Drawn Thread Work

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The empty spaces produced in linen by grouping together with stitches several threads, isolated by the drawing out of warp or woof threads or both, constitutes what is known as "drawn thread work".

By grouping together and covering the isolated threads with different stitches the most varied combinations and the richest patterns can be produced, suitable either as sole decoration or as a finish to cross stitch or other embroidery.

The simplest kind of drawn work is known as "hemstitching" which consists in drawing out a few parallel threads of the material at the head of a hem and fastening up the upper and last cross-thread to the folded hem above it, so as to prevent its ravelling downwards; thus leaving small open spaces between each of the clusters of threads. The borders, insertions and grounds, the Italian cut stitch, the different kinds of American, Danish and Norwegian openwork (*) and finally the Reticella cut work of Italian and Greek origin are all more complicated and elaborate forms of drawn or openwork; the latter being a transition from openwork on linen to lace work.

The patterns of modern work of this kind are very similar to certain lace patterns, they resemble the American ones and

(*) See at the end of this album the list of the publications of the D.M.C library containing a great variety of patterns for every kind of work.
contain, like these, stitches and figures often employed in the Teneriffe lace.

Viewed as regards the execution there are two kinds of openwork on linen: the one is produced by drawing out a certain number of either the warp or the woof threads, this is known as drawn work (the Italian punto tirato); the other requires the removal of both warp and woof threads and is known as cut work (the Italian punto tagliato).

**Materials.** — Openwork on linen is done on woven stuffs, the warp and woof threads of which should as far as possible be of equal size so that the spaces left by the removal of the threads may be regular in form. For table, bed and toilet linen, all the different kinds of white, cream or écru linens, used for embroidery, are suitable: for decorative articles, coloured linens are preferable, known as English or Scotch linens. The different kinds of tammy cloth serve for chair backs, curtains and blinds; gauze and cambric, for dress trimmings.

For the work itself, when the threads of the stuff have been removed, a strong, twisted thread should always be used, one or other of the following articles, bearing the D.M.C trade mark: Alsatian thread D.M.C (Fil d’Alsace), Alsatian twist D.M.C (Retors d’Alsace), Lace thread D.M.C (Fil à dentelle), Crochet cotton 6 cord D.M.C (Cordonnet 6 fils), Special crochet cotton D.M.C (Cordonnet spécial), Crochet cotton bell mark D.M.C (Cordonnet à la cloche), Flax lace thread D.M.C (Lin pour dentelles) or Flax thread for knitting D.M.C (Lin à tricoter). The working thread should, generally speaking, be of the same size as the threads of the stuff, but for the raised parts which are to stand out in special relief a coarser thread should be used. For all the fillings and decorative figures in darning stitch, a loose pliable thread should be selected, such as Special stranded cotton D.M.C (Mouliné spécial), and Stranded flax D.M.C (Lin mouliné) composed of several strands, of which one or more can be used as required or else Pearl cotton D.M.C (Coton perlé) or Floss flax D.M.C (Lin floche), both with a slight twist.
Openwork on linen is generally done in one colour only, white on white, or in the same shade as the stuff; but we should recommend white thread for cream and écru stuffs and a slightly tinted thread for the coloured lines. Openwork on linen in several colours is not often met with.

To facilitate the reproduction of our patterns directions as regards the course of the work and the materials to be used, are given, either beneath the engravings in the text, or, in the case of the plates, at the back of each plate.

**Insertions (punto tirato).**
Insertions are made, as we have already said, by drawing out either the horizontal or the vertical threads. The openwork hems form the starting point of this kind of work.

These hems often take the place of the ordinary hem when a richer effect is desired. Wider insertions are used as a trimming for bed and table-linen instead of embroidery or lace insertion.

**Single hem-stitch** (figs. 1 and 2). — Draw out two threads beneath the fold over, then tack down the hem above the isolated threads. Fasten in the working thread on the left, then slip the needle from right to left under three isolated threads, draw it out and pass it, upwards from below, under two threads of the fold of the hem. (See fig. 1.)

