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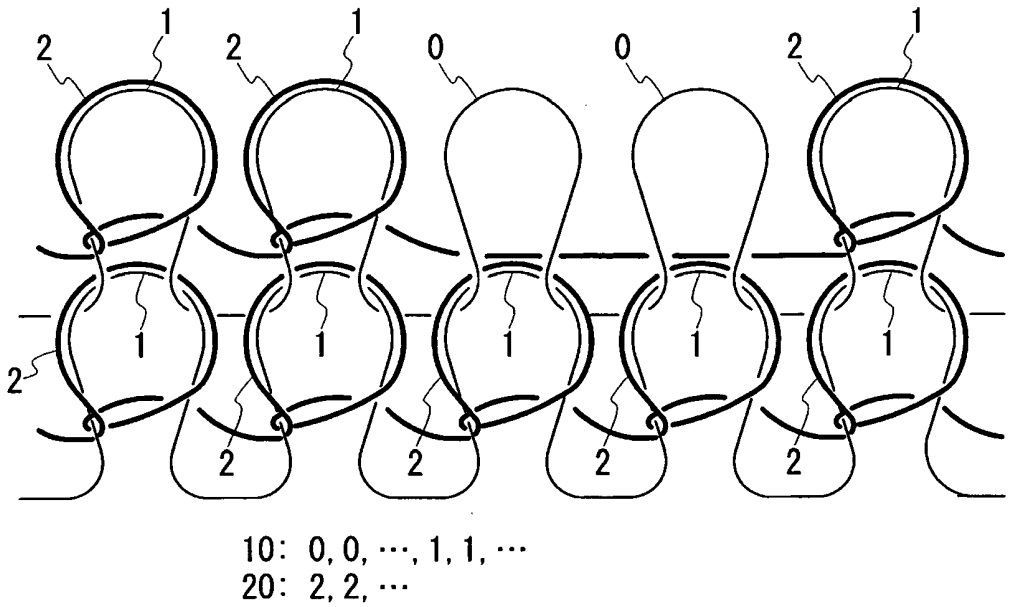
(54) **Knitting method of knitted fabric and knitted fabric**

(57) Provided are a knitting method of a knitted fabric of knitting a knitted fabric formed with a pattern based on an apparent difference between a first knitting yarn and a second knitting yarn using a flat knitting machine, and a knitted fabric including a portion knitted by applying the method. The pattern based on the apparent difference between the first knitting yarn and the second knitting yarn is formed in the knitted fabric by repeating the following steps A to C: the step A of knitting a base stitch row (10) using a first knitting yarn; the step B of selecting a single or plural target stitch(es) (1) of the base stitch row (10) knitted in the step A, and forming a split stitch (2) using a second knitting yarn, which is a different type from the first knitting yarn, with respect to each selected target stitch (1); and the step C of overlapping the target stitch (1) selected in the step B and the split stitch (2) formed with respect to the target stitch (1).

Fig. 2



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Description

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention relates to a knitting method of a knitted fabric of knitting a knitted fabric having a pattern formed based on an apparent difference between a first knitting yarn and a second knitting yarn having an apparent difference from the first knitting yarn using a flat knitting machine, and a knitted fabric having a portion knitted by applying the knitting method.

Description of the Related Art

[0002] Knitting of a lacy knitted fabric using a warp knitting machine has been conventionally carried out (refer to Patent Document 1, for example). The lacy knitted fabric includes a knitted fabric in which a colored second knitting yarn is arranged so as to get entangled in part of a base knitted fabric portion comprising a transparent or translucent first knitting yarn (see Fig. 4 and Fig. 5 of Patent Document 1). In such a lacy knitted fabric, the lacy pattern is formed by the apparent difference between the first knitting yarn and the second knitting yarn.

PRIOR ART DOCUMENT

PATENT DOCUMENT

[0003] [Patent Document 1] Japanese Unexamined Patent Publication No. 9-228204

SUMMARY OF THE INVENTION

[0004] A knitting method of a lacy knitted fabric by a flat knitting machine is not currently proposed as opposed to the proposal of the knitting method of the lacy knitted fabric by the warp knitting machine. Needless to say, the direction in which the stitches are formed is different for the warp knitting machine and the flat knitting machine, and thus the knitting method in the warp knitting machine cannot be applied to the flat knitting machine as is.

