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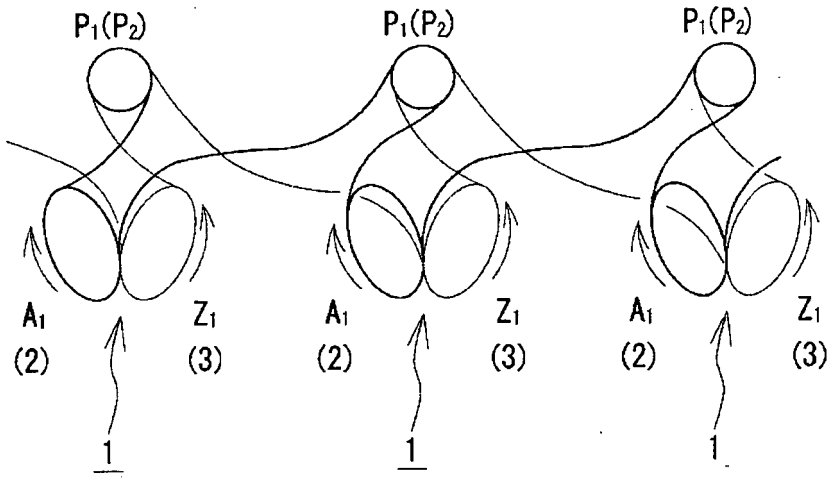
(54) **Knitting method of knitted fabric and knitted fabric**

(57) To provide a knitting method of a knitted fabric for knitting a projecting knitted structure in which two stitches adjacent in a knitting width direction are brought closer in a direction of approaching each other. Steps α and β are performed from a state in which a stitch A_0 and a stitch Z_0 are held on one needle bed (FB) of a flat knitting machine, and a stitch P_0 is held at a position between the stitch A_0 and the stitch Z_0 on the other needle bed (BB). In the step α, a state in which the stitch P_0 is positioned on a left side of the stitch A_0 is obtained, and the stitch A_1 and the stitch P_1 are continuously knitted. In the step β, a state in which the stitch P_1 is positioned on a right side of the stitch Z_0 is obtained, and the stitch P_2 and the stitch Z_1 are continuously knitted. By performing the step α and the step β, the stitch A_1 and the stitch Z_1 are brought closer in a direction of approaching each other in a knitting width direction to form a projecting knitted structure raised in a projecting form in a thickness direction of the knitted fabric.

Fig. 4



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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 including a projecting knitted structure formed by bringing two stitches adjacent in a knitting width direction closer in a direction of approaching each other to project out to a surface of the knitted fabric, and a knitted fabric obtained by the knitting method. In particular, the present invention relates to a knitting method of a knitted fabric in which the appearance differs between a case in which the knitted fabric is seen from the left side and a case in which the knitted fabric is seen from the right side by having a knitting yarn configuring one stitch in the projecting knitted structure and a knitting yarn configuring the other stitch as different types of knitting yarns, and a knitted fabric obtained by the knitting method.

Description of the Related Art

[0002] For example, patent document 1 discloses a technique of knitting Afghan knitted fabric in which hue changes in a complex manner depending on the viewing angle by forming a low region section lowered in a recessed form and a high region section raised in a projecting form on the surface of the Afghan knitted fabric, using different colors between the low region section and the high region section, by hand knitting using crochet hook. The change in hue occurs when the low region section appears and disappears depending on the angle of viewing the Afghan knitted fabric.

PRIOR ART DOCUMENT

PATENT DOCUMENT

[0003]

[Patent Document 1] Japanese Utility Model Publication No. 3159219

SUMMARY OF THE INVENTION

[0004] However, a technique of knitting a knitted fabric in which the appearance differs depending on the viewing angle using a flat knitting machine is not currently proposed. The inventors of the present invention considered a knitting method of a knitted fabric to knit a projecting knitted structure formed by bringing two stitches adjacent in a knitting width direction closer in a direction of approaching each other to project out to a surface of the knitted fabric. It was believed that, if the projecting knitted structure could be knitted in the knitted fabric, a knitted fabric that appears differently when seen from the left and when seen from the right should be obtained by having the knitting yarn configuring one stitch in the projecting knitted structure and the knitting yarn configuring the other stitch as different types.

[0005] In light of the foregoing, it is an object of the present invention to provide a knitting method of a knitted fabric for knitting a projecting knitted structure formed by bringing two stitches adjacent in a knitting width direction closer in a direction approaching each other to project out to the surface side of the knitted fabric.

[0006] The present invention is a knitting method of a knitted fabric for knitting a knitted fabric using a flat knitting machine including at least a pair of a front and a back needle bed and in which one of the front and back needle beds is capable of being racked in a traverse direction. The knitting method of the knitted fabric of the present invention performs steps α and β from a state in which a stitch A_0 and a stitch Z_0 are held in order toward a right side on one of the needle beds and a stitch P_0 is held at a position between the stitch A_0 and the stitch Z_0 on the other needle bed.

[step α]... obtaining a state in which the position of the stitch P_0 is on a left side of the stitch A_0, and continuously performing knitting of a new stitch A_1 following the stitch A_0 and knitting of a new stitch P_1 following the stitch P_0. The stitch P_1 may be a tuck stitch.