For the hem fig. 2, prepare it like the preceding one, and work as before from left to right, only that after having slipped
your needle under the two perpendicular threads, you insert it into the hem downwards from above, over one thread, so that it comes out exactly at the very edge of the fold. These stitches which may also be made on the wrong side of the work, form a kind of cord beneath the hem.

**Ladder hem-stitch** (fig. 3). — After making the first row of stitches, as shewn in fig. 1, draw out a few more threads, 5 in all. Then turn the work and make a second row of stitches like the first. You collect the same threads as in the first row thus forming vertical rungs or steps.

**Serpentine hem-stitch** (fig. 4). — Here again the first row of stitches is made as in fig. 1, by taking up each time an even number of threads. For the second row take up half the threads of two clusters, so as to divide the rungs or steps which will thus form a serpentine line.

**How to secure the edges of the stuff in openwork.** — After drawing out the threads for a hem or an insertion, you must secure the threads of the stuff on both sides of the openwork, so as to keep them in their place and prevent their slipping into the openwork part. This is an indispensable precaution in the case of wide hems or insertions; for small articles of fancy-work it is not so necessary.

The simplest way of securing the edges is shewn in figs. 1 and 3, it can also be done by straight and oblique stroke stitches, set singly or grouped together in the shape of scallops or squares (see plates 1 and 4).

For the openwork parts, combined with embroidery in colours, use cross stitch and plaited stitch (see plates 13 and 19). In work of a more minute description, the edges are button holed or overcast as has been done in the patterns
represented in plates 2, 8, 9, 11, 12 and 18, where the stitches are thickly padded, thus producing a raised effect.

Figs. 5 to 9 also illustrate some stitches that may be used for this work.

**Four-sided stitch** (fig. 5). — Draw out one thread of the stuff, skip three threads and draw out one.

The stitches are made in a row from right to left. Begin with a vertical stitch upwards over the three isolated threads, then carry the needle on the wrong side of the work, three threads downwards to the left, make one horizontal stitch to the right, which will touch the vertical stitch at the top and finally bring out the needle below, to the left of the horizontal stitch. Then make a vertical stitch again and so on. By drawing the thread tight you get small square stitches accompanied above and below by little eyelet holes. In loosely woven stuffs it is not necessary to draw out a thread top and bottom, the openwork effect results of itself by the threads being drawn closely together.

**Crossed back-stitch** (figs. 6 and 7). The right and the wrong side of this stitch both serve for securing the edges of the stuff. Leave a band of stuff, three threads deep, then draw out one thread above and below.

For the execution described by the engraving, fig. 6, you insert the needle as for ordinary back-stitch, slip it under the stuff, slanting it a little towards the second outline of the drawing, and bringing it out one thread beyond the
first stitch. After making one back-stitch over two threads of the stuff, slip the needle upwards again under the stuff and bring it out two threads further on for a new stitch.

The intercrossing of the threads and the way this stitch is worked on the wrong side are shewn in fig. 7.

**Fancy stitch worked in one journey** (fig. 8). — Here again the band of stuff is three threads deep but two threads of the stuff must be drawn out both above and below.

Beginning below on the right, make two back-stitches from left to right over four disengaged threads, these are followed by two stitches over three horizontal threads and two vertical ones, sloped to the right; after which you make two horizontal back-stitches over four threads at the top to come back to the first line with two slanting stitches over three horizontal and two vertical stitches, sloped to the right. Continue in this manner drawing the stitches very tight and the open parts will come out very distinctly.

**Fancy stitch worked in two journeys** (fig. 9). — The stitches are made over five horizontal threads, and one thread is drawn out top and bottom. The first row consists of single stitches, see figs. 1 to 3, one of which is worked upwards and the other downwards (see also the explanatory detail on the left side of the engraving). In the second journey you add a row
of oblique stitches in the middle of the band, set between the stitches of the first row; in the engraving these stitches are shewn by a dark thread.

**Different ways of openworking the bands of drawn stitch.** — The openwork can be produced in various ways:
1° By drawing the clusters of threads opposite ways;
2° By knotting the clusters;
3° By embroidering over the clusters;
4° By linking the clusters together with small decorative subjects.