[0005] In view of the above situations, it is one object of the present invention to provide a knitting method of a knitted fabric of knitting a knitted fabric formed with a pattern based on an apparent difference between the first knitting yarn and the second knitting yarn, representatively a lacy knitted fabric, using a flat knitting machine, and a knitted fabric having a portion knitted by applying such a method.

[0006] A knitting method of a knitted fabric of the present invention is a knitting method of a knitted fabric using a flat knitting machine having at least a pair of front and back needle beds, stitches being transferable between the front and back needle beds, wherein following steps A to C are repeatedly carried out.

[Step A] Knitting a base stitch row using a first knitting yarn.

[Step B] Selecting a single or plural target stitch(es) of the base stitch row knitted in the step A, and forming a split stitch using a second knitting yarn, of which appearance differs from the first knitting yarn, with respect to each selected target stitch.

[Step C] Overlapping the target stitch(es) selected in the step B and the split stitch(es) formed with respect to the target stitch(es).

In the knitting method of the knitted fabric of the present invention, reselection of target stitch(es) is performed in the step B when repeating to form a pattern based on an apparent difference between the first knitting yarn and the second knitting yarn.

[0007] The "split knitting" herein is the knitting operation of transferring the stitch (target stitch) held on one of the front and back needle beds to the knitting needle of the opposing other needle bed at the same time as forming a new stitch (split stitch) so as to be pulled out from the target stitch on the knitting needle of the one needle bed, as described in Japanese Unexamined Patent Publication No. 4-73245. In this case, the split stitch is held on the knitting needle on which the target stitch is originally held. In the knitting method of the knitted fabric of the present invention, the split stitch is formed with respect to the target stitch, and the target stitch is returned to the knitting needle on which the split stitch is held to overlap the split stitch and the target stitch. For instance, if the target stitch is held on the knitting needle X of the front needle bed, the split stitch is formed on the knitting needle X while transferring the target stitch to the knitting needle Y (knitting needle opposing knitting needle X) of the back needle bed, and the target stitch is returned from the knitting needle Y to the knitting needle X. The split stitch is thus overlapped on the front side of the target stitch when viewed from the front needle bed.

[0008] The first knitting yarn and the second knitting yarn in the knitting method of the knitted fabric of the present invention merely need to be of different type. For instance, the first knitting yarn for configuring the base stitch row may be a transparent or translucent knitting yarn, and the second knitting yarn may be a colored, in particular, a colored opaque knitting yarn. The second knitting yarn thicker than the first knitting yarn may be used, or the first knitting yarn may be a transparent or translucent knitting yarn and the second knitting yarn may be a colored knitting yarn thicker than the first knitting yarn. Furthermore, both the first knitting yarn and the second knitting yarn may be knitting yarn of different colors.

[0009] In accordance with one aspect of the knitting method of the knitted fabric of the present invention, at least one of the first knitting yarn and the second knitting yarn is preferably a heat sealing yarn. Obviously, the first knitting yarn and the second knitting yarn both may be the heat sealing yarn.

[0010] A knitted fabric of the present invention is a knitted fabric knitted using a flat knitting machine having at least a pair of front and back needle beds, stitches being transferable between the front and back needle beds, the knitted fabric including a base stitch row knitted with a first knitting yarn; and a split stitch row comprising a single or plural split stitch(es) knitted with a second knitting yarn having an apparent difference from the first knitting yarn, and overlapped on a stitch of the base stitch row. The knitted fabric of the present invention has a characteristic in including a pattern based on an apparent difference between the first knitting yarn and the second knitting yarn.

