## LACE, AND ITS MANUFACTURE.

The history of lace is a remarkable one. Thirty years ago was the period at which the middle and humble classes began to use productions which, though not actually lace, bore a strong resemblance to it; we mean bobbin-net. Before that period, lace, in all its forms, was the production of human labour, unaided by any machinery, except a few pins, a few little sticks, and a cushion; and the cost of production was so high, that none but the wealthy could afford to purchase the lace thus made. Since that time machines have been invented, amplified, and improved to such an extent, that a light and elegant material, answering the purposes of hand-made lace, has been brought within the reach of almost all classes of the community. It is computed that nearly thirty millions of square yards of bobbin-net are made annually in England, chiefly in the neighbourhood of Nottingham. We have given several statistical details of the bobbin-net trade in 'Penny Magazine,' vol. iii., p. 278: the present article will relate to other parts of the subject.

Beckmann has endeavoured to discover how far back the making of lace may be traced, but he could not find any details in the ancient authors to warrant the assumption that what is now called lace was known among them. There have, however, since his time, been plates of Grecian costume published, in which the female dresses are seen to be bordered with lace. The embroidered lace, or that which is worked with a needle, was more ancient than pillow-lace or bone-lace; and lace of the former kind is sometimes found among old church furniture, from which it is probable that it was the production of nuns or of pious ladies of fortune, who had time to devote to such an exceedingly slow and tedious employment. This production probably originated in Italy, and from thence was introduced into Germany and France. Beckmann attributes the invention of pillow-made lace to Barbara Uttmann, a native of Saxony, about the year 1560. The annalists of Saxony have made especial mention of this circumstance, because it was of considerable importance at the time. The mines of Saxony had become less productive than formerly, and the miners' wives, who were principally employed in making veils by the old slow method of needle-work, could scarcely earn sufficient to support them. The new method of making lace was found to be so much more rapid, that it was soon learned by all the wives and daughters of the miners, and the lace which they manufactured, on account of the comparatively low price at which it could be produced, soon became fashionable, in opposition to the Italian lace worked with the needle, and even supplanted it in commerce.

Under the ministry of the celebrated Colbert, the lace manufacture, as then practised in Brussels, was introduced into France. Count de Marsan brought from Brussels to Paris his former nurse, whose name was Dumont, and her four daughters, in 1666. These were all lace-makers, and they received an exclusive right to establish and carry on the lace manufacture in Paris. In a little time Dumont and her daughters collected more than two hundred females, many of whom were of good families, who produced such excellent work, that it soon acquired a reputation both in France and elsewhere. It is certain that before this period the making of lace was very common in Flanders and Belgium. De Reiffenberg states that there is a series of six engravings now existing, by Martin de Vos, Dubruyn, and Londerseel, executed about the year 1580. These represent human occupations at different periods of life. In one of them is a young woman seated, with the apparatus in her lap for making pillow-lace.

Mechlin, Brussels, Valenciennes, and a few other continental towns, continued to be the principal marts for lace. During the seventeenth century there was quite a rage for this production, men as well as women wearing it in profusion: and even down to the end of the last century it was calculated that nearly ten thousand females were employed at lace-making in Brussels alone. Since that time the production of machine-made bobbin-net in England, and to a smaller extent on the Continent, has greatly reduced the amount of pillow-made lace. Valenciennes, which used formerly to be one of the chief places of its production, had not, in 1825, more than three hundred persons employed at it.

The period of the introduction of lace-making into England cannot be well ascertained, but it appears to have been somewhere about the reign of Queen Elizabeth, and to have been occasioned by the persecution of the Lollards in Flanders. Honiton in Devonshire was one of the first places at which it was carried on in England. At this town the manufacture was very flourishing in the time of Charles I. During the early part of the reign of George III., Honiton lace was much patronised by the royal family, and the manufacturers at that place employed upwards of 2400 persons in the town and its neighbourhood. By the year 1822 this number, probably on account of the increase in the bobbin-net

manufacture, had fallen to 300. What is the number of persons employed at the present time we do not know; but the recent Royal marriage has shown that Honiton lace is yet an object of demand. Generally speaking, we believe the thread employed in making Honiton lace is imported from Antwerp, the British thread being considered inferior for that purpose.

The counties in England where the manufacture of thread-lace is carried on are principally Devonshire, Buckinghamshire, and Bedfordshire. Bone-lace (as thread-lace was then called) was made at Olney in Buckinghamshire in the time of Fuller, and after that gradually extended throughout the greater part of the county. At the beginning of the present century, before the improvements in bobbin-net machinery were made, the principal scene of lace-making in Buckinghamshire was at Hanslope, but it extended fifteen or twenty miles round in every direction. In 1801, out of 1275 inhabitants of Hanslope, no fewer than 800 were engaged in this manufacture. Children were put to 'lace-schools' at or soon after five years of age. At eleven or twelve years of age they were able to earn enough for their own subsistence. Both girls and boys were taught to make lace, and even men were employed on it: it was often a good resource to men out of their usual employments, for they could earn as much at it as the generality of day-labourers. At the period of which we speak the lace made at Hanslope varied in value from sixpence to two guineas per yard.

The lace made in Bedfordshire was, for some reason or other, not of so fine a quality as that produced in some parts of Buckinghamshire; and the straw-platting, which has been carried on to a greater extent in Bedfordshire than in other counties, was generally more profitable.

British pillow-lace appears to have been at its height from 1800 to 1812. There were some very striking improvements made in the patterns about the former period, which led to a greatly increased demand, and British lace veils sold for from twenty to one hundred guineas each. About 1812, however, the competition of the bobbin-net manufacture began to be felt in earnest, and from that period pillow-lace making dwindled down to a very low ebb. Fashion may perhaps give it a temporary revival, but it is doubtful whether ever again it will be in a prosperous state.