[step β] ... obtaining a state in which a position of the stitch P_1 is on a right side of the stitch Z_0 and continuously performing knitting of a new stitch Z_1 following the stitch Z_0 and knitting of a new stitch P_2 following the stitch P_1. The stitch P_2 may be a tuck stitch.

The step α and the step β are performed to bring the stitch A_1 and the stitch Z_1 closer in a direction of approaching each other in a knitting width direction to form a projecting knitted structure raised in a projecting form in a thickness direction of the knitted fabric.

[0007] The step α and the step β are interchangeable, and when performing the step β first, the stitch P_1 and the stitch P_2 in the step β are replaced with the stitch P_0 and the stitch P_1, and the stitch P_0 and the stitch P_1 in the step α are replaced with the stitch P1 and the stitch P_2 (see description below).

[step β] ... obtaining a state in which a position of the stitch P_0 is on a right side of the stitch Z_0 and continuously performing knitting of a new stitch Z_1 following the stitch Z_0 and knitting of a new stitch P_1 following the stitch P_0.

[step α]... obtaining a state in which the position of the stitch P_1 is on a left side of the stitch A_0, and continuously performing knitting of a new stitch A_1 following the stitch A_0 and knitting of a new stitch P_2 following the stitch P_1.

[0008] According to one aspect of the knitting method of the knitted fabric of the present invention, the step α and the step β are performed from a state in which two or more units, each unit having the stitch A_0 and the stitch Z_0 held on one needle bed and the stitch P_0 and a stitch Q_0 held on the other needle bed as one unit, are lined in the knitting width direction, and the stitch Q_0 is at a position on a right side of the stitch P_0 and on the left side

of the stitch Z_0. In this case, in the step β, the stitch Q_0 is positioned on the right side of the stitch Z_0 and the stitch P_2 is newly knitted following the stitch Q_0 (in this configuration, the stitches are not replaced even if the step β is performed first; see second embodiment). Accordingly, the stitch A_1 of the unit on the right side and the stitch Z_1 of the unit on the left side are brought closer in the direction of approaching each other in the knitting width direction to form the projecting knitted structure raised in a projecting form in the thickness direction of the knitted fabric.

[0009] According to another aspect of the knitting method of the knitted fabric of the present invention, a knitting yarn for knitting the stitch A_1 and the stitch P_1 and a knitting yarn for knitting the stitch Z_1 and the stitch P_2 are different types of knitting yarns. Of course, the knitting yarn for knitting the stitch A_1 and the stitch P_1 and the knitting yarn for knitting the stitch Z_1 and the stitch P_2 may be the same type of knitting yarns.

[0010] According to another aspect of the knitting method of the knitted fabric of the present invention, the projecting knitted structure is formed over the entire surface of the knitted fabric.

[0011] A knitted fabric of the present invention is a knitted fabric knitted using a flat knitting machine including at least a pair of a front and a back needle bed, and in which one of the front and back needle beds is capable of being racked in a traverse direction, the knitted fabric including a projecting knitted structure formed by bringing a left side stitch and a right side stitch adjacent in a knitting width direction closer in a direction of approaching each other in the knitting width direction. The left side stitch is rotated in a clockwise direction with a wale direction as an axis by having two cross-over yarns that are different in length and extending from the left side stitch and connecting to the stitches arranged on a back side of the knitted fabric. The right side stitch is rotated in a counterclockwise direction with the wale direction as an axis by having two cross-over yarns that are different in length and extending from the right side stitch and connecting to the stitches arranged on the back side of the knitted fabric. The left side stitch and the right side stitch lean against each other in a back to back state, and a portion on a boundary side of the left side stitch and the right side stitch in the projecting knitted structure projects out toward a surface side of the knitted fabric

[0012] According to the knitting method of the knitted fabric of the present invention, the knitted fabric of the present invention including the projecting knitted structure formed by bringing the stitch A_1 and the stitch Z_1 closer in a direction of approaching each other to project out to the surface of the knitted fabric can be knitted. In the projecting knitted structure, the appearance of when the knitted fabric is viewed from the left side and the appearance of when the knitted fabric is viewed from the right side can be differed by having the knitting yarn configuring the stitch A_1 and the knitting yarn configuring the stitch Z1 as different types of knitting yarns (e.g., knitting yarn of different color, knitting yarn of different material, knitting yarn of different thickness).

[0013] While the projecting knitted structure is invented in an aim of changing the appearance of when viewed from the left side of the knitted fabric and the appearance of when viewed from the right side of the knitted fabric, it also has a knitted structure having a novel structure that has not been proposed in the past. Thus, even if the type of the knitting yarn of the stitch A_1 and the type of the knitting yarn of the stitch Z_1 configuring the projecting knitted structure are not different, the projecting knitted structure has a visual effect on the basis of such novel structure.

[0014] In the knitting method of the knitted fabric of the present invention, the projecting knitted structure is formed over the entire surface of the knitted fabric to apply the effect of the projecting knitted structure over the entire surface of the knitted fabric. In particular, the iridescent colored knitted fabric in which the hue changes depending on the viewing angle can be knitted by using different colors between the knitting yarn of the stitch A_1 and the knitting yarn of the stitch Z_1 configuring the projecting knitted structure.

