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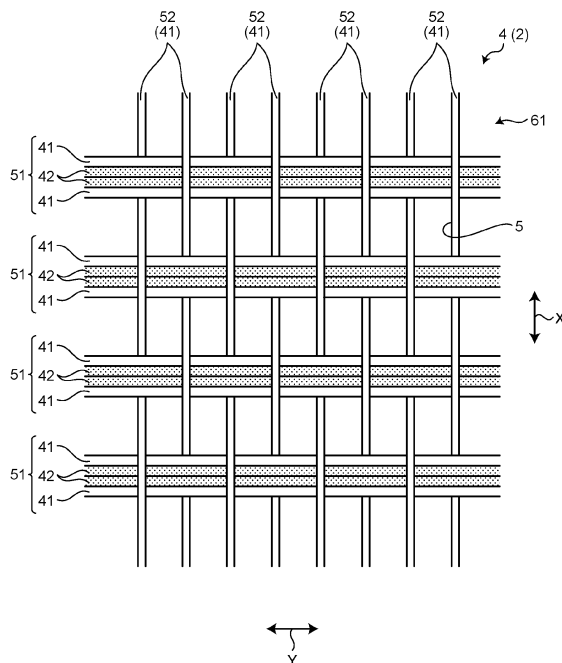
GE KH MA MD TN(30) Priority: **14.04.2023 JP 2023066196**(71) Applicant: **ASICS Corporation****Kobe-shi, Hyogo 650-8555 (JP)**(72) Inventor: **Suzuki, Chihaya****Hyogo, 6508555 (JP)**(74) Representative: **Marks & Clerk LLP**

15 Fetter Lane
London EC4A 1BW (GB)

(54) **UPPER AND SHOE**

(57) An upper includes an upper body 4 being a woven fabric, and the upper body 4 includes a first bundle body 51 in which a first linear body 41 and a second linear

body 42 are bundled along a first direction, and a second bundle body 52 in which the first linear body 41 is bundled along a second direction orthogonal to the first direction.

FIG.3**EP 4 458 201 A2**

Description

BACKGROUND

1. Technical Field

[0001] The present disclosure relates to an upper and a shoe.

2. Background Information

[0002] As disclosed in JP 2020-525088 A, a shoe includes an upper covering an instep of a foot, and a sole disposed below the upper to support the foot. The upper is required to have various functions depending on a purpose of use and the like. In particular, performance shoes used for sports can be required to have reduced stretch and still easily return to their original length when stretched. However, it has been difficult to achieve these functions with a single material, and it has been common to achieve these functions by combining a plurality of parts to form an upper.

[0003] By combining a plurality of parts to form an upper, processes for bonding and sewing the parts together are required, which increases the number of manufacturing processes. In addition to the increase in the number of parts, materials such as bonding agents and sewing threads increase. For these reasons, there is a problem that the manufacturing efficiency of the upper is reduced and the environmental burden is also increased.

[0004] The present disclosure has been made in view of the above, and a purpose thereof is to obtain an upper capable of achieving a required function while reducing an increase in the number of necessary parts.

SUMMARY

[0005] In order to solve the above problem and achieve the object, an upper of a shoe, the upper comprising: an upper body being a woven fabric, wherein the upper body includes a first bundle body in which a first linear body and a second linear body are bundled along a first direction, and a second bundle body in which the first linear body is bundled along a second direction orthogonal to the first direction.

BRIEF DESCRIPTION OF THE DRAWINGS

[0006]

FIG. 1 is a perspective view illustrating an external appearance of a shoe according to a first embodiment;

FIG. 2 is a developed view of an upper body in the first embodiment;

FIG. 3 is a partially enlarged view of a part of a first region of the upper body in the first embodiment;

FIG. 4 is a partially enlarged view of a part of a second

region of the upper body in the first embodiment; FIG. 5 is a view illustrating a modification of the upper in the first embodiment;

FIG. 6 is a partially enlarged view of a part of the first region of the upper body formed of a knitted fabric; and

FIG. 7 is a partially enlarged view of a part of the second region of the upper body formed of a knitted fabric.

DETAILED DESCRIPTION

[0007] Hereinafter, an embodiment of an upper and a shoe according to the present disclosure will be described in detail with reference to the drawings. Note that the present disclosure is not limited by the embodiment. In the following description, the same portions are denoted by the same reference signs, and redundant description will be omitted.

[0008] FIG. 1 is a perspective view illustrating an external appearance of a shoe according to a first embodiment of the present disclosure. In the drawings including FIG. 1, only a shoe 1 for a left foot is illustrated. Since the shoe 1 has a left-right symmetrical structure for a left foot and a right foot, only the shoe 1 for a left foot is described in the present embodiment, and the description of the shoe 1 for a right foot is omitted. In the following description, the toe side of a foot of a wearer of the shoe 1 is defined as a fore side, and the heel side is defined as a rear side. A direction orthogonal to the fore-rear direction in a plan view of the shoe 1 is defined as a foot width direction. Note that, in the drawings, the fore-rear direction can be indicated by an arrow X, and the foot width direction can be indicated by an arrow Y.

[0009] In addition, a median side of a foot in the anatomical position is referred to as a medial foot side, and the side opposite to the median side of the foot in the anatomical position is referred to as a lateral foot side. That is, the side closer to the median line in the anatomical position is referred to as the medial foot side, and the side farther from the median line in the anatomical position is referred to as the lateral foot side. In addition, a vertical direction means a direction orthogonal to both the fore-rear direction and the foot width direction unless otherwise specified.

[0010] The shoe 1 includes an upper 2 and a sole 3. The upper 2 includes an upper body 4 that covers the upper surface of the sole 3, with a space for the foot of the wearer between the upper body 4 and the sole 3. The upper body 4 is fixed to the sole 3 by stitching, welding, or bonding, or a combination thereof. The upper body 4 is disposed with a foot insertion opening 21. The foot insertion opening 21 is an opening for inserting the foot of the wearer into the upper body 4.

[0011] FIG. 2 is a developed view of the upper body in the first embodiment. The upper body 4 includes an upper fore foot portion R1 that covers a fore foot position of a foot of a wearer with a standard body shape, an upper

midfoot portion R2 that covers a midfoot position of a foot of a wearer with a standard body shape, and an upper rear foot portion R3 that covers a rear foot position of a foot of a wearer with a standard body shape. The upper fore foot portion R1, the upper midfoot portion R2, and the upper rear foot portion R3 are connected in this order in the fore-rear direction from the fore side of the upper 2.