**Different ways of drawing the clusters together interverted** (figs. 10, 11, 12, 13, 14, 15, 16, 17, 18). — You draw

![Fig. 15. Flour clusters once interverted and twice crossed.](image)

![Fig. 16. Whole clusters once interverted and three times crossed.](image)

the clusters together opposite ways by slipping a needle and coarse thread under one cluster which you then slip over one of the next clusters. To keep the clusters in their new position you pass the coarse thread between the clusters that are interverted.

You can draw the clusters opposite ways in one journey or in several parallel lines, then you can take either whole clusters, or divided ones, or several clusters at once as will be seen from the following examples.

We begin with the small strips made in one journey; fig. 10 shews us the plainest one, two whole clusters once interverted.
For this you draw, as we have just said, the second cluster over the first and the coarse thread passes over the second cluster and under the first. For the stripe fig. 11 the clusters are divided before they are interverted; this pattern presents a less open effect than the preceding one.

The engraving fig. 12 shews two whole clusters interverted with two half-clusters and fig. 13 a design consisting of two whole and four half clusters.

The patterns of figs. 14 and 15 are formed of four clusters interverted at the same time. For fig. 14 you draw the third and fourth clusters over the first and the second, which gives a subject crossed once, whilst for fig. 15 you intervert the third and the fourth clusters and the fourth and the second; in this way the clusters appear crossed twice.

Finally fig. 16 shews how to execute in one journey a row crossed three times. To get this effect you intervert the fourth and first clusters, the sixth and the third, the eighth and the fifth and so on.

Two more patterns are added in which the clusters are interverted in two parallel rows. Fig. 17 shews a double row of the motives of fig. 10, and fig. 18, a double row of the motives of fig. 15. The position of the needle shows the working of the second row.

**Three-rowed insertion with divided clusters once interverted and little waved bands between** (fig. 19). — The following patterns are to shew the uses to which the different crossed openwork stitches just described can be put.
For the three-rowed insertion, fig. 19, repeat the stitch illustrated by fig. 3 six times; the first and sixth time for beginning and finishing the insertion, the second and fifth time after having drawn out six threads of the stuff, the third and the fourth time after drawing out eight threads. All the clusters must consist of four threads of the stuff. The first and the third rows must be worked after fig. 4, the middle row after fig. 11.

**Insertions with interverted clusters in two rows** (fig. 20). — After drawing out twelve threads of the stuff and securing the edges with the stitch shewn in fig. 3 worked over three disengaged threads, you make two series of stitches interverting the whole clusters as shewn in fig. 17.

**Insertion with interverted clusters crossed three times and embroidered over** (fig. 21). — Draw out twenty-five threads of the stuff; the isolated threads on both sides are then secured by oblique stroke stitches over six threads.

The clusters are then crossed in the middle of their height by means of the stitch represented in fig. 16, after which you introduce another thread each side of the first, following the
clusters proceeding from the first assemblage. After drawing the first threads through you surround the clusters with overcast stitches by means of a second thread, thus enclosing them between two threads.

**Different ways of knotting the clusters** (figs. 22, 23, 24, 25, 26, 27, 28, 29, 30, 31). — The insertions with knotted clusters constitute a second variety of drawn thread work on linen. The knotted clusters can be made in one or more parallel rows and the auxiliary thread, that serves to make the knots, may be visible and form at the same time part of the pattern, or may be used only for the knots and pass more or less invisibly from one cluster to another. For a single row you connect the clusters by a knot formed by an interverted chain stitch, in more elaborate patterns you can use both overcasting and button-hole stitch.

We recommend all these kinds of openwork being done on the wrong side, in this way it will be found easier to carry the thread invisibly from one cluster to another and the chain stitch will also present a better appearance.

We begin our series of patterns by those with knotted clusters worked in one row and in which the auxiliary thread is visible; fig. 22 shows the making of a knot with an interverted chain stitch in an insertion formed by triple clusters, once knotted. The thread with which you make the collecting knots descends vertically and links the clusters together.

