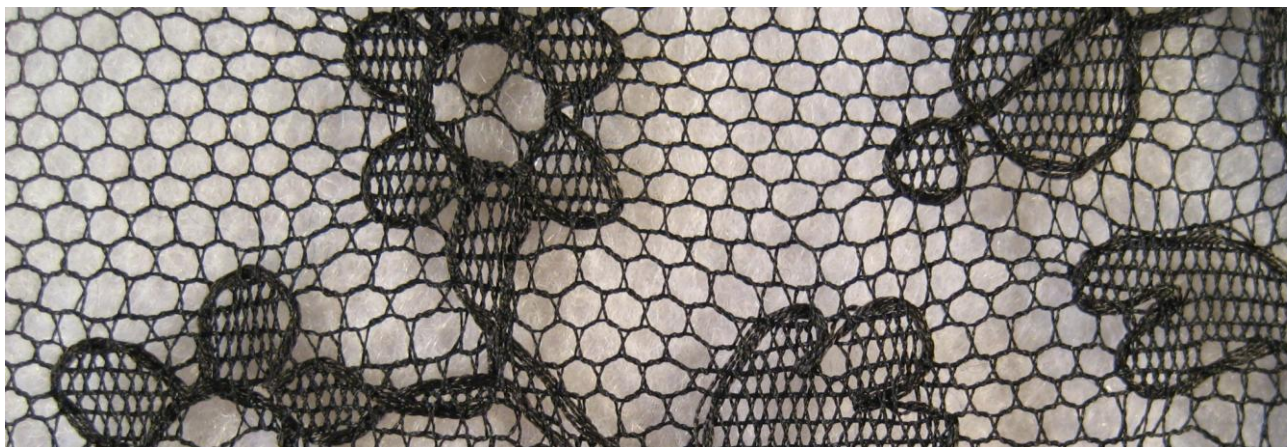
Identifying Handmade and Machine Lace

Characteristics of Machine Lace – Pusher



Illus.19
Pusher lace structure

Illus.20 and 20a (detail below)
Pusher lace border, 1840-70, black silk, probably Nottingham. The outline is put in by hand.
(NCM 1907/174 © Nottingham City Museums)



Identifying Handmade and Machine Lace

Characteristics of Machine Lace – Pusher



Illus.21

Part of a Chantilly bobbin lace cap, 1840-50. Both Chantilly and Pusher lace are made from a matt black silk called grenadine. Large hand made items could only be made in strips which were sewn together with a special stitch, point de raccroc. Here the joining threads have gone revealing the original strips. Large items in Pusher lace were made in one piece and this is one of the ways of telling the two laces apart. (NCM 1931-60 © Nottingham City Museums)



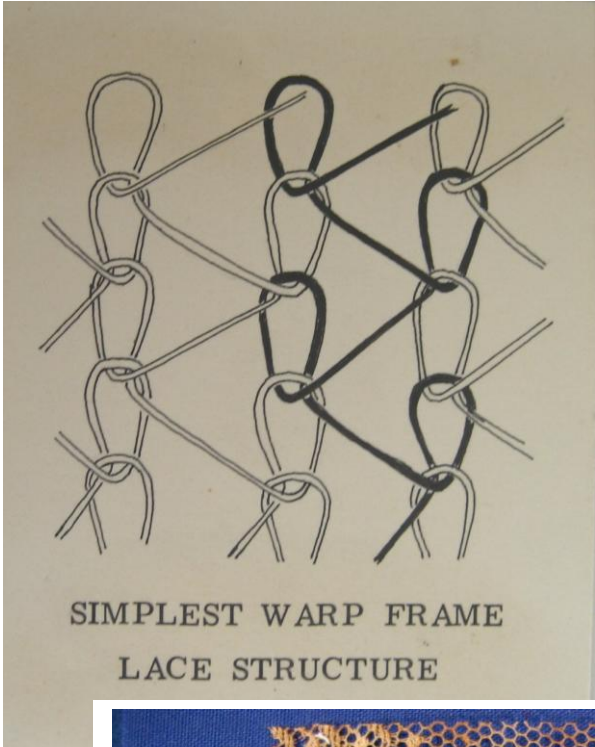
Illus.22

Pusher lace mat, white cotton, c.1920, probably French. The outline has been put in by a lockstitch machine. (NCM 1972-30/41 © Nottingham City Museums)