Without professing to give a minute account of the mode of producing Brussels lace, or the kind similar to it, we may convey a few general notions respecting it. It is a light tissue or fabric made from single threads, the openings or meshes between them being formed by twisting the threads round pins. The work-bench, if we may use the term, is generally an oval plate, stuffed and covered so as to form a cushion or 'pillow;' and this is placed either on a table or on the lap. On this pillow a stiff piece of parchment is placed, and holes are pricked through the parchment in any desired form. Through these holes pins are stuck into the pillow. The threads with which the lace is formed are wound upon small bobbins; and from these bobbins the threads are woven around the pins, and twisted round each other in various ways, so as to form a pattern. The formation of the meshes may be described thus:—Suppose a number of ropes to be laid parallel, each consisting of two or three threads twisted round each other, but at every two or three spiral turns the threads composing one rope are twisted around those of its neighbour, and then return to be twisted with its own; this, being done with the whole of the threads, forms the meshwork or ground of the whole piece. The shape or figure of the meshes depends upon the number of turns which are made before the threads of one rope are twisted round those of the adjoining one. In the making of lace these various twistings are effected either by twisting the threads round the pins, or twisting the bobbins round each other. What we have been here describing is the mode by which the meshes or plain groundwork are produced. The lace is, however, ornamented by a thread, much thicker than that forming the net, which is woven or knitted in among the meshes in the form of flowers and other tasteful designs. The value of the lace principally depends on the elegance and completeness of these worked devices.

These are the outlines of all the methods; but the minutiæ were and are different in different places. It is believed that the first ever made in England was that denominated *Brussels point*, of which the network or ground is made by the pillow and bobbins, and the pattern and sprigs worked with the needle. The distinguishing features of the principal foreign laces are said by Mr. Slater (M'Culloch's 'Dict.') to be as follows:—*Brussels ground:* an hexagonal or six-sided mesh formed by platting and twisting four threads of flax to a perpendicular line of mesh. *Brussels wire-ground:* this is made of silk; the meshes are partly straight and partly arched, and the pattern is worked separately by the needle. *Mechlin:* an hexagonal mesh formed of three flax threads twisted and platted to a perpendicular line; the pattern is worked in the net. *Valenciennes:* the mesh is an irregular hexagon formed of two threads, partly twisted and platted at the top of the mesh; the pattern is, as in the Mechlin lace, worked in the net. *Lisle:* this has a diamond-shaped mesh, formed of two threads platted to a perpendicular line. *Alençon:* an hexagonal mesh of two threads, twisted like the generality of Buckingham lace, and considered inferior to most of the preceding. *Alençon point:* formed of two threads to a perpendicular line, with octagonal and square meshes alternately.

Our former article on bobbin-net contains as much information as it may be necessary to give respecting the rise and present state of that branch of industry. We may, however, say a few words as to the mode of manufacture. In weaving plain materials, such as calico, the rows of weft-thread cross the rows of warp-thread at right angles, interlacing one among another in a regular manner, the cross-thread passing over one and under the next of the long threads; in *twilled* materials the cross thread (or weft) passes over one, and under two, three, or four of the warp-threads, thus giving a kind of ribbed appearance. But in making bobbin-net the adjoining threads are made to twist round each other by the intervention of *two* weft or cross threads. The machine by which this twisting and interlacing are effected is one of the most beautiful pieces of mechanism that the cotton-manufacture presents, but it is too elaborate to be described here. We may, however, show the principle on which the meshes are formed, by the aid of the following cuts.

*Fig.* 1 represents what would result if the perpendicular threads were of inflexible wire; and *Fig.* 2 the effect produced when they are, as in practice, of flexible fibres. In each case the perpendicular threads, which indeed form the *warp*, may be traced from top to bottom. One of the weft-threads descends diagonally from right to left, and then, after forming a *selvage* or edge, descends from left to right; while at the same time the other weft-thread descends diagonally first from left to right, and afterwards from right to left. The weft-threads twist round the warp-threads at the sides of every mesh, and cross each other at the top and bottom of every mesh.

The net produced by machinery obtains different names, according to the mode in which it is made. There were some years ago *two-plain net, square or tuck-notted net, fish-mesh net, platted net*, &c.; but at present the kinds produced in England are *point-net, warp-net*, and *bobbin-net;* these names are derived, not from their peculiarity either in appearance or in use, but from the sort of machines with which they are made. The *quillings*, or

narrow strips of net, are made in broad sheets or widths, being connected together merely by a single thread, which is afterwards drawn out. The meshes in machine-made net vary from about twenty to thirty-six in an inch. The French are accustomed to make a kind of silk net called *single press point:* when this is plain it is called *tulle*, and when ornamented *dentelle*.

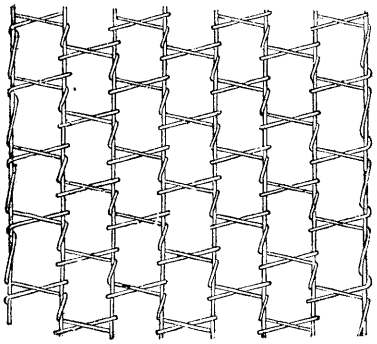

*Fig.* 1.

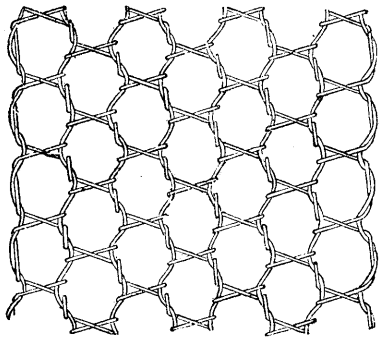

*Fig.* 2.