In fig. 23 the clusters appear much longer, they are knotted
twice, which forms a pattern with horizontal bars in the middle of the insertion.

For fig. 24 you draw four clusters together and these are afterwards divided in the second row so as to form in the middle a serpentine pattern.

In the next figures the thread that served to make the knots is carried over the clusters without shewing in the empty spaces between.

The little insertion fig. 25 is a specimen of single openwork without the edges being overcast or secured in any way by stitches, as in little articles of fancy-work. The clusters of threads are knotted in a zig-zag line by means of single chain stitches and without overcasting stitches between these latter.

Fig. 26 shews a similar pattern but with the edges secured against fraying and the clusters encircled in the middle by an overcasting stitch.

For the insertion illustrated by fig. 27 you each time knot four clusters together; the serpentine bars in the middle of the strip are lightly overcast.

Fig. 28 shews an insertion consisting of a double row of sextuple clusters, the middle bars set in the shape of lozenges are encircled with button-hole stitches.

The single Turkish knot, fig. 29, is often used when the edges of a wide insertion are to be ornamented with a row of eyelet holes. After drawing out two or three threads of the stuff collect three or five together by means
of the knot explained by the engraving and the result will be a row of small round holes.

Fig. 30 shews the use of the Turkish knot to collect two clusters in a wider insertion. In this way small isolated crosses are formed, the opposite to those in fig. 22, where the clusters are visibly connected by the thread that served to make the collecting knot.

Finally, in fig. 31, we give a narrow serpentine insertion where the pattern is formed solely by horizontal overcasting stitches; this work is not very strong and we cannot recommend its use save in certain fancy articles not exposed to much wear.

The ensuing patterns of insertions will shew the use of the stitches we have been describing.

**Insertion formed of two rows of triple clusters knotted once** (fig. 32). — Draw out twice twelve threads of the stuff with an interval of four threads and secure the edges from fraying by stitches over 2 threads, as in fig. 3. After fastening in the thread, knot three clusters together by means of three interverted chain stitches, see also fig. 22. The thread that crosses the middle of the empty spaces between must always be given a little play.
Insertion of knotted clusters with vertical bars (fig. 33).
The stitches to secure the edges are to be worked over four threads, you then draw out twenty threads between the edges. The pattern itself is worked after fig. 23, only that instead of knotting the clusters together with only one chain stitch you do it with three.

Turkish insertion with two rows of isolated clusters (fig. 34).
After securing the edges by stitches set over three horizontal and four vertical threads draw out for each band sixteen threads of the stuff.

The crossed figures of the second band are interverted as regards those of the first band. Fig. 30 shows the working of the stitch.

Different ways of embroidering the clusters (figs. 35, 36, 37, 38). — The third class of drawn work comprises the insertions with embroidered clusters; this work requires more trouble and patience than the preceding kind, for the clusters of threads entirely disappear under the embroidery that forms the pattern.

The stitch most frequently used for this embroidery is darning stitch, together sometimes with overcasting and button-hole stitches.

Fig. 35 explains the making of the little overcast bars used either for ornamenting a narrow hem or for making latticed grounds in works of a larger size. (See also the grounds, fig. 72 to 78 and the borders fig. 97 to 99.) As seen in fig. 35, the thread is carried downwards from above in the middle of the cluster to be overcast; beginning at the bottom, you completely surround
the cluster, consisting in this instance of four threads of the stuff, with overcasting stitches.

Fig. 36 shews the overcast bars placed in a zig-zag line. Here the bars are worked alternately upwards and downwards, and over clusters of three threads only. At the junction of two bars you connect them by two overcasting stitches over the six threads they are composed of; in this way you have an insertion of serpentine bars.

The bars covered with darning stitches, fig. 37, always require clusters made of an even number of threads. The bars are made from right to left, to and fro, the needle being always inserted in the middle of the threads of the cluster.