[0011] According to the knitting method of the knitted fabric of the present invention, the knitted fabric of the present invention can be knitted in which the split stitch knitted with the second knitting yarn is overlapped on part of the base stitch row knitted with the first knitting yarn, and a pattern based on the apparent difference between the first knitting yarn and the second knitting yarn is formed. In this case, a lacy knitted fabric in which the second knitting yarn appears lifted up, as shown in Fig. 3 of the embodiment, can be knitted if the first knitting yarn configuring the base stitch row is a transparent or translucent knitting yarn and the second knitting yarn is a colored opaque knitting yarn. A lacy knitted fabric in which the second knitting yarn appears lifted up can be knitted by using the second knitting yarn thicker than the first knitting yarn. Furthermore, a pattern based on the difference in color of the first knitting yarn and the second knitting yarn, as shown in Fig. 4 of the embodiment, can be formed if the first knitting yarn and the second knitting yarn are both knitting yarn of different colors.

[0012] In the knitting method of the knitted fabric of the present invention, a shape of the base stitch row formed by the first knitting yarn can be fixed by using the heat sealing yarn for the first knitting yarn, and as a result, the shape of the entire knitted fabric can be maintained. Furthermore, in the knitting method of the knitted fabric of the present invention, the shape of the split stitch formed by the second knitting yarn can be fixed by using the heat sealing yarn for the second knitting yarn. The split stitch is merely overlapped on part of the base stitch row, and thus the shape of the split stitch may be deformed when the knitted fabric is pulled strongly. Such a problem does not arise if the split stitch is formed with the heat sealing yarn and thermal processing is performed on the knitted fabric after knitting to fix the shape of the split stitch.

BRIEF DESCRIPTION OF THE DRAWINGS

[0013]

Fig. 1 is a knitting step diagram schematically showing a knitting method of a knitted fabric of the present invention shown in a first embodiment;

Fig. 2 is a loop diagram of a knitted fabric knitted according to the knitting step of Fig. 1;

Fig. 3 is a view showing a partially enlarged photograph of the knitted fabric knitted by the knitting method of the first embodiment; and

Fig. 4 is a view showing a partially enlarged photograph of a knitted fabric knitted by the knitting method of a second embodiment.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0014] Embodiments of the present invention will be hereinafter described with reference to the drawings. The knitting described in each embodiment describes a knitting example using a two bed flat knitting machine having at least a pair of needle beds, that is, a front needle bed (hereinafter referred to as FB) and a back needle bed (hereinafter referred to as BB), stitches being transferrable between the front and back needle beds. The knitting needles arranged in the needle beds of the flat knitting machine are latch needles with a latch. The flat knitting machine to be used may be a two bed flat knitting machine equipped with a transfer jack bed or may be a four bed flat knitting machine. The knitting needle to be used may be a compound needle including a needle main body with a hook and a slider for opening and closing the hook.

<First Embodiment>

[0015] In the present embodiment, an example in which the knitting method of the present invention is applied in knitting a lacy knitted fabric will be described with reference to Figs. 1 and 2.

[0016] Fig. 1 is a knitting step diagram schematically showing the knitting method of the knitted fabric according to the present invention. "S + number" in the figure indicates the number of the knitting step, the black dot indicates the knitting needle arranged in the FB and the BB, and the arrow indicates the transferring direction of the stitches.

[0017] First, in S1, a base stitch row 10 is knitted on the knitting needles A to I of the FB using a transparent non-heat sealing yarn (first knitting yarn: displayed in thin line). The stitch to carry out split knitting in S2 of the stitches configuring the base stitch row 10 is selected as target stitch 1 (others are non-target stitches 0). Which stitch to select as the target stitch 1 may be appropriately determined depending on what kind of pattern to form in the knitted fabric.

[0018] In S2, the split knitting is carried out on the target stitch 1 using a white heat sealing yarn (second knitting yarn : displayed in thick line) thicker than the first knitting yarn. The split knitting is carried out by forming a new stitch (split stitch 2) by pulling out the second knitting yarn from the target stitch 1 to be transferred while transferring the target stitch 1 from the knitting needle of the FB to the knitting needle of the BB. For instance, when the split knitting is carried out on the target stitch 1 held on the knitting needle A of the FB, the target stitch 1 is trans-

ferred to the knitting needle A of the BB and the split stitch 2 is formed on the knitting needle A of the FB. According to S2, a split stitch row 20 comprising a plurality of split stitches 2 knitted in a series of second knitting yarn is formed.