[0012] The upper body 4 includes a first region 61 and a second region 62. The second region 62 is mainly disposed in the upper midfoot portion R2 of the upper body 4. The first region 61 is a region of the upper body 4 excluding the second region 62.

[0013] The first region 61 and the second region 62 of the upper body 4 are woven fabrics formed by combining warp yarns and weft yarns.

[0014] Next, the structure of the woven fabric in the first region 61 will be described. FIG. 3 is a partially enlarged view of a part of the first region of the upper body in the first embodiment. The upper body 4 is formed by alternately crossing a first bundle body 51, which is a weft yarn extending along a first direction, and a second bundle body 52, which is a warp yarn extending in a second direction orthogonal to the first direction. Note that, the first direction substantially coincides with the foot width direction of the shoe 1 when the upper body 4 is fixed to the sole 3. The second direction substantially coincides with the fore-rear direction of the shoe 1 when the upper body 4 is fixed to the sole 3.

[0015] The first bundle body 51 is formed by bundling a first linear body 41 and a second linear body 42. In the example illustrated in FIG. 3, a plurality of first linear bodies 41 and a plurality of second linear bodies 42 are paralleled without being twisted to form a paralleled yarn. In FIG. 3, the first bundle body 51 is illustrated as being formed of two first linear bodies 41 and two second linear bodies 42 for easy understanding of the drawing, but the number of first linear bodies 41 and the number of second linear bodies 42 are not limited thereto.

[0016] The second bundle body 52 is formed of the first linear body 41. In FIG. 3, the second bundle body 52 is illustrated as being formed of one first linear body 41 for easy understanding of the drawing, but the second bundle body 52 is formed by bundling a plurality of first linear bodies 41. The first linear bodies 41 in the second bundle body 52 may include a leno weave portion.

[0017] The tensile resistance of the first linear body 41 is smaller than the tensile resistance of the second linear body 42. In addition, the elongation recovery percentage of the first linear body 41 is greater than the elongation recovery percentage of the second linear body 42. This can also be said that the first linear body 41 and the second linear body 42 have a relationship in which the magnitude relationship of tensile resistance and the magnitude relationship of elongation recovery percentage are reversed.

[0018] Since the tensile resistance of the first linear body 41 is smaller than the tensile resistance of the second linear body 42 and the elongation recovery percent-

age of the first linear body 41 is greater than the elongation recovery percentage of the second linear body 42, the first linear body 41 stretches and returns to its original length more easily than the second linear body 42. On the other hand, the second linear body 42 is more difficult to stretch and return to the length of an object when stretched than the first linear body 41.

[0019] An example of a such combination of properties is to form the first linear body 41 with thermoplastic polyurethane elastomer (TPU) and to form the second linear body 42 with polyester resin. In addition, another example is to form the first linear body 41 with thermoplastic polyester elastomer (TPEE) and to form the second linear body 42 with polyester resin. Note that the first linear body 41 and the second linear body 42 may be monofilaments or multifilaments. In addition, one of the first linear body 41 and the second linear body 42 may be a monofilament, and the other may be a multifilament.

[0020] Next, the structure of the woven fabric in the second region 62 will be described. FIG. 4 is a partially enlarged view of a part of the second region of the upper body in the first embodiment. It is assumed that FIGS. 3 and 4 are enlarged to the same scale.

[0021] A first bundle body 53 in the second region 62 is formed by aggregating a plurality of the first bundle bodies 51 (see FIG. 3) in the first region 61, and includes a greater number of the first linear bodies 41 and second linear bodies 42 than the first bundle body 51 in the first region 61.

[0022] By aggregating a plurality of the first bundle bodies 51 to form the first bundle body 53, the spacing between the first bundle bodies 53 in the second region 62 can be made wider than the spacing between the first bundle bodies 51 in the first region 61, without changing the number of the first linear bodies 41 and second linear bodies 42 per unit area.

[0023] The sole 3 is positioned below the upper 2. The sole 3 covers the sole of the wearer. The sole 3 is formed of a material having a cushioning property in order to absorb an impact applied to the foot during walking and running.

[0024] As described above, in the shoe 1 according to the first embodiment, the first bundle body 51 is used for the weft yarn of the upper 2. That is, a paralleled yarn formed by paralleling the first linear body 41 and the second linear body 42 is used for the weft yarn extending in the foot width direction. The first linear body 41 and the second linear body 42 have a relationship in which the magnitude relationship of tensile resistance and the magnitude relationship of elongation recovery percentage are reversed. As a result, the upper 2 is difficult to stretch in the foot width direction due to the properties of the second linear body 42 and easily returns to its original length due to the properties of the first linear body 41 when stretched. In a conventional upper, a portion desired to achieve a function of reducing stretch and easily returning to its original length is achieved by combining a plurality of parts. On the other hand, in the shoe 1 according to the

first embodiment, the above function is achieved only by the upper body 4 without combining a plurality of parts. Therefore, it is possible for the upper 2 to achieve the required function while reducing the number of parts used for the shoe 1. By reducing the number of parts, it is possible to reduce processes for bonding and sewing the parts together. In addition, it is possible to reduce materials such as bonding agents and sewing threads for joining the parts. As a result, it is possible to improve the manufacturing efficiency of the upper 2 and reduce the environmental burden. Note that the tensile resistance and the elongation recovery percentage are measured in accordance with the method for elastic recovery percentage of elongation; method B described in JIS L 1095. The tensile resistance is a value obtained by dividing the load when a linear body is stretched to a certain elongation (3% or 5%) by the fineness of the linear body and the load strain. The elongation recovery percentage is a value obtained by stretching a linear body to a certain elongation (3% or 5%) and removing the load immediately after stretching, and dividing a residual elongation after holding the linear body for 2 minutes by the initial length of the linear body.

[0025] In addition, in the upper 2, the second bundle body 52 formed of the first linear body 41 is used for the warp yarn extending in the fore-rear direction, but the number of the first linear bodies 41 included in the second bundle body 52 is increased to obtain a material with reduced stretch in the fore-rear direction.

[0026] In addition, in the second region 62 disposed in the upper midfoot portion R2, the first bundle body 53 is formed by bundling the first linear bodies 41 and the second linear bodies 42 more densely than in the first region 61. As a result, in the second region 62, the number of the first linear bodies 41 and the second linear bodies 42 included in one bundle body is greater than that in the first region 61. As a result, it is possible for the second region 62 to achieve a function of reducing stretch and easily returning to its original length when stretched as compared to the first region 61. Therefore, it is possible to make the strength of the function different for each portion of the upper 2. Note that three or more types of regions having different numbers of the first linear bodies 41 and the second linear bodies 42 included in one bundle may be disposed.