Identifying Handmade and Machine Lace

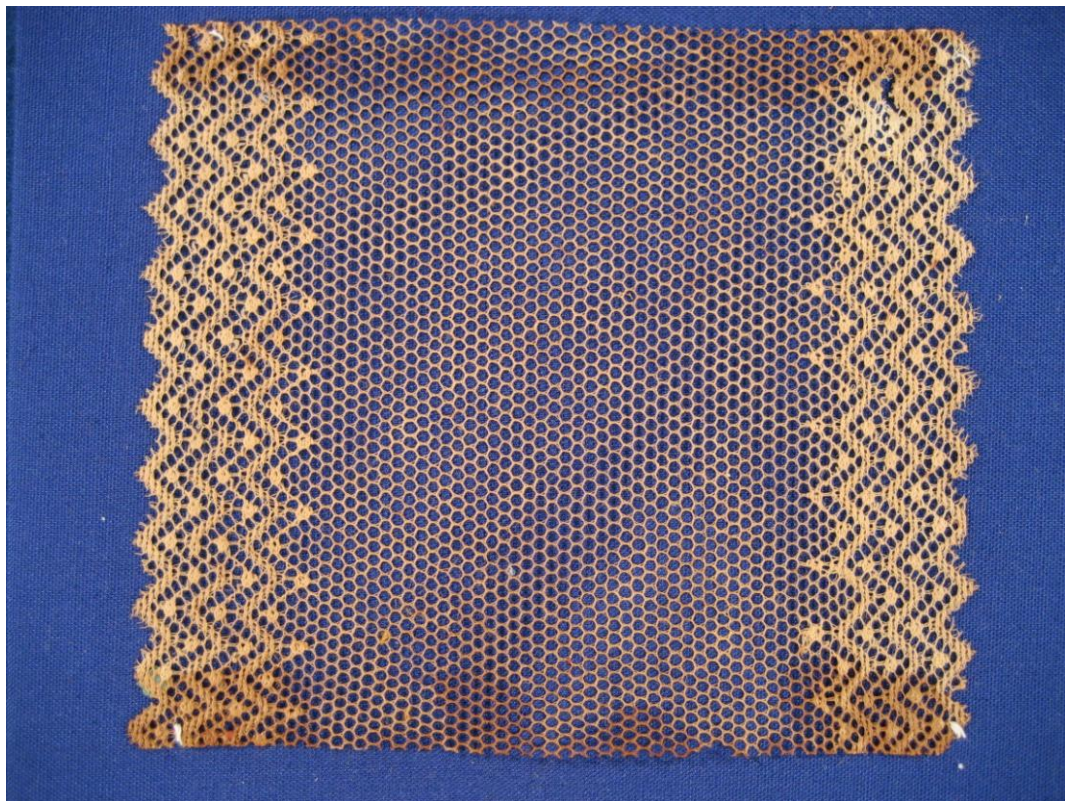
Characteristics of Machine Lace – Warp frame

V&A



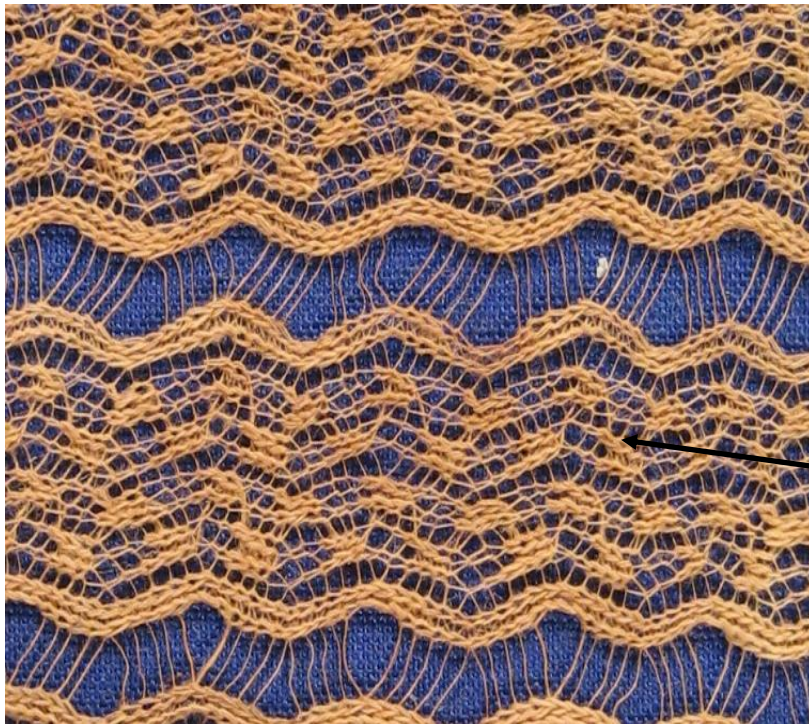
Illus.24 (below) and 25 (above)