Insert the needle, eye foremost, the point turned against
the thimble, this facilitates the work and prevents you from splitting the threads of the clusters. When the bar is finished, turn the work round, so as always to work in the same direction, that is to say, having the finished part on the right of your needle.

To shew how larger figures are worked in darning stitch, we give in fig. 38 an insertion composed of pyramids in course of execution and shewing the work in progress. The needle travels to and fro over a settled number of clusters till all the threads of the stuff are entirely covered.

**Insertions in darning stitch.** — The following patterns represent insertions of Slav or Hungarian origin; they are executed in darning stitch. These insertions are employed as
borders for trimming house-linen and wearing apparel; they are mostly executed in white on écru linen, more rarely in colours. In the latter case, very bright decided colours are preferable: red, blue, green and orange, some parts are even embroidered in black. In addition to these patterns we give a series of Persian subjects copied from the ancient veils, which are famous for their great beauty.

In these kinds of drawn work it often happens that the embroidery stitches that cover the clusters fill up the whole width of the insertion, it will therefore in these cases be unnecessary to secure the threads of the edges by overcasting stitches.

**Insertion with two rows of bars in darning stitch in one colour** (fig. 39). Draw out 14 threads. Pass the working thread so that it should disappear under the darning stitches made to and fro over ten threads, in sufficient number to cover the isolated threads to half their height.

To reach the second cluster, re-insert the needle under the last darning stitches, carry the thread under the isolated threads and begin the second cluster by dividing the threads as the figure indicates. Fig. 37 also explains the execution of the bars in darning stitch.

**Insertion with three rows of bars in darning stitch worked in three colours** (fig. 40). — After drawing out 18 threads of the stuff collect the vertical threads and work the darning stitches over the ten threads as in fig. 39 but in three colours instead of one, using always the same colour for three clusters in a diagonal line.

**Insertion with three rows of bars of different lengths in darning stitch** (fig. 41). — Secure the edges with stroke
stitches set slanting over four threads of the stuff, then draw twenty horizontal threads for the openwork. The bars of the two exterior rows, which are longer than those of the middle row, take a few more stitches to cover them than the middle ones which are nearly square.

**Insertion in darning stitch diagonal rows of bars of two sizes form the pattern** (fig. 42). — The edges are secured by oblique stitches over four threads of the stuff and 28 threads are then removed for the openwork. The pattern is composed of two diagonal rows of five bars covered with darning stitches worked over two clusters of threads which alternate with one diagonal row of five squares worked over 3 clusters of threads.

**Fig. 39. Insertion with two rows of bars covered with darning stitches in one colour.**

**Materials:** Cuba linen in cream, Crochet cotton bell mark No. 5, in écru.

**Fig. 40. Insertion with three rows of bars in darning stitch in three colours.**

**Materials:** Plaited tammie cloth in white, Pearl cotton D.M.C No. 5, in Cardinal red 304, Pistachio green 319 and Mandarin yellow 741.

**Insertion in darning stitch with pattern of pyramids** (fig. 43). — Here too the edges are first secured by oblique stitches over four threads; the openwork requires the removal of thirty threads of the stuff.

The pyramids are worked over twelve clusters of threads, the little squares placed in diagonal lines over two.
**Insertion in darning stitch in three colours** (fig. 44). — The pattern requires the removal of thirty threads and the edges are secured by oblique stitches over three threads of the stuff. One subject of this insertion takes twenty clusters, you begin by the wide parts forming the pyramids, which are covered with darning stitches in dark blue over three clusters. The inside bars of the pyramids are worked in red, the bars between them in yellow, the latter taking two clusters of threads.

**Insertion in darning stitch with lozenge pattern** (fig. 45). — For this figure draw out 32 threads and secure the edges with oblique stitches over three threads of the stuff.
One subject occupies 22 clusters of threads. The lozenges are embroidered in blue; the intermediate figures in red and the framing of the lozenges in yellow.

**Insertion formed of isolated clusters in darning stitch** (fig. 46). — Draw out twenty threads. The square stitches that secure the edges are made over four threads, see fig. 5. Three clusters secured and collected together at the edges are covered,
in the middle, with ten to twelve darning stitches. The thread is fastened off after each bar.