[0019] In S3, the target stitch 1 transferred to the knitting needle of the BB in the split knitting of S2 is returned to the knitting needle of the FB, where it was held in S1. For instance, the target stitch 1 held on the knitting needle A of the FB in S1 is returned to the knitting needle A of the FB in S3. According to S3, the base stitch row 10 and the split stitch row 20 are overlapped. In this case, the split stitch 2 is overlapped on the front side of the target stitch 1 of the base stitch row 10.

[0020] Thereafter, the knitting of S1 to S3 is repeated. In this case, which stitch to select for the target stitch 1 in the base stitch row 10 can be reselected according to the pattern to be formed in the knitted fabric to be knitted. Obviously, the knitting needle on which the target stitch selected is held may be the same before and after the repetition as a result of the reselection. The state of the target stitch 1 and the split stitch 2, which are overlapped, is shown in the loop diagram of Fig. 2 for reference.

[0021] Fig. 3 shows a partially enlarged photograph of the knitted fabric actually knitted. As shown in Fig. 3, according to the knitting step of Fig. 1, a lacy knitted fabric can be knitted in which the white second knitting yarn appears as if entangled with respect to the knitted fabric acting as the base, which is knitted with a colorless transparent first knitting yarn, and the portion formed by the white second knitting yarn appears as if lifted up from the knitted fabric acting as the base.

[0022] According to the knitting method of the first embodiment described above, tapestry wall hanging, interior accessories such as coasters and table clothes, curtains, and the like can be knitted.

<Second Embodiment>

[0023] In a second embodiment, a description will be given of an example of knitting a knitted fabric according to the knitting step diagram shown in Fig. 1 with both the first knitting yarn and the second knitting yarn as non-heat sealing yarn of different colors.

[0024] Fig. 4 is a view showing a partially enlarged photograph of the knitted fabric that has been knitted. As shown in Fig. 4, a pattern is formed in the knitted fabric based on the difference in color between the first knitting yarn and the second knitting yarn in the knitted fabric of the second embodiment. Similar to the first embodiment, what kind of pattern to form in the knitted fabric changes depending on which stitch of the base stitch row 10 to select as the target stitch 1 in S1 and S2 of Fig. 1.

[0025] The embodiments of the present invention are not limited to the embodiments described above, and may be appropriately changed within a scope not deviating from the gist of the present invention. For instance, the knitting shown in the embodiments may be carried out using the compound needle (refer to Japanese Patent No. 2917146, for example) including a needle main body, and a slider with two blades. In such a case, the split stitch in the finished knitted fabric has a shape slightly different from that in the loop diagram referencing Fig. 2, but it should be easily recognized by those skilled in the art that such a split stitch is formed by split knitting by following the path of the knitting yarn of the split stitch. Furthermore, the second knitting yarn used may be changed in the middle of knitting the knitted fabric. In addition, a knitted fabric of a wide variety of patterns can be knitted by combining the knitting method of the knitted fabric of the present invention and the intarsia knitting.

Claims

1. A knitting method of a knitted fabric using a flat knitting machine having at least a pair of front and back needle beds, stitches being transferable between the front and back needle beds, **characterized in that**
   a step A of knitting a base stitch row (10) using a first knitting yarn,
   a step B of selecting a single or plural target stitch (es) (1) of the base stitch row (10) knitted in the step A, and forming a split stitch (2) using a second knitting yarn, of which appearance differs from the first knitting yarn, with respect to each selected target stitch (1), and
   a step C of overlapping the target stitch(es) (1) selected in the step B and the split stitch(es) (2) formed with respect to the target stitch(es) (1), are repeated, wherein reselection of target stitch(es) (1) is performed in the step B when repeating to form a pattern based on an apparent difference between the first knitting yarn and the second knitting yarn.

2. The knitting method of the knitted fabric according to claim 1, **characterized in that** the first knitting yarn is a transparent or translucent knitting yarn, and the second knitting yarn is a colored knitting yarn.

3. The knitting method of the knitted fabric according to claim 1 or 2, **characterized in that** at least one of the first knitting yarn and the second knitting yarn is a heat sealing yarn.