[0015] When the stitch Q_0 exists at the start of the step α, and the step β and the stitch P_2 is newly knitted following the stitch Q_0 in the step β, a thick projecting knitted structure can be obtained compared to when the stitch Q_0 is not used. On the contrary, if the stitch Q_0 is not used, the number of stitches in the knitting width direction on the back side of the knitted fabric (side opposite to the side in which the projecting knitted structure projects out) is few compared to when the stitch Q_0 is used, and hence a thin projecting knitted structure can be obtained.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016]

Fig. 1(A) is a photograph of a knitted fabric shown in an embodiment seen from a left side;
Fig. 1(B) is a photograph of the knitted fabric seen from a right side;
Fig. 2 is an enlarged photograph of a projecting knitted structure arranged in the knitted fabric of Fig. 1;
Fig. 3 is a knitting step diagram schematically showing a knitting procedure of a projecting knitted structure shown in a first embodiment;
Fig. 4 is a simple loop diagram of the projecting knitted structure knitted in the first embodiment;
Fig. 5 is a knitting step diagram schematically showing a knitting procedure of a projecting knitted structure shown in a second embodiment; and
Fig. 6 is a simple loop diagram of the projecting knitted structure knitted in the second embodiment.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0017] An embodiment of a knitting method of a knitted fabric of the present invention will be hereinafter described based on the drawings. In the embodiment, a knitting example using a two-bed flat knitting machine including a front needle bed (hereinafter referred to as "FB") and a back needle bed (hereinafter referred to as "BB") extending in a traverse direction and disposed opposite to each other in a cross direction, and in which the BB can be racked in the traverse direction will be described. The flat knitting machine to be used is not, of course, limited to the two-bed flat knitting machine, and may be a four-bed flat knitting machine.

<First embodiment>

[0018] In the first embodiment, an example of knitting a knitted fabric in which alphabets stand out when the knitted fabric is seen from the left side as shown in Fig. 1(A) and in which numbers stand out when the knitted fabric is seen from the right side as shown in Fig. 1(B) will be described. In order to obtain such a knitted fabric, a special knitted structure needs to be formed on the surface of the knitted fabric.

[0019] As shown in an enlarged photograph of Fig. 2, a projecting knitted structure 1 formed by bringing two adjacent stitches (left side stitch 2, right side stitch 3) closer in a direction of approaching each other is continuously arranged in plurals in a wale direction and a course direction of the knitted fabric on the surface of the knitted fabric of Fig. 1. The left side stitch 2 of the projecting knitted structure 1 contacts with the right side stitch 3 of the projecting knitted structure 1 in a state of the left side stitch 2 rotating in a clockwise direction with a wale direction as an axis and the right side stitch 3 rotating in a counterclockwise direction with the wale direction as an axis, so that a portion on a boundary side of the stitches 2, 3 projects out at the surface of the knitted fabric. Looking at a cross-section of the projecting knitted structure 1, the projecting knitted structure 1 is raised in a substantially triangular shape to the surface side of the knitted fabric. Thus, the left side stitch 2 can be seen more than the right side stitch 3 when the projecting knitted structure 1 is seen from the left side, while the right side stitch 3 can be seen more than the left side stitch 2 when the projecting knitted structure 1 is seen from the right side. That is, a knitted fabric in which the pattern that can be recognized differs in the right and left sides as shown in Fig. 1 can be knitted by partially changing the color of the left side stitch 2 and the color of the right side stitch 3 in the knitted fabric.

[0020] A knitting procedure of the projecting knitted structure 1 will now be described based on a knitting step diagram of Fig. 3. "Alphabet + number" in Fig. 3 indicates the number of the knitting step, a horizontal bar indicates a front needle bed (hereinafter referred to as "FB") and a back needle bed (hereinafter referred to as "BB"), ○ indicates a stitch held on the FB and the BB, and • indicates a newly formed stitch. The illustration of a knitting needle arranged in the needle bed is omitted.

[0021] S1 of Fig. 3 shows a state in which the stitch A_0 and the stitch Z_0 are held in order toward the right side on the FB, and the stitch P_0 is held between the stitch A_0 and the stitch Z_0 in the BB. In S1, three units, each unit having the stitches A_0, Z_0, P_0 as one unit, are lined in a knitting width direction in a plane of drawing.

[0022] In S2, the BB is racked in the traverse direction to obtain a state in which the stitch P_0 is positioned on the left side of the stitch A_0 (correspond to the first half of the step α). Furthermore, in S2, knitting of a new stitch A_1 following the stitch A_0 and knitting of a new stitch P_1 following the stitch P_0 are continuously carried out (correspond to the second half of the step α). According to S2, the stitch A_1 is knitted continuously in the wale direction of the stitch A_0, and the stitch P_1 is knitted continuously in the wale direction of the stitch P_0. In this case, a moving direction of a yarn feeder for supplying the knitting yarn to the FB and the BB is not limited. For example, when performing S2, the yarn feeder is moved toward the right side (left side) if the yarn feeder is on the left side (right side) of the stitch A_0 and the stitch P_0 to knit the stitch P_1 (stitch A_1), and then the stitch A_1 (stitch P_1) is knitted following thereto. The stitch P_1 may be a tuck stitch. If the stitch P_1 is a tuck stitch, knitting is performed on the stitch P_1 with a knitting yarn different from the knitting yarn of the tuck stitch to fix the tuck stitch before the next tuck knitting.