Warp frame lace, 1810-30, white cotton; the net is very similar to point net except for the stray threads crossing the mesh. (IMG_0775 © Nottingham City Museums)



Identifying Handmade and Machine Lace

Characteristics of Machine Lace – Warp frame and Raschel lace

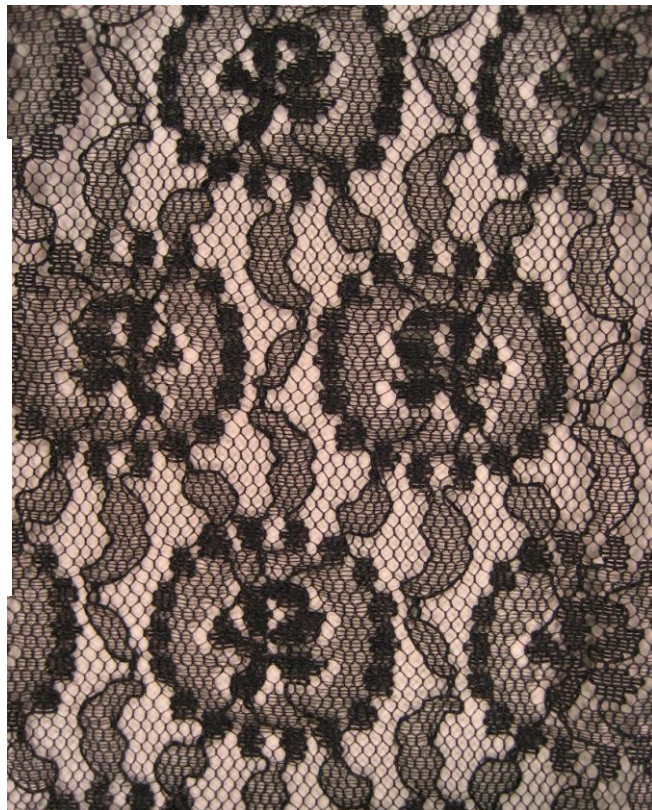


Illus.26

Warp frame lace, 1804-1814, white cotton; the chains which are characteristic of warp frame lace can be clearly seen. (IMG_0781 © Nottingham City Museums)

Illus.27

All-over pattern Raschel lace, 1970-75, nylon, probably a dress or lingerie lace made by Arthur Phelps & Co. Ltd. of Nottingham. The sides of the mesh are made up of chains and the pattern threads are inlaid, trapped between the chains. (NCMG 2007-56/13 © Nottingham City Museums)



Identifying Handmade and Machine Lace

Characteristics of Machine Lace – Barmen and Machine Embroidered

Illus.28

Barmen lace
border,
1920-30,
cream silk. A
very close
copy of Cluny
lace (NCMG ???)



Illus.29 and 29a (reverse side above)

Border embroidered by 'hand machine', from the trimming on a baby's carrying mantle, 1870-80. The pattern repeats are identical, especially noticeable when the thread passes from one motif to the next. (NCMG 2006-239 © Nottingham City Museums)

Identifying Handmade and Machine Lace

Characteristics of Machine Lace – Schiffli



Illus.30

Chemical lace made on the Schiffli machine, 1910-20, probably German or Swiss, part of a collar. The Schiffli machine uses two threads and makes a stitch similar to a closely spaced zigzag stitch on a domestic sewing machine. (NCM 2006-263 © Nottingham City Museums)



Illus.30a

Back of the Schiffli collar. (NCM 2006-263 © Nottingham City Museums)

Identifying Handmade and Machine Lace

Characteristics of Machine Lace – Schiffli



Illus.
Nee
Notti

:8 ©



Illus.31a

Detail of above

(NCM CTM 128 © Nottingham City Museums)



Illus. 31b

Detail of above – reverse side.