**Insertion with the pattern in darning stitch worked in four colours** (fig. 47). — Draw out 28 threads. The pyramids take six clusters of three threads each, in a medium shade and a dark shade of green. For centre figure, worked in Dawn red

![Insertion in darning stitch with lozenge pattern.](image1)

Materials: Russian linen in cream, Pearl cotton D.M.C No. 5 in Blue fast dye 797, Geranium red 817 and Mandarin yellow 743.

![Insertion with isolated clusters in darning stitch.](image2)

Materials: Plaited tammy cloth in cream, Special stranded cotton D.M.C No. 25 in Hazel nut grey 424.

you collect three clusters on the right and three on the left. The middle is in black.

**Insertion in darning stitch and overcasting stitch** (fig. 48). — Draw out twenty threads. Overcasting stitches, over three threads in height and three in width, edge the
insertion. At the bottom a second row of overcasting stitches succeeds to the first; these, set parallel to the others, are made over three, six and nine threads. The first cluster of three threads of the stuff must be encircled six times by the working thread, which is then carried upwards to the edge. Passing then to the second and third cluster you cover them with six darning stitches, succeeded by twelve stitches on the first and the second cluster, until there remains only space enough uncovered for the six overcasting stitches. The second part is done in the same way only reversed.

**Different ways of connecting the clusters by decorative figures.** — In this last series of insertions the clusters of threads are connected, by different combinations of stitches made with the needle admitting of great variety. Those employed in Renaissance and Teneriffe lace and in embroidered net are adaptable here.

The ones most frequently used are wheels or spiders, either detached or connected by knotted lines, and next to these come rounds and festons, overcast or embroidered in relief, picots and rosettes in post stitch, &c.

**Insertions with wheels** (fig. 49). — The edges are secured with cross stitch, see fig. 7. You connect four clusters for a wheel. The thread fastened on in the middle of the insertion
passes alternately over and under a cluster. You make several rows as in darning, stopping there where the thread entered to form the wheel, and you pass under the wheel to reach the next four clusters, see also figs. 81 and 82.

**Insertion with wheels and narrow ladder insertions top and bottom** (fig. 50). — Draw out 5 threads for the narrow insertions and 22 for the wide one. For the exterior borders connect four threads of the stuff (see fig. 3), the strips of stuff are edged with cross stitches (see fig. 6). The middle clusters are connected on both sides by a knotted back-stitch represented in the figure, then you collect always four and four at half their length by three interverted chain stitches (see fig. 22), and then pass the thread at the intersection of the threads of the two first rows of stitches to form a wheel there, over 5 threads, before going on to the next bars.
**Insertion with whole and half-wheels (fig. 51).** — For the insertion draw out 24 threads of the stuff; the edges are secured by half-wheels, you begin by carrying the working thread over the two middle threads, you then advance successively from both sides until you have eight threads in the half circle. The whole wheels are made separately and over the same clusters of threads as the half-wheels.

**Insertion with bars in darning stitch and overcast eyelet-holes (fig. 52).** — Draw out 28 threads. The edges are secured by stroke stitches set vertically over two to five threads.
The pattern itself is begun in the middle, on nine threads of the stuff with eight to nine overcasting stitches, then you divide the threads into three equal parts and add, on each side of the first stitches, twelve to fourteen darning stitches, thus leaving at most, only 5 m/m. of isolated threads uncovered. When two bars in darning stitch are finished, you connect them by four button-hole stitches — one loop stitch — then you wind the single thread round several times more and cover the ring closely with overcasting stitches.

**Insertion with bars and rosettes ornamented with winding stitch** (fig. 53). — Draw out 24 threads. The edges are
ornamented with vertical stroke stitches over two, three, four and five threads. Count four threads for the overcast bars, eight for the bar in darning stitch, ornamented with picots in winding stitch and sixteen threads for the ground of the rosette. Collect the threads of the stuff for a wheel and then cover it entirely with winding stitch. The loop that connects one bar with the other is made as you work. Having reached the desired point carry the thread towards the first bar and come back to finish it. As the engraving shews the pattern may also be worked in two colours.