[0027] In addition, since the first linear bodies 41 and the second linear bodies 42 are bundled in the second region 62 more densely than in the first region 61, the spacing between the first bundle bodies 53 is wide, and it is possible to improve air permeability as compared to the first region 61.

[0028] In addition, when the first linear body 41 is formed of thermoplastic polyester elastomer and the second linear body 42 is formed of polyester resin, both are formed of polyester-based materials, which improves recyclability.

[0029] Note that the first bundle bodies 51 and 53 may be twisted yarns formed by twisting the first linear body

41 and the second linear body 42. In addition, the first bundle bodies 51 and 53 may be covered yarns formed by using one of the first linear body 41 and the second linear body 42 as a core yarn and wrapping the other around the core yarn as a sheath yarn. Even when the first bundle bodies 51 and 53 are twisted yarns or covered yarns in this manner, by combining the first linear body 41 and the second linear body 42 having different properties, it is possible to expect effects similar to those of the paralleled yarns.

[0030] When the upper body 4 is formed of a woven fabric, as illustrated in FIGS. 3 and 4, the shape of a through hole 5 passing through the inside and the outside of the shoe 1 is substantially quadrangular by being surrounded by the first bundle body 51 or 53 and the second bundle body 52. In addition, by adjusting the spacing between the first bundle bodies 51 or 53 or the spacing between the second bundle bodies 52, it is possible to select which side of the through hole 5 having a rectangular shape is the long side.

[0031] When the through hole 5 has a rectangular shape, shear deformation in a direction parallel to the long side easily occurs. That is, the upper body 4 easily stretches in the direction parallel to the long side. Therefore, by making the shape of the through hole 5 different for each region of the upper body 4, it is possible to control the direction in which the upper body 4 easily stretches and the ease of stretching for each region.

[0032] FIG. 5 is a view illustrating a modification of the upper in the first embodiment. In the upper 2 according to the modification, a third region 63 is disposed on the medial foot side and the lateral foot side in the upper midfoot portion R2 of the upper body 4. In addition, a fourth region 64 is disposed on the lateral foot side in the upper fore foot portion R1 of the upper body 4. In addition, a fifth region 65 is disposed on the medial foot side in the upper rear foot portion R3 of the upper body 4.

[0033] In the third region 63, the through hole 5 is disposed in such a manner that the long side of the rectangle is parallel to the foot width direction. Therefore, in the upper midfoot portion R2 disposed with the third region 63, the upper body 4 easily stretches in the foot width direction.

[0034] In the fourth region 64 and the fifth region 65, the through hole 5 is disposed in such a manner that the long side of the rectangle is parallel to the fore-rear direction. Therefore, on the lateral foot side of the upper fore foot portion R1 disposed with the fourth region 64 and on the medial foot side of the upper rear foot portion R3 disposed with the fifth region 65, the upper body 4 easily stretches in the fore-rear direction.

[0035] As described above, by making the shape of the through hole 5 different, it is possible to make the direction in which the upper body 4 easily stretches different for each region.

[0036] Note that all of the third region 63, the fourth region 64, and the fifth region 65 are not limited to being disposed in the upper body 4, and any region may be

selectively disposed. In addition, the third region 63, the fourth region 64, and the fifth region 65 may be disposed on at least one of the medial foot side and the lateral foot side.

[0037] The upper body 4 may be formed of a knitted fabric. FIG. 6 is a partially enlarged view of a part of the first region of the upper body formed of a knitted fabric. As illustrated in FIG. 6, in a case of a knitted fabric, the upper body 4 is formed by knitting the first bundle body 51 formed of the first linear body 41 and the second linear body 42. In the case of a knitted fabric, the warp yarn is not disposed, and thus the second bundle body 52 is not disposed unlike the case of a woven fabric.

[0038] Even in the case of a knitted fabric, the upper 2 is difficult to stretch in the foot width direction due to the properties of the second linear body 42 and easily returns to its original length due to the properties of the first linear body 41 when stretched. As a result, it is possible for the upper 2 to achieve the required function while reducing the number of parts used for the shoe 1. In addition, it is possible to improve the manufacturing efficiency of the upper 2 and reduce the environmental burden.

[0039] FIG. 7 is a partially enlarged view of a part of the second region of the upper body formed of a knitted fabric. The second region 62 has a portion in which the first bundle body 51 is not knitted. In the upper body 4 formed of a knitted fabric, since the first bundle body 51 is knitted by being hung onto the first bundle body 51 on both sides, the wave shape is repeated along the foot width direction as illustrated in FIG. 6.

[0040] In the portion disposed in the second region 62 in which the first bundle body 51 is not knitted, the first bundle body 51 is not hung on both sides, and the first bundle body 51 is disposed in a straight line as illustrated in FIG. 7.

[0041] In the upper body 4 formed of a knitted fabric, since the first bundle body 51 has a repeated wave shape along the foot width direction as described above, the first bundle body 51 can be deformed into a straight line by being pulled in parallel to the foot width direction. Therefore, the upper body 4 formed of a knitted fabric relatively easily stretch in the foot width direction.

[0042] On the other hand, by disposing a portion in which the first bundle body 51 is not knitted as in the second region 62, the second region 62 can be a non-knitted region in which the first bundle body 51 is disposed in a straight line. In the portion in which the first bundle body 51 is disposed in a straight line, stretching due to deformation of the first bundle body 51 itself is difficult to occur, and the function of the first bundle body 51 is easily achieved. That is, based on the properties of the first linear body 41 and the second linear body 42 included in the first bundle body 51, the function of being difficult to stretch and easily returning to its original length when stretched.

[0043] An upper according to the present disclosure can achieve a required function while reducing an in-

crease in the number of necessary parts.

[0044] Although the invention has been described with respect to specific embodiments for a complete and clear disclosure, the appended claims are not to be thus limited but are to be construed as embodying all modifications and alternative constructions that may occur to one skilled in the art that fairly fall within the basic teaching herein set forth.

[0045] Hereinafter, various aspects of the present disclosure are described.

[0046] An upper according to a first aspect includes an upper body being a woven fabric, wherein the upper body includes a first bundle body in which a first linear body and a second linear body are bundled along a first direction, and a second bundle body in which the first linear body is bundled along a second direction orthogonal to the first direction.