4. A knitted fabric knitted using a flat knitting machine having at least a pair of front and back needle beds, stitches being transferable between the front and back needle beds, the knitted fabric **characterized by**
   a base stitch row (10) knitted with a first knitting yarn; and
   a split stitch row (20) comprising a single or plural split stitch(es) (2) knitted with a second knitting yarn having an apparent difference from the first knitting

yarn, and overlapped on a stitch of the base stitch row (10); wherein a pattern based on an apparent difference between the first knitting yarn and the second knitting yarn is formed.

Fig. 1

10: 0, 0, ···1, 1···
20: 2, 2, ···

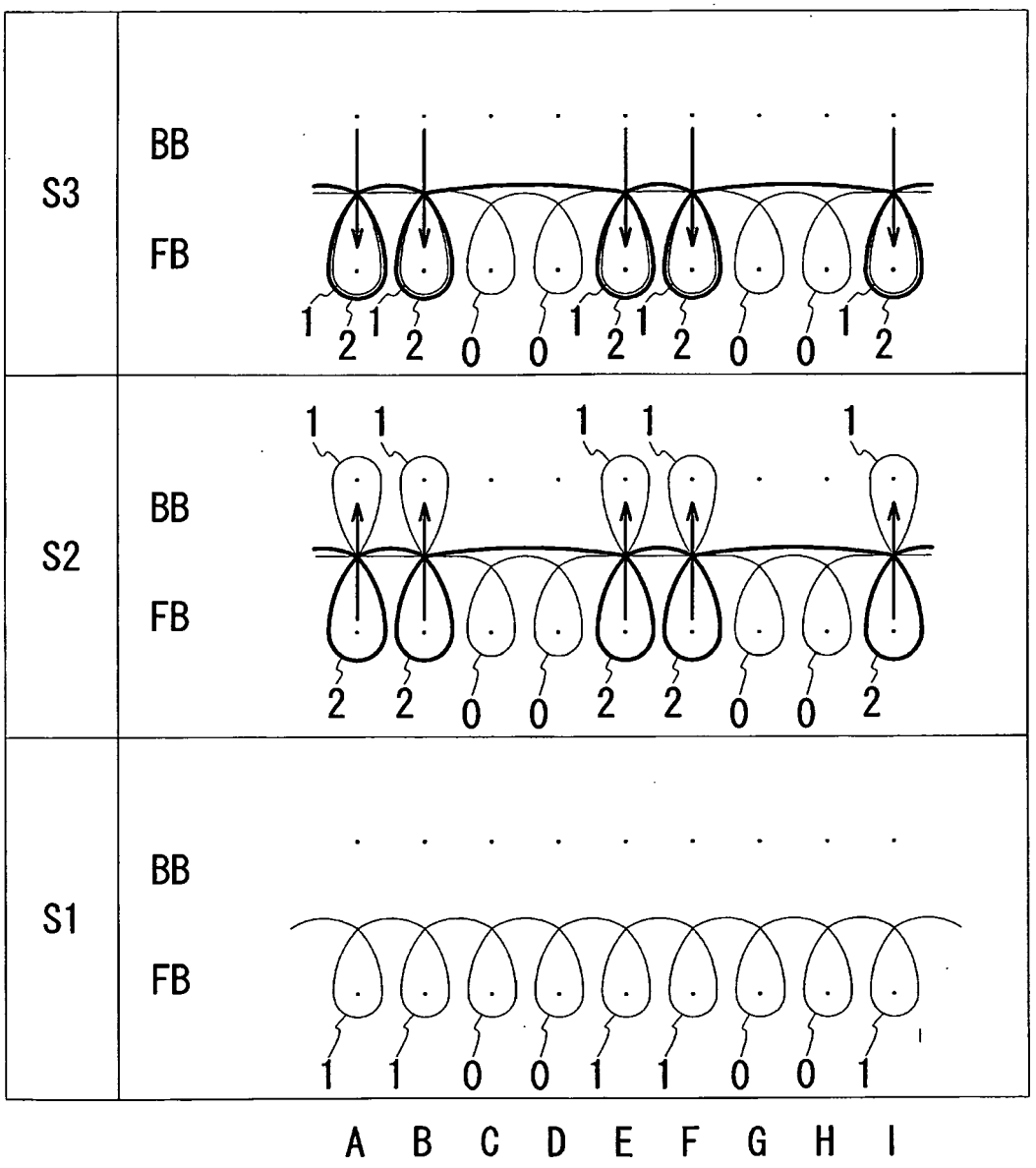
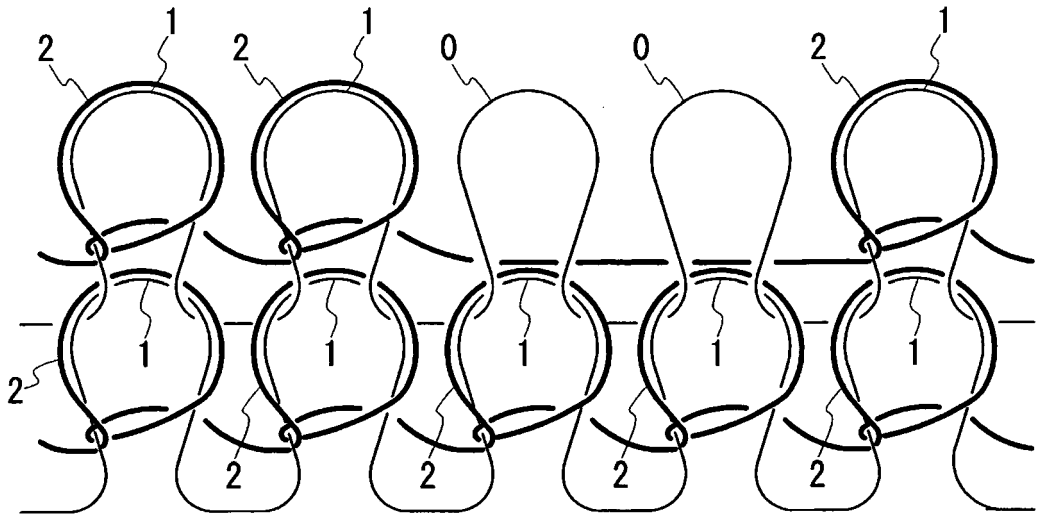