[0023] In S3, the BB is racked toward the right side, so that the stitch P_1 is positioned on the right side of the stitch Z_0 (correspond to the first half of the step β). Furthermore, in S3, the knitting of a new stitch Z_1 following the stitch Z_0 and the knitting of a new stitch P_2 following the stitch P_1 are continuously carried out (correspond to the second half of the step β). According to S3, the stitch P_2 is knitted continuously in the wale direction of the stitch P_1, and the stitch Z_1 is knitted continuously in the wale direction of the stitch Z_0. The moving direction of the yarn feeder in the step β is not limited. The moving direction of the yarn feeder in S3 is determined merely by whether the yarn feeder is on the left side or the right side of the stitch P_1 and the stitch Z_0 when performing S3. The stitch P_2 may be a tuck stitch. If the stitch P_2 is a tuck stitch, knitting is performed on the relevant tuck stitch before the next tuck knitting to fix the tuck stitch.

[0024] S2 and S3 are thereafter repeated to form the next projecting knitted structure in the wale direction of the projecting knitted structure. In the process of shifting from nth (n is a natural number greater than or equal to 1) S3 to n+1th S2, the arrangement of the stitches A_1, Z_1, P_2 in S3 becomes the same state as the stitches A_0, Z_0, P_0 in S1 (see S3'). That is, the nth stitches A_1, Z_1, P_2 can be assumed as the n+1th stitches A_0, Z_0, P_0.

[0025] In what state the stitches A_1, Z_1, P_2 formed in S3 are actually in the knitted fabric will be described

based on Fig. 4. Fig. 4 is a loop diagram simply showing the state of stitches in the cross-section of the knitted fabric. In Fig. 4, the stitches are shown in a deformed manner so that a deformed state of the stitches and the connection of the cross-over yarns between the stitches can be recognized, and the vertical relationship of the knitting yarn is ignored.

[0026] As shown in Fig. 4, the stitch A_1 of one unit is connected to the stitch P_1 of the same unit and the stitch P_1 of another unit adjacent on the right in the drawing with cross-over yarns, where the former cross-over yarn is shorter than the latter cross-over yarn. As a result, the stitch A_1 is rotated in the clockwise direction with the wale direction as the axis to get closer to the stitch Z_1. The stitch Z_1 of one unit is connected to the stitch P_2 of the same unit and the stitch P_2 of another unit adjacent on the left in the drawing with cross-over yarns, where the former cross-over yarn is shorter than the latter cross-over yarn. As a result, the stitch Z_1 is rotated in the counterclockwise direction with the wale direction as the axis to get closer to the stitch A_1. The stitch A_1 (the left side stitch 2) and the stitch Z_1 (the right side stitch 3) rotate in opposite directions to each other, and thus lean against each other in a back to back state. As a result, the projecting knitted structure 1 configured by the stitches A_1, Z_1 projects out to the surface side of the knitted fabric.

[0027] When repeating the knitting steps described above, the knitted fabric shown in Fig. 1 can be knitted by changing the colors between the knitting yarn for knitting the stitch A_1 and the stitch P_1 and the knitting yarn for knitting the stitch Z_1 and the stitch P_2 when forming the pattern in the knitted fabric. As apparent from Figs. 1(A) and 1(B), the appearance of the knitted fabric changes depending on the viewing angle. Furthermore, the knitted fabric has a line-shaped bump lined in the wale direction of the knitted fabric, and thus has a unique appearance based on the bump. The projecting knitted structure 1 is knitted using the front and back needle beds and is projected out to the surface side of the knitted fabric, and thus the knitted fabric of the present embodiment is thick but has high flexibility considering the thickness.

<Second Embodiment>

[0028] In the second embodiment, the arrangement state of the stitches before performing the step α and the step β differs from the first embodiment, and the knitting procedure of the knitted fabric in which the step β is performed before the step α will be described based on Fig. 5. The way of viewing Fig. 5 is the same as the way of viewing Fig. 3.

[0029] T1 shows a state in which the stitch A_0 and the stitch Z_0 are held on the FB, and the stitch P_0 and the stitch Q_0 are held on the BB. The stitch Q_0 of the BB is arranged on the right side of the stitch P_0 and on the left side of the stitch Z_0 in the knitting width direction. In T1, two units, each unit having the stitches A_0, Z_0, P_0, Q_0 as one unit, are lined in the knitting width direction in the drawing.

[0030] In T2, the BB is racked toward the right side so that the stitch Q_0 is positioned on the right side of the stitch Z_0, and the stitch Z_1 continuing in the wale direction of the stitch Z_0 and the stitch P_2 continuing in the wale direction of the stitch Q_0 are continuously knitted (correspond to the step β). The stitch P_2 may be a tuck stitch.

[0031] In T3, the BB is racked toward the left side so that the stitch P_0 is positioned on the left side of the stitch A_0, and the stitch A_1 continuing in the wale direction of the stitch A_0 and the stitch P_1 continuing in the wale direction of the stitch P_0 are continuously knitted (correspond to the step α). The stitch P_1 may be a tuck stitch.