[0047] In an upper according to a second aspect is the upper according to a first aspect, the upper body includes a first region and a second region, and the number of the first linear bodies and the second linear bodies of the first bundle body in the second region is greater than the number of the first linear bodies and the second linear bodies of the first bundle body in the first region.

[0048] In an upper according to a third aspect is the upper according to second aspect, wherein the second region is disposed in an upper midfoot portion covering a midfoot position of a foot of a wearer of the shoe.

[0049] In an upper according to a fourth aspect is the upper according to any one of first to third aspects, wherein the first bundle body and the second bundle body have different thicknesses.

[0050] In an upper according to a fifth aspect is the upper according to any one of first to fourth aspects, wherein the upper body is disposed with a rectangular through hole surrounded by the first bundle body and the second bundle body, and the through hole has a long side parallel to the first direction.

[0051] In an upper according to a sixth aspect is the upper according to any one of first to fifth aspects, wherein the upper body includes a third region on at least one of a medial foot side and a lateral foot side of an upper midfoot portion covering a midfoot position of a foot of a wearer of the shoe, and the through hole is disposed in the third region.

[0052] In an upper according to a seventh aspect the upper according to any one of first to sixth aspects, wherein the upper body is disposed with a rectangular through hole surrounded by the first bundle body and the second bundle body, and the through hole has a long side parallel to the second direction.

[0053] In an upper according to an eighth aspect the upper according to any one of first to sixth aspects, wherein the upper body includes a fourth region on at least one of a medial foot side and a lateral foot side of an upper fore foot portion covering a fore foot position of a foot of a wearer of the shoe, and the through hole is disposed in the fourth region.

[0054] In an upper according to a ninth aspect the upper according to any one of first to eighth aspects, wherein the upper body includes a fifth region on at least one of a medial foot side and a lateral foot side of an upper rear foot portion covering a rear foot position of a foot of a wearer of the shoe, and the through hole is disposed in the fifth region.

[0055] In an upper according to a tenth aspect the upper according to any one of first to ninth aspects, wherein the first bundle body is formed by paralleling the first linear body and the second linear body.

[0056] In an upper according to an eleventh aspect the upper according to any one of first to ninth aspects, wherein the first bundle body is a twisted yarn formed by twisting the first linear body and the second linear body.

[0057] In an upper according to a twelfth aspect the upper according to any one of first to ninth aspects, wherein the first bundle body is a covered yarn formed by using one of the first linear body and the second linear body as a core yarn and wrapping the other of the first linear body and the second linear body around the core yarn.

[0058] In an upper according to a thirteenth aspect the upper according to any one of first to twelfth aspects, wherein the first linear body has a smaller tensile resistance than a tensile resistance of the second linear body, and the first linear body has a greater elongation recovery percentage than an elongation recovery percentage of the second linear body.

[0059] A shoe according to a fourteenth aspect includes: the upper according to first aspect; and a sole disposed below the upper.

[0060] An upper according to a fifteenth aspect includes: an upper body being a knitted fabric using a first bundle body in which a first linear body and a second linear body are bundled, wherein the upper body partially includes a non-knitted region in which the first bundle body is linearly arranged.

[0061] In an upper according to a sixteenth aspect the upper according to fifteenth aspect, wherein the first bundle body is formed by paralleling the first linear body and the second linear body.

[0062] In an upper according to a seventeenth aspect the upper according to fifteenth aspect, wherein the first bundle body is a twisted yarn formed by twisting the first linear body and the second linear body.

[0063] In an upper according to an eighteenth aspect the upper according to fifteenth aspect, wherein the first bundle body is a covered yarn formed by using one of the first linear body and the second linear body as a core yarn and wrapping the other of the first linear body and the second linear body around the core yarn.

[0064] In an upper according to nineteenth aspect the upper according to any one of fifteenth to eighteenth aspects, wherein the first linear body has a smaller tensile resistance than a tensile resistance of the second linear body, and the first linear body has a greater elongation recovery percentage than an elongation recovery per-

centage of the second linear body.

[0065] A shoe according to a twentieth aspect includes: the upper according to any one of fifteenth to nineteenth aspects; and a sole disposed below the upper.

Claims

1. An upper of a shoe, the upper comprising:

an upper body being a woven fabric, wherein the upper body includes a first bundle body in which a first linear body and a second linear body are bundled along a first direction, and a second bundle body in which the first linear body is bundled along a second direction orthogonal to the first direction.

2. The upper according to claim 1, wherein

the upper body includes a first region and a second region, and
the number of the first linear bodies and the second linear bodies of the first bundle body in the second region is greater than the number of the first linear bodies and the second linear bodies of the first bundle body in the first region.

3. The upper according to claim 2, wherein the second region is disposed in an upper midfoot portion covering a midfoot position of a foot of a wearer of the shoe.

4. The upper according to claim 1, wherein the first bundle body and the second bundle body have different thicknesses.

5. The upper according to claim 1, wherein

the upper body is disposed with a rectangular through hole surrounded by the first bundle body and the second bundle body, and
the through hole has a long side parallel to the first direction.

6. The upper according to claim 5, wherein

the upper body includes a third region on at least one of a medial foot side and a lateral foot side of an upper midfoot portion covering a midfoot position of a foot of a wearer of the shoe, and
the through hole is disposed in the third region.

7. The upper according to claim 1, wherein

the upper body is disposed with a rectangular through hole surrounded by the first bundle body and the second bundle body, and

the through hole has a long side parallel to the second direction.

8. The upper according to claim 7, wherein

the upper body includes a fourth region on at least one of a medial foot side and a lateral foot side of an upper fore foot portion covering a fore foot position of a foot of a wearer of the shoe, and the through hole is disposed in the fourth region.

9. The upper according to claim 7, wherein

the upper body includes a fifth region on at least one of a medial foot side and a lateral foot side of an upper rear foot portion covering a rear foot position of a foot of a wearer of the shoe, and the through hole is disposed in the fifth region.

10. The upper according to claim 1, wherein the first bundle body is formed by paralleling the first linear body and the second linear body.

11. The upper according to claim 1, wherein the first bundle body is a twisted yarn formed by twisting the first linear body and the second linear body.

12. The upper according to claim 1, wherein the first bundle body is a covered yarn formed by using one of the first linear body and the second linear body as a core yarn and wrapping the other of the first linear body and the second linear body around the core yarn.

13. The upper according to claim 1, wherein

the first linear body has a smaller tensile resistance than a tensile resistance of the second linear body, and the first linear body has a greater elongation recovery percentage than an elongation recovery percentage of the second linear body.