**Arrangement of the insertions at the corners** (fig. 54, 55, 56). — When insertions form the borders to a square piece
of work, you begin by cutting the threads to within a c/m. of the edge of the hem or of the insertion itself, then you isolate them as fig. 54 shows. You introduce the isolated threads into the fold over of the hem and fix them there with buttonhole stitches (fig. 55) or else if the hem stitching is not to be interrupted, you turn the threads down at the back and sew them down there with a few stitches (fig. 56).

**Formation of the corners of insertions of one row (fig. 57).** By drawing out both the warp and the woof threads you get an empty square at the corner which is then filled by a small decorative figure. As an example we give, in fig. 57, the small insertion with interverted clusters (fig. 10) the empty square at
the corner of which is ornamented by a wheel with eight spokes, you carry the thread of the first insertion to the opposite edge, insert it into the hem, then carry it back to the centre of the wheel that is to be made; trace the five other spokes, make the wheel on seven threads, fasten the thread on the opposite side of the second insertion, pass it under the wheel and make the eighth spoke by taking the thread across to the second insertion.

**Forming the corners of insertions consisting of several rows** (figs. 58 and 59). — In the case of insertions consisting of
several rows, you can make the corners in two different ways; either you cut the threads right up to each strip of stuff, or you draw out all the threads up to the hem. We give examples of both ways.

Figure 58 shews the corner of insertion fig. 50 for which the threads have been cut up to each strip of stuff. The small corners are filled with a small wheel of four spokes, the big one with a wheel of twelve spokes richly ornamented (see also fig. 84).

The corner fig. 59 of the insertion fig. 32 is more troublesome to make. For it all the threads near the hem have been cut; the disengaged threads from the middle strips of stuff are transformed into bars in darning stitch, and - the four empty corners are filled with wheels of eight spokes.

Cut stitch (Punto tagliato). — For cut stitch embroidery you draw out both the warp and the woof threads.

The number of threads to be drawn out depends not only on the pattern chosen, but also on the stuff on which the embroidery is to be done.

The threads remaining between the empty spaces then serve as canvas for the different kinds of stuff. You must be careful only to choose stuffs with the warp and woof threads of equal size, so that the spaces left by the removal of the threads should be exactly square;
otherwise the appearance of the work, when finished, will suffer considerably.

**Cutting out the threads inside the square of stuff** (fig. 60). — Often embroideries in cut stitch are framed in other kinds of embroidery. In such cases, you cut the threads to several m/m. towards the interior of the work, and only then isolate them so as to preserve the inside edges of the stuff intact. You must draw out an equal number of threads both ways. For most patterns you have to leave as many threads as you remove. Fig. 60 shews four threads removed and four left.

**Drawing out the threads throughout the whole surface of the stuff** (fig. 61). — In fig. 61, where the threads are drawn out to the edge, you will observe four threads drawn out for every three left. This difference is admissible when you want to make the work more transparent than it would be by removing and covering the same number of threads.

**Festooned edge for cut stitch embroidery** (fig. 62). — To prevent the cut edges of stuffs from unravelling they should be festooned or button-holed, as shewn in the engraving fig. 62.

**Overcast edge for cut stitch embroidery** (fig. 63). — A small cord or overcasting is almost better than festooning for
strengthening the edges in the more elaborate patterns. You calculate, before cutting into the stuff, how many threads you have to cut out, then trace out your pattern with tacking stitches; this done you cut, to within two threads of the tracing stitches, the stuff to be removed and immediately overcast the cut edge with stitches made over one or two padding threads, which gives a slight relief to the edges.

**Grounds.** — The sixteen subjects we are now going to describe, designated “grounds”, are chiefly used to ornament the openwork parts in pieces of work of a certain importance as regards size (see plate 16); they can always be used as insertions or scalloped borders, as has been done for the patterns illustrated by our plates 11 and 12.

