

UNITED STATES PATENT OFFICE.

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MANUFACTURE OF LACE.

Application filed July 5, 1922, Serial No. 572,877, and in Great Britain March 3, 1922.

This invention relates to the manufacture on circular lace machines of the well known filet laces, that is, laces made on a filet square net.

5 In hand made filet lace a horizontal bar and a vertical pillar each consists of only one thread so that the pillars and bars are of the same size. In filet lace, however, as hitherto made on a machine, each horizontal bar
10 was composed of four threads two of which were employed to make the vertical pillars with the result that the bars appeared much coarser than the pillars.

This invention relates to a method of making on a machine filet lace in which the bars and pillars shall be more nearly alike than has hitherto been the case, so that the machine made lace shall more closely resemble hand made lace.

20 According to this invention each pillar is formed of one thread while each bar is formed of two or three threads.

In the drawings:

25 Figure 1 shows filet net made in accordance with this invention and Figures 2, 3, and 4 show modified forms.

In Figure 1 each pillar is formed of only one thread, while each bar is formed of two threads. Each pillar thread e after forming the pillar of one square forms part of the bar of that square and then a pillar of an adjacent square; three such threads are marked e , e^1 and e^2 . There are also threads f which co-operate with the threads e to form the
35 bars but form no part of the pillars as they pass from end to end of the fabric without transversing it.

40 Figure 2 shows an alternative method in which the pillar threads g traverse the fabric without forming any part of the bars, each bar being formed of two threads f , f^1 , which as in Figure 1 pass from end to end of the fabric forming no part of the bars.

In net made as shown in Figures 1 and 2, every spindle of the machine being provided with thread in the ordinary manner twist is taken off the threads in alternate sections, with the result that the bars are of uneven appearance. We therefore preferably leave
50 some of the spindles empty, that is, we put no threads upon them, and we interpose these empty spindles where a pillar crosses a bar

so as to allow twist to be kept on the bar threads throughout whereby the bars may be more tightly intertwined and have a finer appearance. Net thus formed is shown in
55 Figure 3, which is similar to Figure 1 but with empty spindles interposed, the positions which threads carried by them if they had not been empty would occupy being indicated by dotted lines h .
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It will be seen that in the nets illustrated in Figures 1 and 3 a pillar thread passes in zig zag fashion right across the net from side to side. We may, however, turn these pillar
65 threads back at some convenient bar, say, the middle bar of the net, which will thus be formed of three threads.

70 Figure 4 shows a net in which, while each pillar is formed of a single thread only, each bar is formed of three threads; each pillar thread i passes from end to end of the pattern in two adjacent bars of which it forms part alternately, while the remaining threads
75 j , j^1 , of each bar form no part of the pillars.

Thus a machine made net is obtained which in appearance approaches much more closely to hand made net than has before been possible.

The invention has the additional advantage that it enables more elaborate designs and wider widths to be made on the same sized machine than was heretofore possible, the threads not required for the bars being
85 available for this purpose.

Also the invention enables the threads of the bars and pillars to be differently weighted.

What we claim is:—

1. Machine made filet net lace in which
90 each pillar consists of one thread only.

2. Machine made filet net lace in which each pillar consists of one thread only, while each bar consists of a plurality of threads.

3. Machine made filet net lace in which
95 each pillar consists of one thread only, while each bar consists of two threads.

In testimony that we claim the foregoing as our invention we have signed our names this twenty-first day of June, 1922.

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