14. A shoe comprising:

the upper according to claim 1; and a sole disposed below the upper.

15. An upper of a shoe, the upper comprising:

an upper body being a knitted fabric using a first bundle body in which a first linear body and a second linear body are bundled, wherein the upper body partially includes a non-knitted region in which the first bundle body is linearly arranged.

16. The upper according to claim 15, wherein the first

bundle body is formed by paralleling the first linear body and the second linear body.

17. The upper according to claim 15, wherein the first bundle body is a twisted yarn formed by twisting the first linear body and the second linear body.

18. The upper according to claim 15, wherein the first bundle body is a covered yarn formed by using one of the first linear body and the second linear body as a core yarn and wrapping the other of the first linear body and the second linear body around the core yarn.

19. The upper according to claim 15, wherein

the first linear body has a smaller tensile resistance than a tensile resistance of the second linear body, and

the first linear body has a greater elongation recovery percentage than an elongation recovery percentage of the second linear body.

20. A shoe comprising:

the upper according to claim 15; and a sole disposed below the upper.

FIG.1

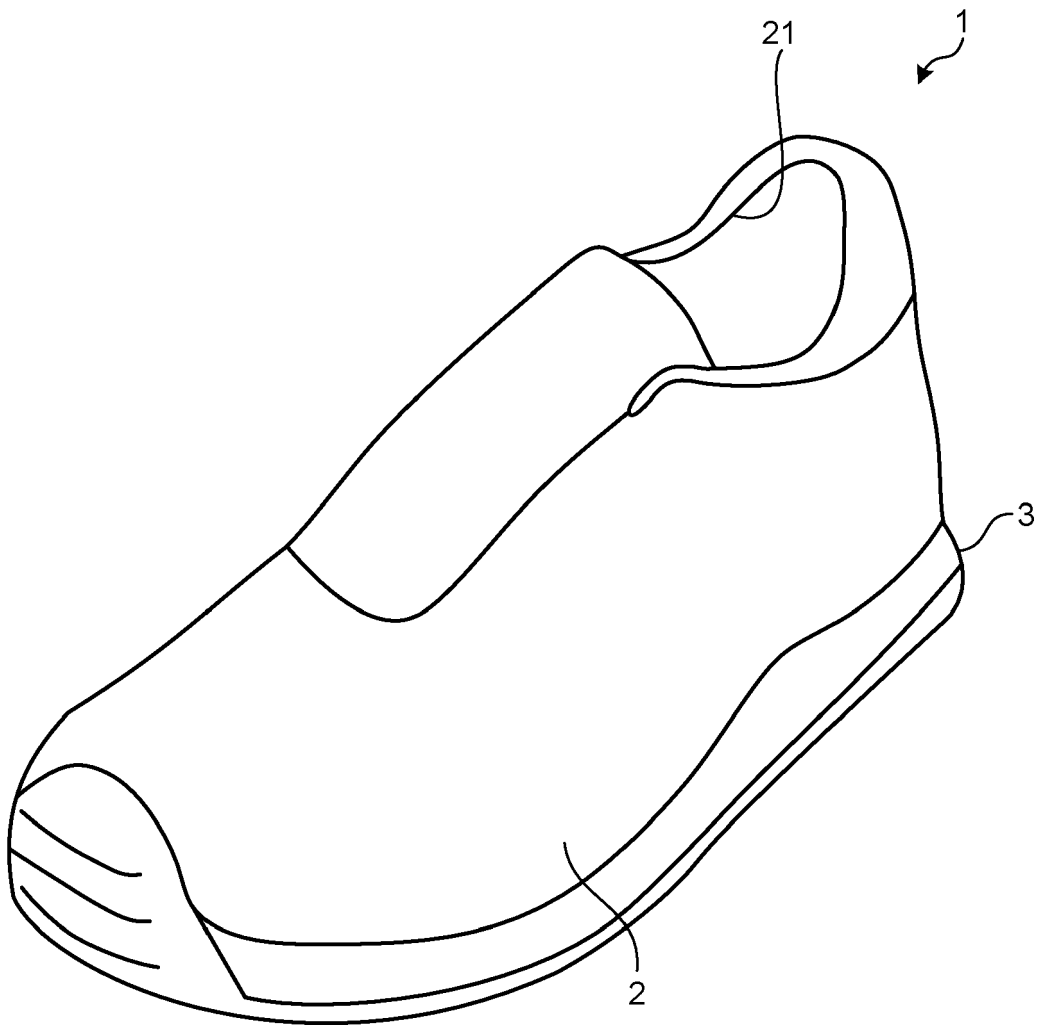


FIG.2

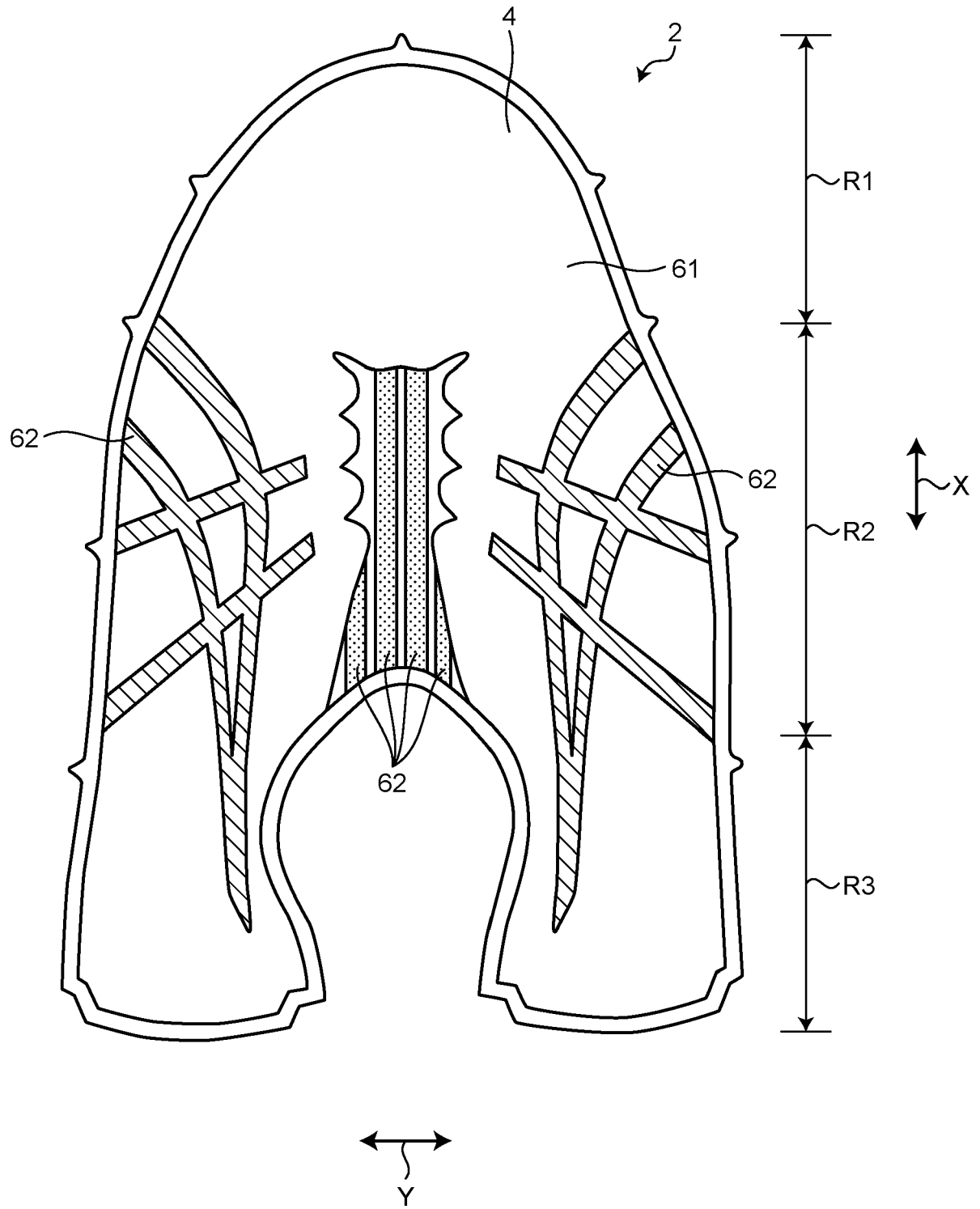


FIG.3

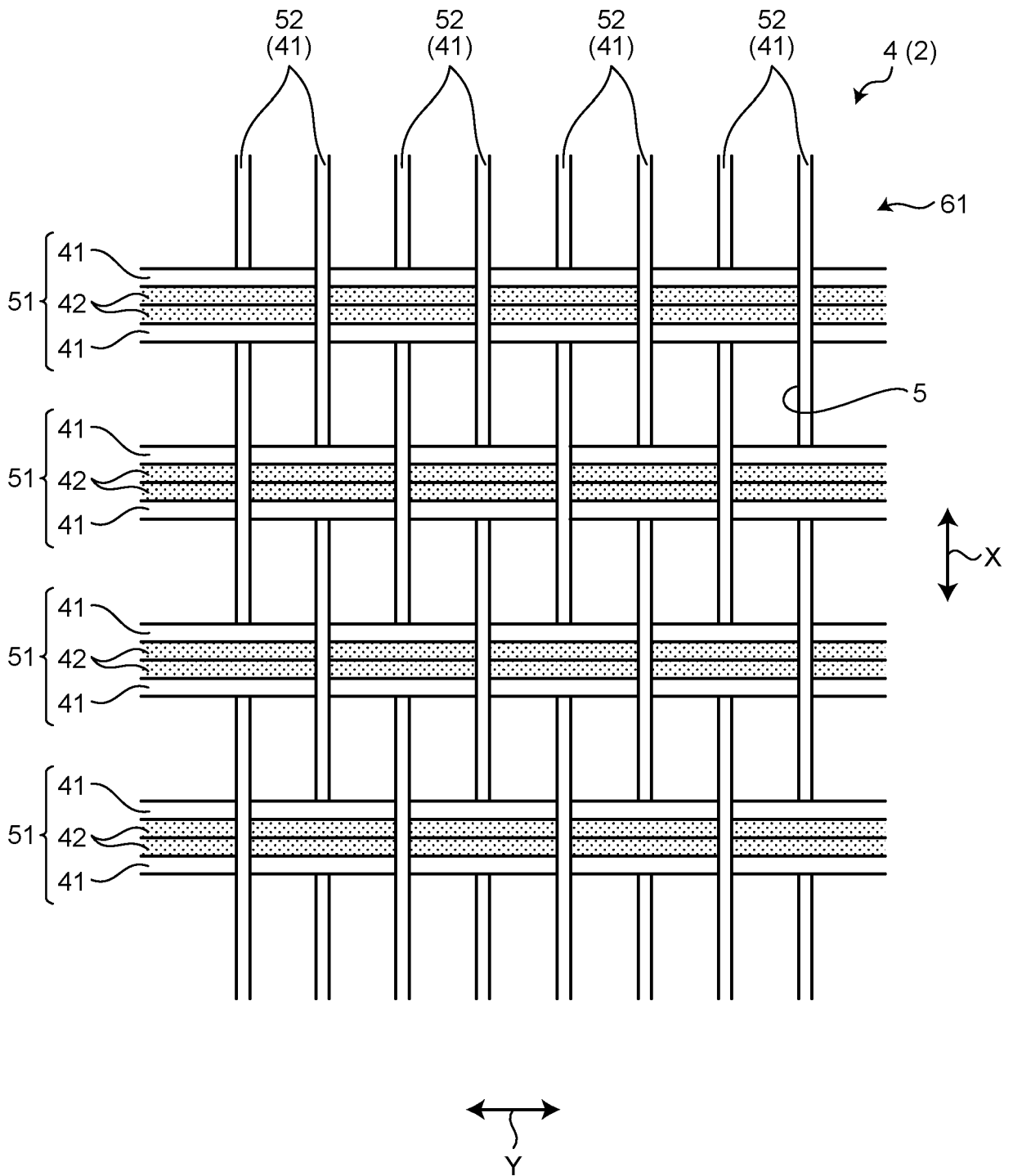


FIG.4

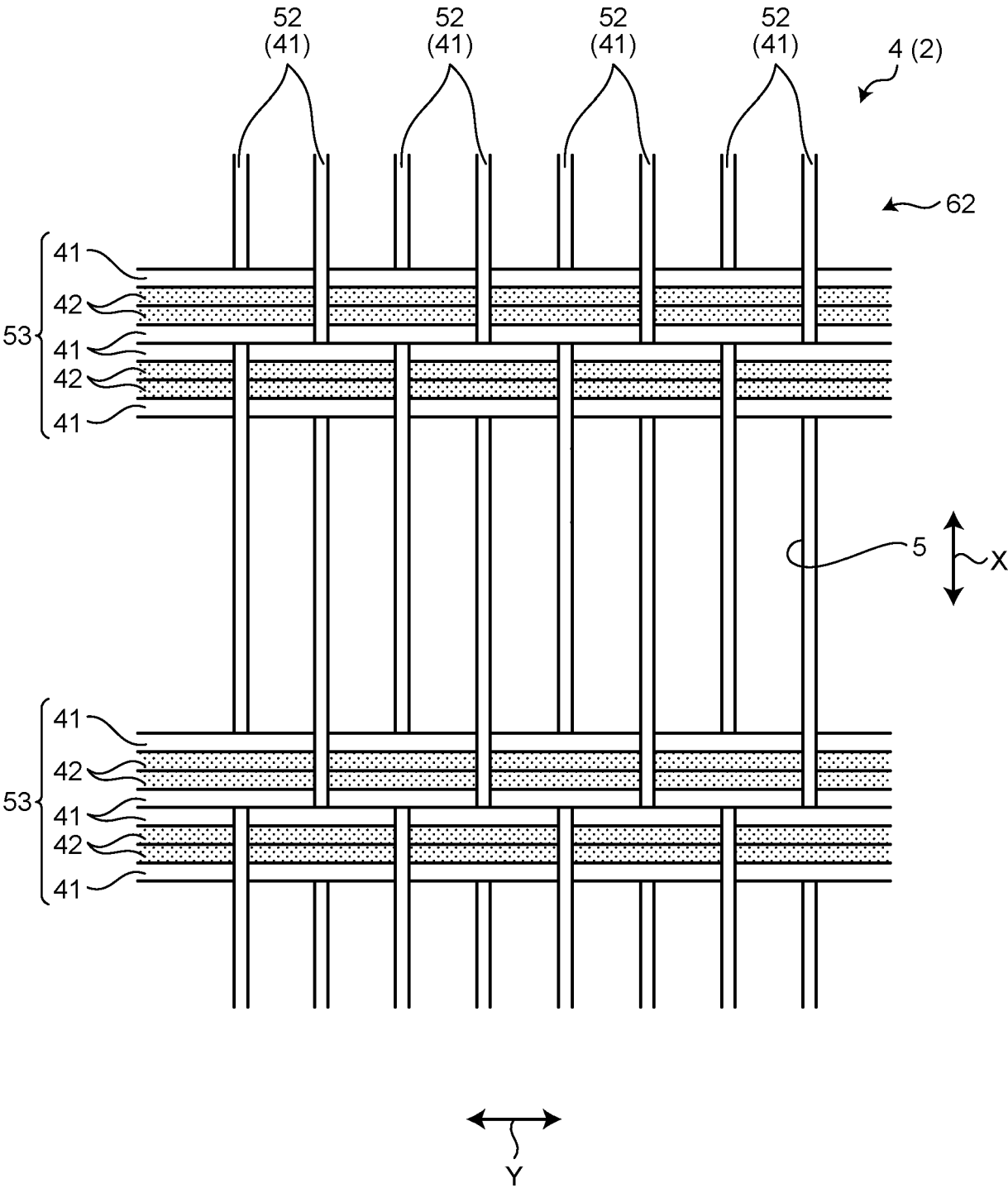


FIG.5

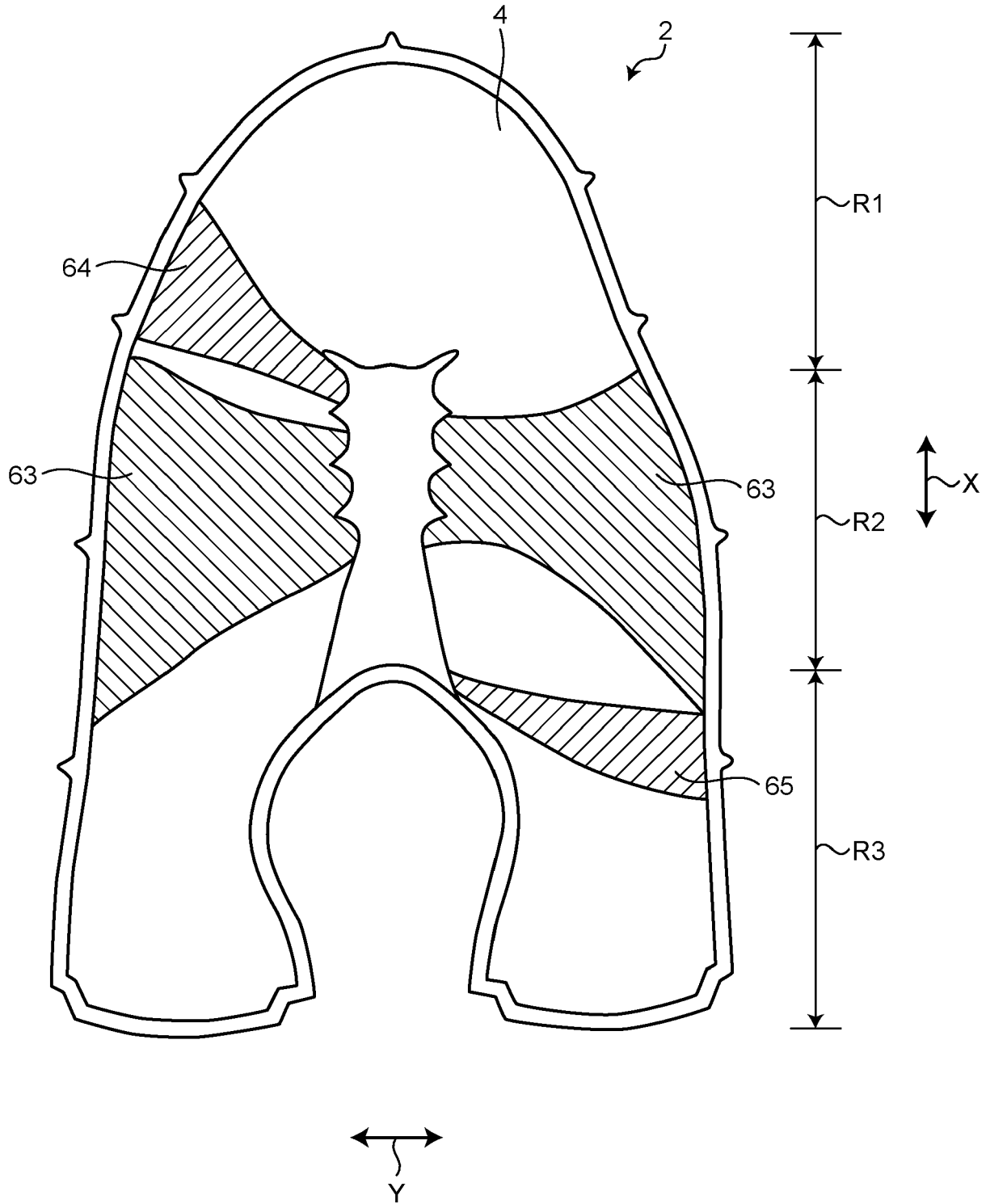


FIG.6

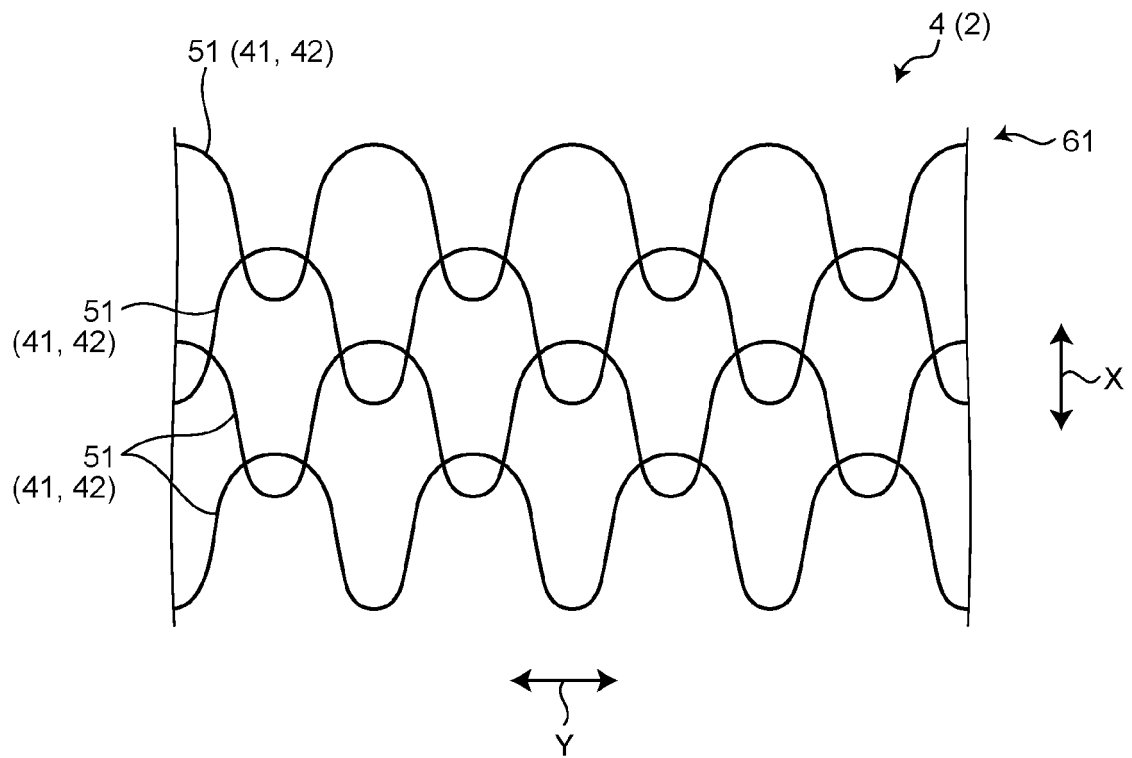
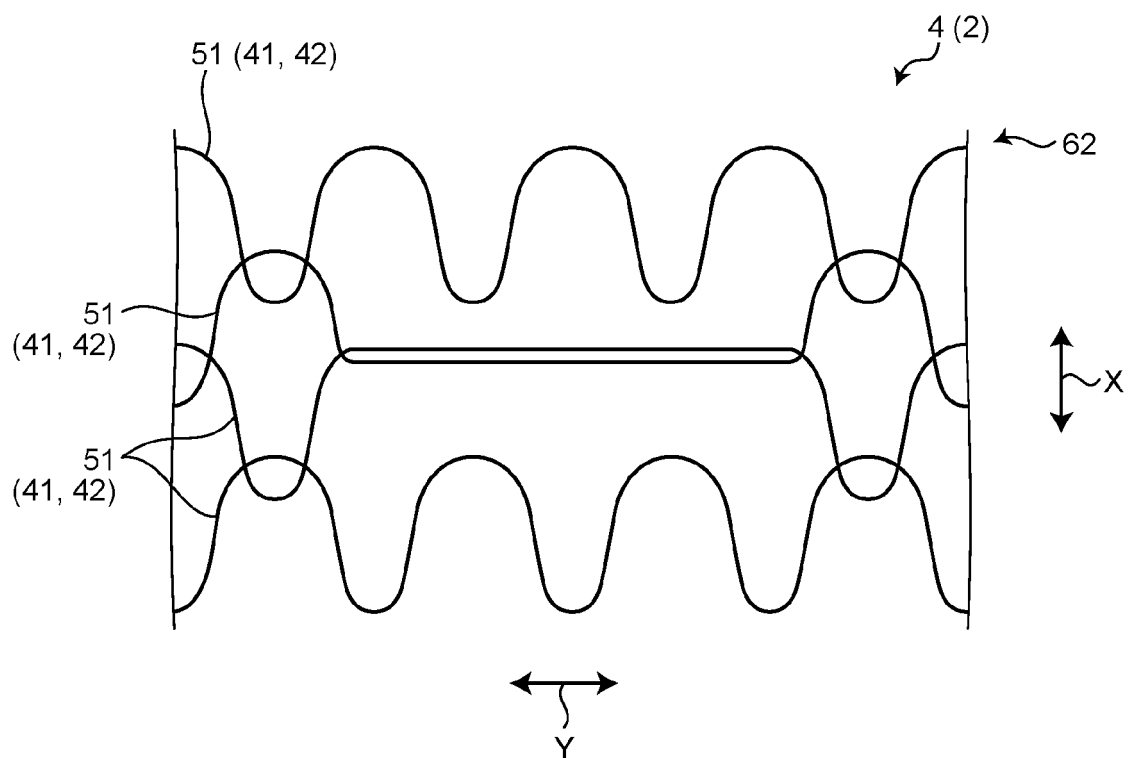


FIG.7



REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- JP 2020525088 A [0002]