The easiest subjects are those in which the clusters are only partly embroidered over or merely knotted like those of our first figures. They are followed by patterns in which the ground consists of overcast bars or bars worked in darning stitch, copied from old pieces of needlework of Italian or Persian origin. These are rather long and difficult to do but workers will be rewarded for their trouble by the solidity and beauty of the result.
First openwork ground. *With horizontal and vertical bars* (fig. 64). — Cut three horizontal and three vertical threads, leaving an interval of three threads between.

By drawing out the cut threads you get an open ground resembling net. The isolated threads are overcast in diagonal rows so as to make round bars. The intersections of the threads are covered by an oblique stitch; the bars, according to their direction, by two vertical or two horizontal stitches, as the engraving shews.

Second openwork ground. *With clusters connected together in diagonal rows* (fig. 65). — In height and breadth: cut four threads leaving an interval of four threads.

Here likewise the ground is worked in diagonal rows; the pattern is formed by connecting the clusters together by a single knot in a coarse thread. The engraving explains how the knot is made.

Third openwork ground. *With interverted loop stitches* (fig. 66). — In height and breadth: cut four threads leaving an interval of four threads. Here the pattern is produced by isolated loop stitches placed in every alternate empty space and which embrace each way the four disengaged threads of the net.

As seen in the engraving, these stitches are worked in dia-
gonal rows, and the thread in its passage from stitch to stitch is hidden under the little square of stuff.

**Fourth openwork ground. With loop stitches set in lines** (fig. 67). — In height and breadth: cut six threads leaving an interval of six threads. This ground is more covered than the foregoing one, each empty space is filled by a loop stitch interlaced over only three disengaged threads of the net and worked in vertical rows. In this manner, by the divided clusters, you get oval eyelet holes between the squares of stuff.

**Fifth openwork ground. With diagonal net** (fig. 68). In height and breadth: cut four threads leaving an interval of four threads. Begin by making the diagonal net, for which you lay a thread covered afterwards by overcasting stitches set very wide apart.

In the engraving all the threads running from right to left are laid and overcast, likewise some of the threads from left to right crossing the first ones; it shews too how to lay the thread and overcast it.

When the net is quite finished, you frame each square of stuff — which seems covered with a thread stretched across diagonally — with square stitches to be worked in horizontal rows.
Sixth ground. With knotted clusters and fillings of single spiders (fig. 69). — In height and breadth: cut nine threads leaving an interval of nine threads. With the disengaged threads form clusters connected once horizontally or vertically by means of a knot described for the ground fig. 65 or by an interverted chain stitch.

When all the clusters are knotted, stretch the diagonal threads across that complete the spiders. Here the thread passes — always diagonally — over the 1\textsuperscript{st}, 2\textsuperscript{nd} and 3\textsuperscript{rd}, under the 4\textsuperscript{th}, 5\textsuperscript{th} and 6\textsuperscript{th}, and over the 7\textsuperscript{th}, 8\textsuperscript{th} and 9\textsuperscript{th} of the nine threads of the squares of stuff which gives greater firmness to this openwork.

You begin by stretching the threads across from left to right and this layer finished you stretch the threads across in the opposite direction, taking care to connect them in the middle by a knot and thus putting a small spider with six legs in each empty space.

Seventh openwork ground. With interverted clusters and fillings of single spiders and wheels in darning stitch (fig. 70). In height and breadth: cut twelve threads leaving an interval of twelve threads.

The disengaged threads divided into three equal threads are to be divided and interverted in horizontal and vertical rows.
When all the clusters are interverted, you begin by stretching the diagonal threads across, passing them over the 1st to the 4th, under the 5th to the 8th and over the 9th to the 12th of the threads of the squares of stuff.

Where the threads cross each other you connect them by a

Fig. 78. Fifteenth ground with double overcast bars and spiders in single darning stitch.

Fig. 80. How to stretch and overcast the rays.

Fig. 79. Sixteenth ground with bars in 'interverted darning stitch and spiders in single darning stitch

Fig. 81. How to make the spider in interverted darning stitch.

Fig. 82. Spider with eight legs or rays. Completed.