[0032] T2 and T3 are thereafter repeated to form the next projecting knitted structure following in the wale direction of the projecting knitted structure. In the process of shifting from the nth T3 to the n+1th T2, the arrangement of the stitches A_1, Z_1, P_1, P_2 in T3 becomes the same state as the stitches A_0, Z_0, P_0, Q_0 in T1 (see T3'). That is, the nth stitches A_1, Z_1, P_1, P_2 can be assumed as the n+1th stitches A_0, Z_0, P_0, Q_0.

[0033] In what state the stitches A_1, Z_1, P_1, P_2 formed in T3 actually are in the knitted fabric will be described based on Fig. 6. The way of viewing Fig. 6 is the same as the way of viewing Fig. 4.

[0034] As shown in Fig. 4, the stitch A_1 in a unit on the right side of the drawing is connected to the stitch P_1 of the same unit and the stitch P_1 of another unit adjacent on the left side of the drawing with cross-over yarns, where the former cross-over yarn is shorter than the latter cross-over yarn. As a result, the stitch A_1 of the unit on the right side is rotated in the counterclockwise direction with the wale direction as the axis to get closer to the stitch Z_1 of the unit on the left side. The stitch Z_1 of one unit on the left side of the drawing is connected with the stitch P_2 of the same unit and the stitch P_2 of another unit adjacent on the right side of the drawing with cross-over yarns, where the former cross-over yarn is shorter than the latter cross-over yarn. As a result, the stitch Z_1 is rotated in the clockwise direction with the wale direction as the axis to get closer to the stitch A_1 of the unit on the right side. The stitch Z_1 (left side stitch 2) and the stitch A_1 (right side stitch 3) rotate in opposite directions to each other, and thus lean against each other in a back to back state. As a result, the projecting knitted structure 1 configured by the stitches A_1, Z_1 projects out to the surface side of the knitted fabric.

[0035] According to the knitting steps described above, a knitted fabric more stable than the knitted fabric knitted with the knitting steps of the first embodiment is obtained. This is because the number of stitches in the knitting width direction on the back side of the knitted fabric of the second embodiment is greater than that of the first embodiment.

[0036] A novel jacquard pattern that appears and disappears depending on the viewing angle as shown in Fig. 1 can be formed as a visual pattern by partially chang-

ing the colors and materials of the knitting yarns.

<Third Embodiment>

[0037] The color of the knitting yarn for knitting the left side stitch 2 and the color of the knitting yarn for knitting the right side stitch 3 in Fig. 2 may be different over the entire knitted fabric. For example, by knitting the knitted fabric with a red knitting yarn for the left side stitch 2 and with a green knitting yarn for the right side stitch 3, a knitted fabric in which color gradation forms at a portion (a portion which is wrinkled, slacked, or curved along the human body) that curves when the knitted fabric is worn can be obtained. The gradation forms because the proportion the left side stitch 2 and the right side stitch 3 can be seen gradually changes according to the degree of curve of the knitted fabric. Such knitted fabric is an iridescent colored knitted fabric in which the hue partially changes in a complex manner depending on the extent of wrinkles and slacks when worn.

[0038] The positions of the stitches were changed only using the racking of the needle bed in the first to third embodiments, but the positions of the stitches may be changed using the racking of the needle bed and the transferring of stitches.

Claims

1. A knitting method of a knitted fabric for knitting a knitted fabric using a flat knitting machine including at least a pair of a front and a back needle bed and in which one of the front and back needle beds is capable of being racked in a traverse direction, the knitting method of the knitted fabric **characterized by** performing,
from a state in which a stitch A_0 and a stitch Z_0 are held in order toward a right side on one needle bed and a stitch P_0 is held at a position between the stitch A_0 and the stitch Z_0 on the other needle bed,
a step α of obtaining a state in which a position of the stitch P_0 is on a left side of the stitch A_0 and continuously performing knitting of a new stitch A_1 following the stitch A_0 and knitting of a new stitch P_1 following the stitch P_0; and
a step β of obtaining a state in which a position of the stitch P_1 is on a right side of the stitch Z_0 and continuously performing knitting of a new stitch Z_1 following the stitch Z_0 and knitting of a new stitch P_2 following the stitch P_1,
the steps α and β being performed to bring the stitch A_1 and the stitch Z_1 closer in a direction of approaching each other in a knitting width direction to form a projecting knitted structure raised in a projecting form in a thickness direction of the knitted fabric,
wherein the step α and the step β are interchangeable, and when performing the step β first, the stitch P_1 and the stitch P_2 in the step β are replaced with the stitch P_0 and the stitch P_1, and the stitch P_0 and the stitch P_1 in the step α are replaced with the stitch P_1 and the stitch P_2.

2. The knitting method of the knitted fabric according to claim 1, **characterized in that**
when the step α and the step β are performed from a state in which two or more units, each unit having the stitch A_0 and the stitch Z_0 held on one needle bed and the stitch P_0 and a stitch Q_0 held on the other needle bed as one unit, are lined in the knitting width direction, and the stitch Q_0 is at a position on a right side of the stitch P_0 and on the left side of the stitch Z_0,
in the step β, the stitch Q_0 is positioned on the right side of the stitch Z_0 and the stitch P_2 is newly knitted following the stitch Q_0 so that the stitch A_1 of the unit on the right side and the stitch Z_1 of the unit on the left side are brought closer in the direction of approaching each other in the knitting width direction to form the projecting knitted structure raised in a projecting form in the thickness direction of the knitted fabric,
wherein the replacement of the stitches described in claim 1 is not carried out even when the β is performed first.