Fig. 2



10: 0, 0, ···, 1, 1, ···
20: 2, 2, ···

Fig. 3

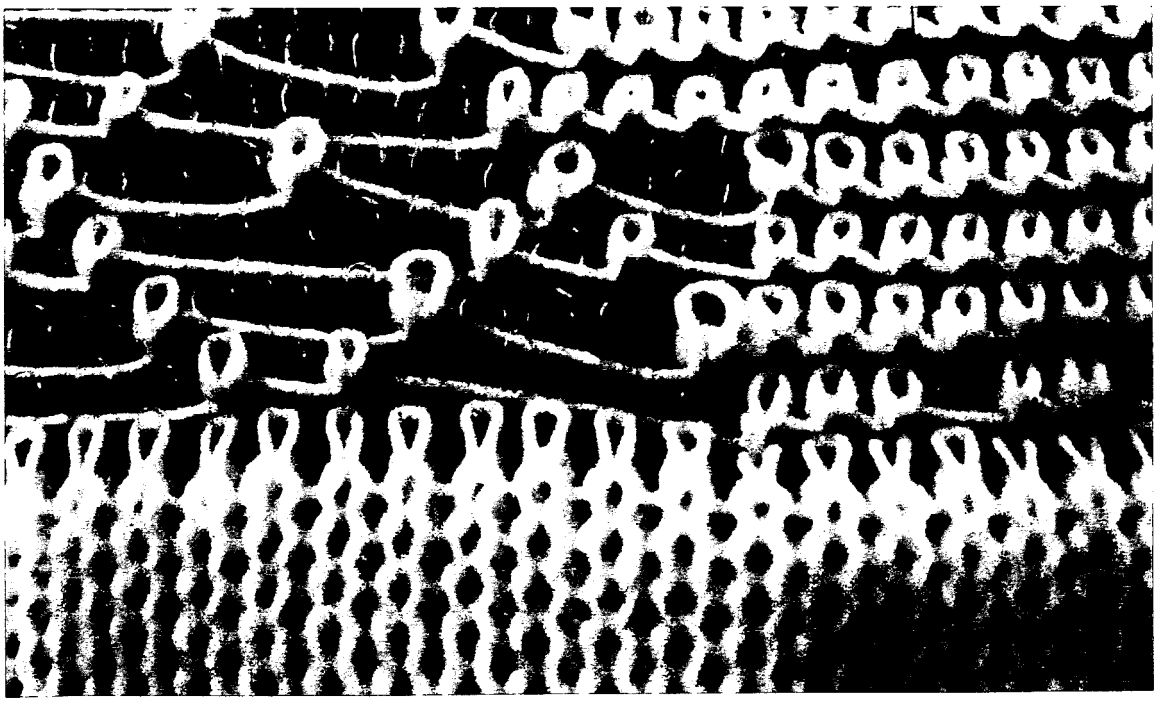
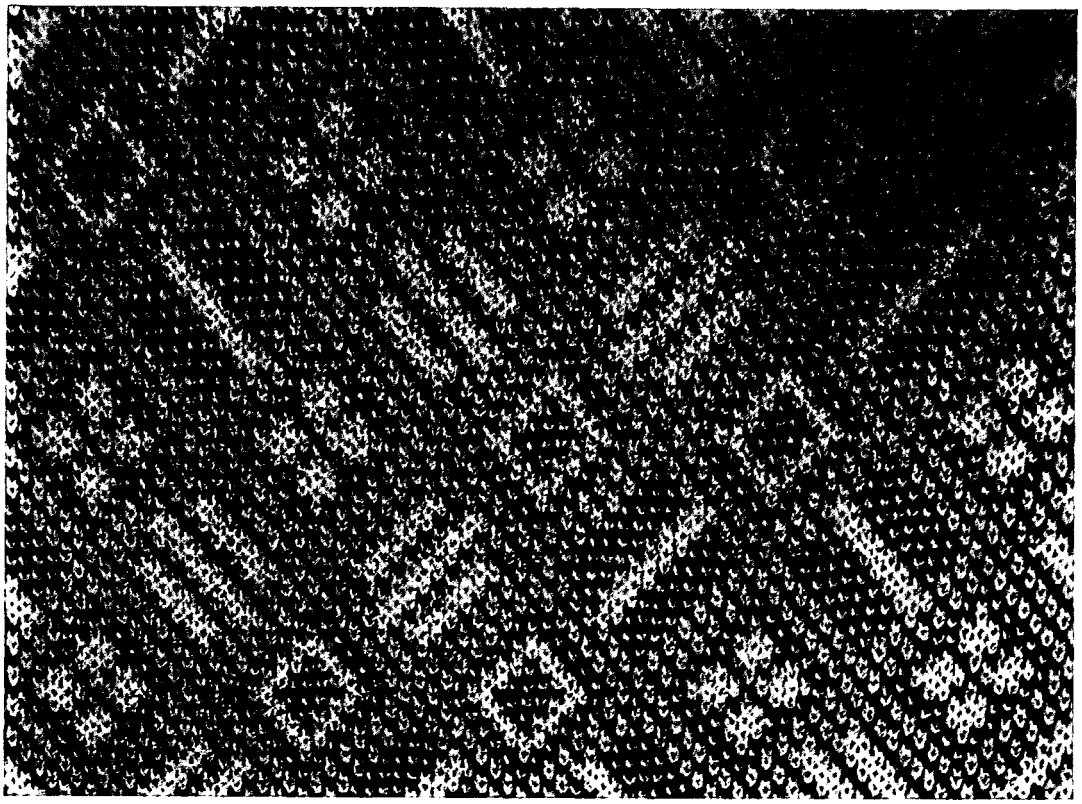


Fig. 4



REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- JP 9228204 A **[0003]**
- JP 4073245 A **[0007]**
- JP 2917146 B **[0025]**