(NCM CTM 128 © Nottingham City Museums)

Identifying Handmade and Machine Lace

Glossary and useful terms

Allover (machine) patterned all over often with no obvious top and bottom; mostly cut and used as a fabric rather than a trimming

Application (hand and machine) one fabric applied to another, e.g. muslin onto net in Carrickmacross lace or bobbin made motifs in Brussels and Honiton application laces

Bars/brides (mostly hand) used instead of net to hold the lace together; lace using bars is called guipure

Border (hand and machine) trimming with one straight edge and one straight or shaped edge with picots (small loops); both hand and machine borders are made vertically with the straight edge to the right or left

Clothwork (hand) in bobbin lace the interweaving of threads so that the result looks like woven cloth

Cordonnet/gimp (hand) the outline of the pattern; not all laces have this, Valenciennes for example does not

Fillings (hand and machine) usually small areas of fancy nets within the pattern as opposed to the ground which is the net background to the lace

Flounce (hand) a deep border; (machine) a deep border made across with width of the machine; usually made on the Leavers machine as dress laces from 1920s onwards

Galloon (mostly machine) with two shaped edges; used in the same way as insertion

Ground (hand and machine) the net holding the lace together

Guipure (hand and machine) lace which has bars instead of net to hold the lace together

Half stitch (hand) in bobbin lace the interweaving of threads so that the result looks like a lattice; more open than clothwork; sometimes used for shading

Hand or needle run (hand) stitching in and out of the fabric, similar to darning; early lace embroiderers were called 'lace runners'

Insertion (hand and machine) with two straight edges, used between the edges of two pieces of fabric, as application or as heading to a border

Liner (machine) the outline of the pattern, corresponding to the cordonnet in hand made lace

Motif (hand) in chiefly Brussels and Honiton laces a flower (for example) made individually for application to net; (machine) usually cut from a larger piece, again for application

Needle running (hand) see under Hand or needle run; (machine) Schiffli embroidery giving the appearance of being hand run

Picots (hand and machine) small loops on the edge of lace or on bars linking the various parts of the pattern (guipure)

Reseau (hand) French for net

Tambour work (hand) a chain stitch made using a pointed hooked needle and originally a round frame (the tambour or drum)

Tape lace (hand and machine) a bobbin or machine-made tape tacked over a pattern and connected by needle bars and stitches, when finished the tacking is removed and the lace released; there are various types, Branscombe and Luxeuil for example; Princess and Battenburg refer to particular patterns of machine made tape; lace made with tape with pointed ovals is sometimes, confusingly, referred to as Honiton lace

Three twist net (machine) a net with three twists per side of the mesh making a diamond shaped ground. Invented in the 1830s. There is no hand made equivalent. Much used for applied work especially in Brussels and Honiton and sometimes called 'Brussels net'. There is also a much rarer four twist net.

Identifying Handmade and Machine Lace

Bibliography

Hand-made Lace

- Carnes, A.A. Bedfordshire Hand-made Lace; Bedfordshire Times Publishing Co. N.D. (c.1923)
- Channer, C. & A. Buck In the Cause of English Lace; R.Bean, Bedford; 1991
- Earnshaw, P. The Identification of Lace; Shire Publications, 1980
- Earnshaw, P. The Dictionary of Lace; Shire Publications, 1982
- Earnshaw, P. Bobbin & Needle-made Laces – Identification & Care; Batsford, 1983
- Earnshaw, P. Lace in Fashion; Batsford 1985
- Earnshaw, P. Threads of Lace; Gorse Publications, 1990
- Earnshaw, P. Youghal Lace; Gorse Publications, 1990
- Freeman, C. Pillow Lace in the East Midlands; Luton Museum, 1966, reprint
- Falayeva, V. Russian Bobbin Lace; Aurora Art Publications, Leningrad, 1986
- Gwynne, J.L. Illustrated Dictionary of Lace; Batsford, 1997
- Huetson, T.L. Lace & Bobbins, David & Charles, 1973
- Inder, P.M. Honiton Lace; Exeter Museum Publications, 1971
- Jackson, Mrs F.N. A History of Hand-Made Lace; Upcott Gill, 1900
- Jones, M. The Romance of Lace; Staples Press, 1951
- Jourdain, M. Old Lace, Batsford, 1908
- Kraatz, A. Lace, History & Fashion; Thames & Hudson, 1989
- Levey, S.M. Lace – A History; V&A Museum / W.S. Maney, 1983
- Leverly, S.M. “Le Pompe”, 1559, Patterns for Venetian Bobbin Lace; Ruth Bean, 1983
- & Payne, P.C.
- Lowes, Mrs. Chats on Old Lace & Needlework: Fisher Unwin, 1908
- Luxton, E. Royal Honiton Lace; Batsford, 1988
- May, F.L. Hispanic Lace and Lace Making; Hispanic Society of America, N.D.
- Meulen-Nulle, L. Alencon Lace; Aberdeen University Press, 1987
- Palliser, Mrs Bury A History of Lace; Sampson Lowe, 1902 (revised edition)
- Palliser, Mrs Bury Catalogue of Lace in the South Kensington Museum; Eyre & Spottiswood, 1881