3. The knitting method of the knitted fabric according to claim 1 or 2, **characterized in that** a knitting yarn for knitting the stitch A_1 and the stitch P_1 and a knitting yarn for knitting the stitch Z_1 and the stitch P_2 are different types of knitting yarns.

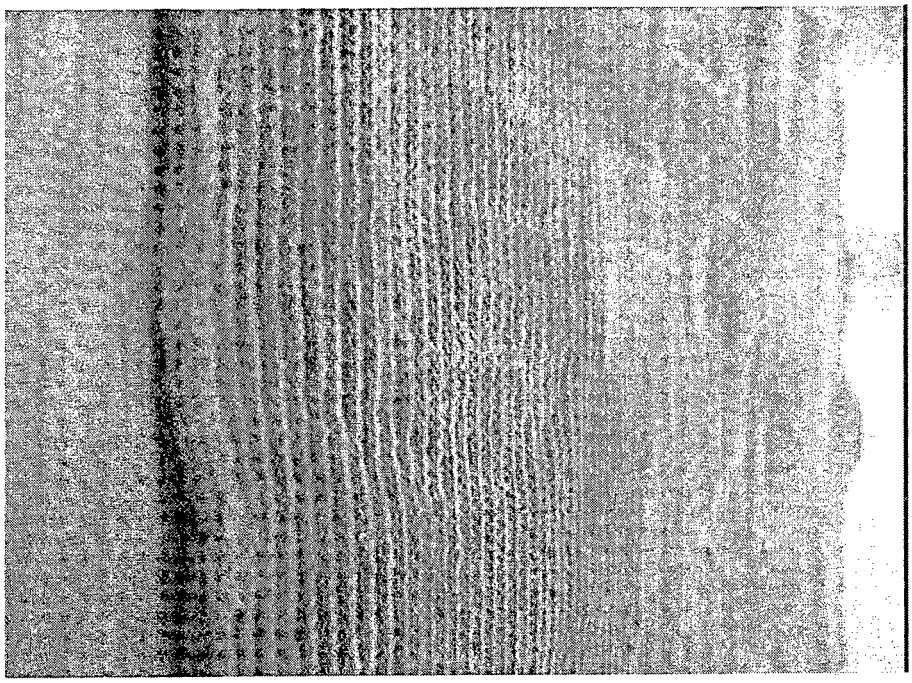
4. The knitting method of the knitted fabric according to any one of claims 1 to 3, **characterized in that** the projecting. knitted structure is formed over an entire surface of the knitted fabric.

5. A knitted fabric knitted using a flat knitting machine including at least a pair of a front and a back needle bed, and in which one of the front and back needle beds is capable of being racked in a traverse direction, the knitted fabric **characterized by**
a projecting knitted structure (1) formed by bringing a left side stitch (2) and a right side stitch (3) adjacent in a knitting width direction closer in a direction of approaching each other in a knitting width direction, wherein
the left side stitch (2) is rotated in a clockwise direction with a wale direction as an axis by having two cross-over yarns that are different in length and extending from the left side stitch (2) and connecting to the stitches arranged on a back side of the knitted fabric;
the right side stitch (3) is rotated in a counterclockwise direction with the wale direction as an axis by having two cross-over yarns that are different in length and extending from the right side stitch (3)

and connecting to the stitches arranged on the back side of the knitted fabric; and
the left side stitch (2) and the right side stitch (3) lean against each other in a back to back state, and
a portion on a boundary side of the left side stitch (2) and the right side stitch (3) in the projecting knitted structure (1) projects out toward a surface side of the knitted fabric.

Fig. 1

(A)



(B)