- Pfannschmidt, E-E. Twentieth Century Lace; Scribner, New York, 1975
- Pethebridge, J. A Manual of Lace; Cassell, 1947
- Pethebridge, J. A Picture Book of Lace; V&A Museum, 1926
- Pollen, Mrs J.H. Seven Centuries of Lace; Heinemann, 1908
- Reigate, E. An Illustrated Guide to Lace; Antique Collectors' Club, 1986
- Rowley, P. Art, Trade or Mystery; Lace & Lace Making in Northamptonshire; Lace Guild, 2000
- Simeon, M. A History of Lace; Stainer & Bell, 1979
- Sharp, A. Point and Pillow Laces; London, 1899
- Springett, C. & D. Success to the Lace Pillow (lace bobbins); as authors, 1997
- Tomlinson, M. Three Generations in the Honiton Lace Trade; author, 1983
- Toomer, H. Lace – A Guide to Identification; Batsford, 1989
- Trendell, P. A Guide to the Collection of Lace in the V&A Museum; 1930
- Voysey, C. Needle Lace in Photographs; Batsford, 1987
- Voysey, C. Bobbin Lace in Photographs; Batsford, 1987
- Wardle, P. Victorian Lace; Herbert Jenkins, 1968
- Wardle, P. and de Jong, M. Kant in Mode (Lace in Fashion), 1815-1914 (English & Dutch text) catalogue of exhibition at the Utrecht Museum, 1985
- Yallop, H.J. History of Honiton Lace Industry; Exeter University Press, 1992
- 24 Lace Patterns (bobbin lace) from the Collection at Northampton Museum; Northampton Borough Council, 1999

Machine-made Lace

- Allen, W.G John Heathcote & His Heritage; Christopher Johnson, 1958
- Earnshaw, P. The Identification of Lace; Shire Publications, 1980
- Earnshaw, P. A Dictionary of Lace; Shire Publications, 1982
- Earnshaw, P. Lace Machines and Machine Laces, volume 1 Batsford, 1986; volume 2
Gorse Publications, 1995
- Earnshaw, P. How to Recognise Machine Laces, Gorse Publications, 1995
- Felkin, W. A History of the Machine-wrought Hosiery and Lace Manufacturers;
David & Charles 1967 reprint of the 1867 first edition.
- Golec, E.L. & Leavers Lace; American Lace Manufacturers Association, 1950
- Gwynne, J.L. Illustrated Dictionary of Lace; Batsford, 1997
- Halls, Z. Nottingham Lace in the 18th and 19th Centuries; Nottingham Castle
Museum, 1964
- Harding, K. Lace Furnishing Manufacture; Macmillan, 1952
- Henson, H.G. A History of the Framework Knitters, 1589-1790; David & Charles, 1970
reprint of the 1831 first edition
- Levey, S.M Lace – A History; V&A Museum/W.S. Maney, 1983
- Lowe, D. & The City of Lace; Nottingham Lace Centre, 1982
Richards, J.
- Lowe, D. & The Lace Heritage; Nottingham Lace Centre, 1984
Richards, J.
- Mason, S.A. Nottingham Lace, 1760s-1950s; author, 1994
- Palliser, Mrs Bury A History of Lace; Sampson Lowe, 1902
- Risley, C. Machine Embroidery; Studio Vista, 1973
- Wardle, P. Victorian Lace; Herbert Jenkins, 1968
- Willis, F.A. A History of Technology – The Textile Industry – Hosiery and Lace;
Oxford University Press, 1958