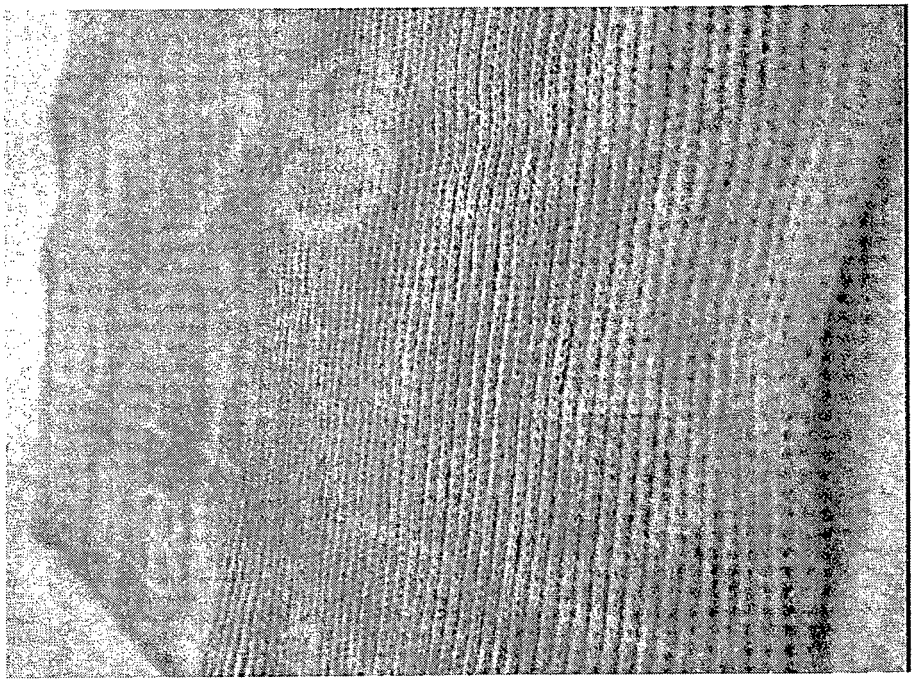


Fig. 2

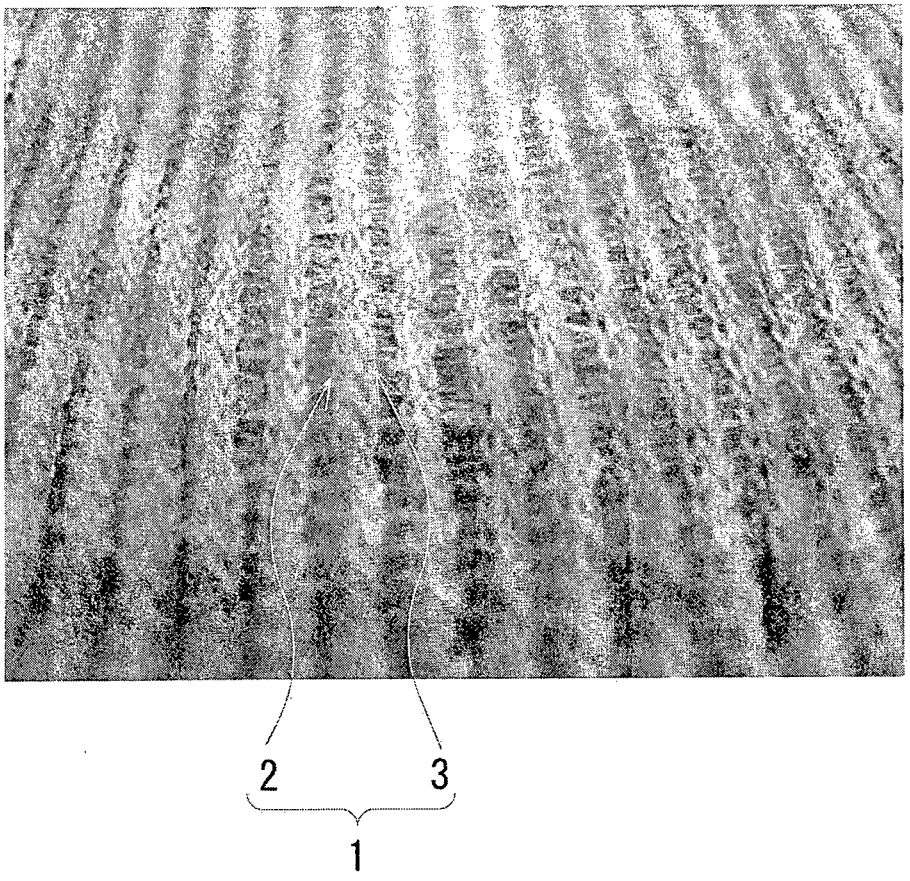


Fig. 3

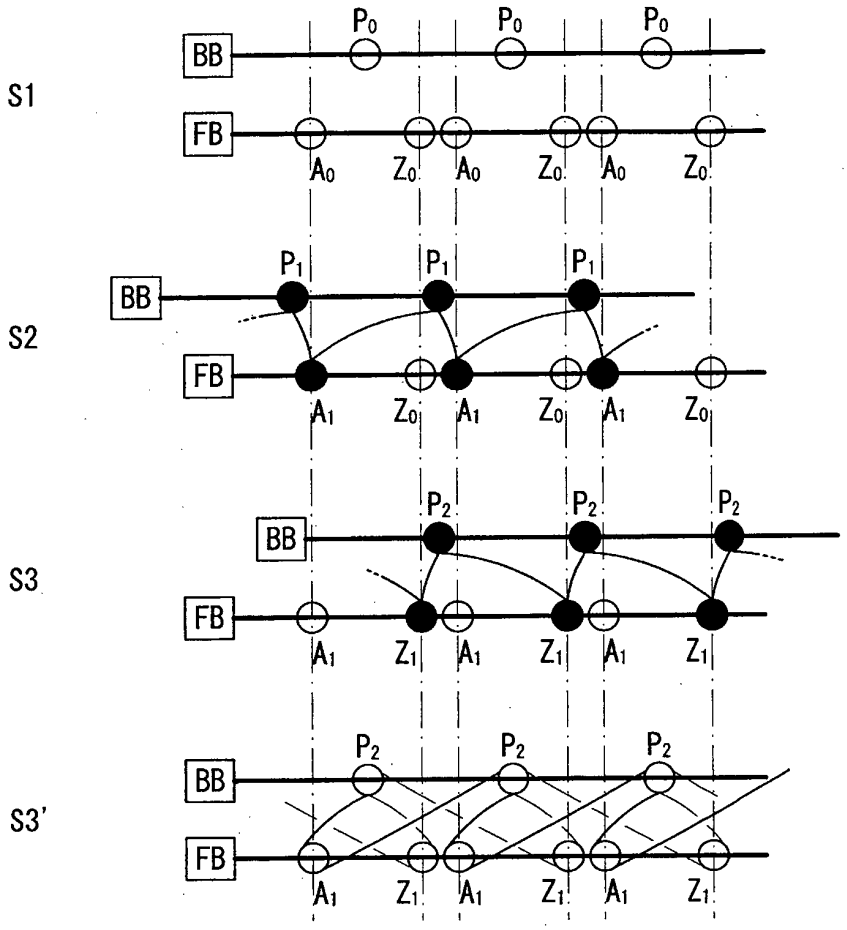


Fig. 4

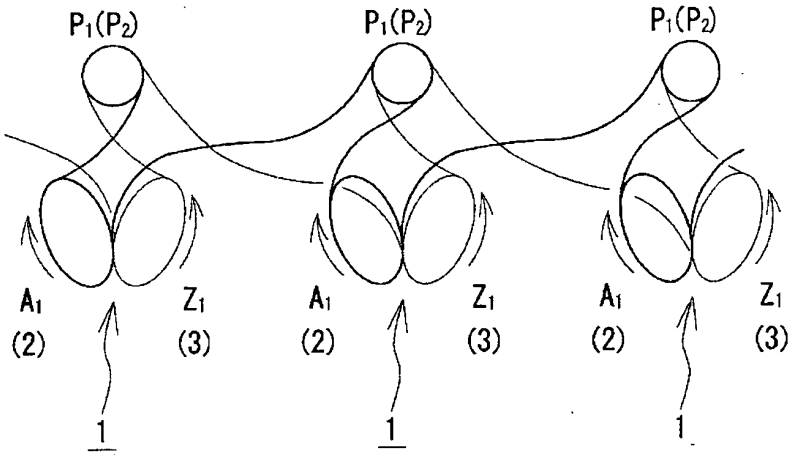


Fig. 5

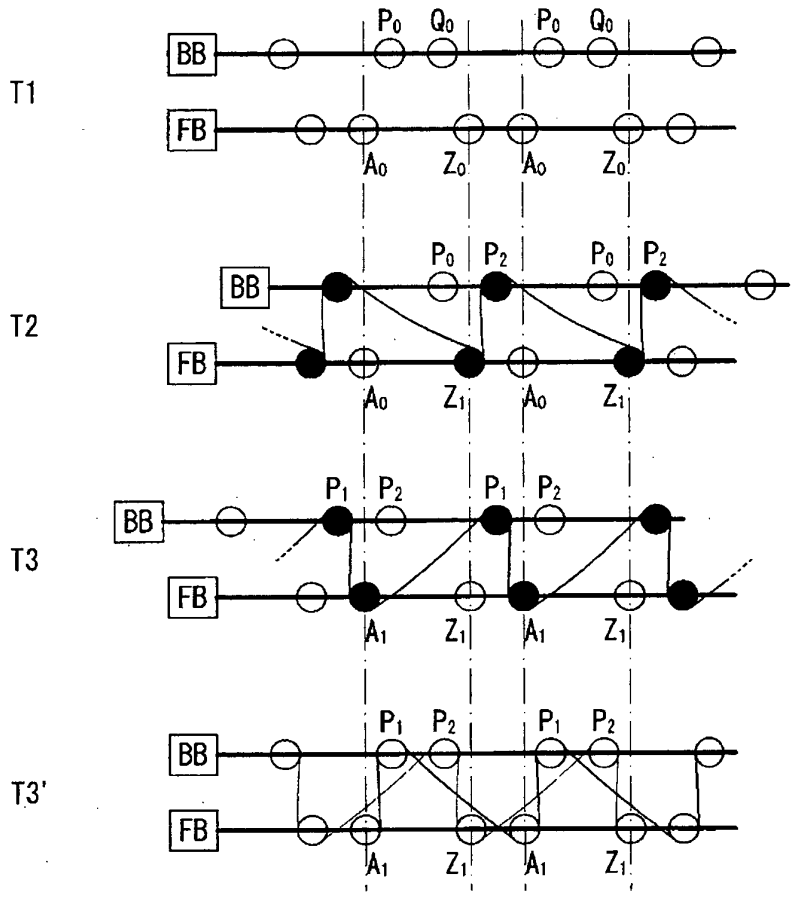

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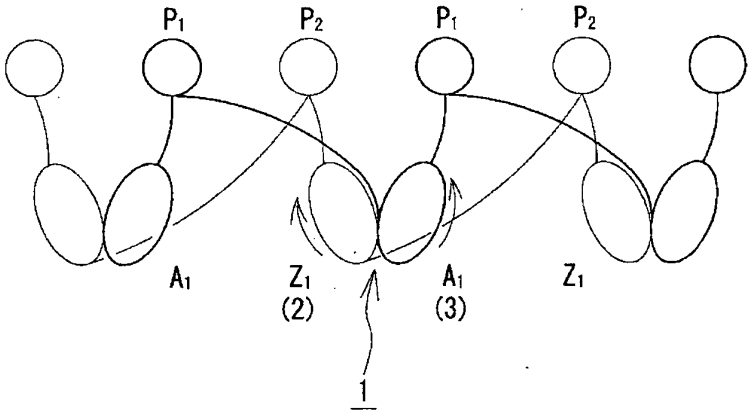
Fig. 6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EUROPEAN SEARCH REPORT

Application Number
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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	12 September 2013	Sterle, Dieter

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