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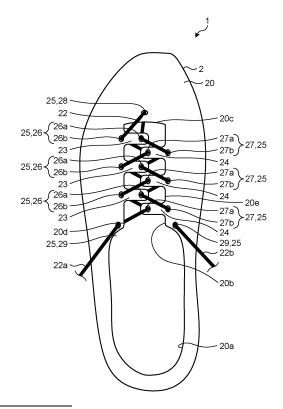
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(54) UPPER AND SHOE COMPRISING SAME

An upper (2) provided with an opening (20b) includes a first side edge (20d), a second side edge (20e), a first forming portion (23) that protrudes from the first side edge (20d) toward the second side edge (20e), a second forming portion (24) that protrudes from the second side edge (20e) toward the first side edge (20d), an outer foot side string passing portion (26) including one first string passing portion (26a) and one second string passing portion (26b) as one set, and an inner foot side string passing portion (27) including one third string passing portion (27a) and one fourth string passing portion (27b) as one set, and a shoelace (22). The first forming portion (23) and the second forming portion (24) are alternately provided in a fore-rear direction. The shoelace (22) includes a first portion (22a) alternately passed through the second string passing portion (26b) and the third string passing portion (27a), and a second portion (22b) alternately passed through the first string passing portion (26a) and the fourth string passing portion (27b).

FIG.2



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Dooonpa

Field

[0001] The present invention relates to an upper and a shoe including the same.

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Background

[0002] Conventionally, a large number of shoes in which an upper is brought into close contact with the foot by tensioning a shoelace have been developed and brought into practical use. For example, Patent Literature 1 discloses an invention in which, in an upper in which a foot insertion opening for inserting a foot of a wearer, an opening communicating with the foot insertion opening and extending forward from the foot insertion opening, and a plurality of holes provided at left and right side edges of the opening and separated in a fore-rear direction are formed, a shoelace is alternately passed through left and right holes.

[0003] The shoelace disclosed in Patent Literature 1 is passed through the left and right holes while repeatedly crossing the opening diagonally rearward, and intersects above the instep. In the invention disclosed in Patent Literature 1, the upper can be brought into close contact with the foot by tensioning the shoelace passed through the left and right holes.

Citation List

Patent Literature

[0004] Patent Literature 1: JP 2007-190351 A

Summary

Technical Problem

[0005] However, in the invention disclosed in Patent 40 Literature 1, since the shoelace intersects above the instep, pressure is likely to be applied to the instep having many nerves, and there is a problem that an excessive tightening feeling is given to the wearer.

[0006] The present invention has been made in view of the above, and an object thereof is to obtain an upper capable of reducing a tightening feeling on an instep.

Solution to Problem

[0007] In order to solve the above problem and achieve the object, an upper formed with a foot insertion opening and an opening communicating with the foot insertion opening and extending forward from the foot insertion opening, the upper comprising: a first side edge that is an edge on an outer foot side of the opening; a second side edge that is an edge on an inner foot side of the opening; a first forming portion that protrudes from the

first side edge toward the second side edge; a second forming portion that protrudes from the second side edge toward the first side edge; an outer foot side string passing portion including one first string passing portion provided in the first forming portion and one second string passing portion spaced apart toward the outer foot side with respect to the first string passing portion as one set; an inner foot side string passing portion including one third string passing portion provided in the second forming portion and one fourth string passing portion spaced apart toward the inner foot side with respect to the third string passing portion as one set; and a shoelace passing through the outer foot side string passing portion and the inner foot side string passing portion, wherein the first forming portion and the second forming portion are alternately provided in a front-back direction, and the shoelace includes a first portion alternately passed through the second string passing portion and the third string passing portion, and a second portion alternately passed through the first string passing portion and the fourth string passing portion.

Advantageous Effects of Invention

[0008] An upper according to the present invention has an effect of reducing a tightening feeling on an instep.

Brief Description of Drawings

³⁰ [0009]

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FIG. 1 is a perspective view of a shoe according to a first embodiment of the present invention.

FIG. 2 is a top view of an upper according to the first embodiment, illustrating a state before a shoelace is pulled.

FIG. 3 is a top view of the upper according to the first embodiment, illustrating a state in which the shoelace is pulled from the state illustrated in FIG. 2.

FIG. 4 is a top view of an upper according to a second embodiment, illustrating a state before the shoelace is pulled.

FIG. 5 is a top view of the upper according to the second embodiment, illustrating a state in which the shoelace is pulled from the state illustrated in FIG. 4. FIG. 6 is a top view of an upper according to a third embodiment, illustrating a state before the shoelace is pulled.

FIG. 7 is a top view of the upper according to the third embodiment, illustrating a state in which the shoelace is pulled from the state illustrated in FIG. 6. Description of Embodiments

[0010] Hereinafter, embodiments of an upper according to the present invention and a shoe including the same will be described in detail with reference to the drawings. Note that the present invention is not limited by the examples.

[0011] In the embodiment described below, a direction in which a shoe center axis, which is a perpendicular line passing through the center of the shoe in a plan view of the shoe, extends is referred to as a fore-rear direction, and a direction orthogonal to a fore-rear direction in a plan view of the shoe is referred to as a left-right direction. [0012] Further, in the fore-rear direction, a direction from a terminal of the upper on a side where a portion covering the heel portion of the foot is located toward a terminal of the upper on a side where a portion covering the toe portion of the foot is located is referred to as a fore, and in the fore-rear direction, a direction from the terminal of the upper on the side where the portion covering the toe portion of the foot is located toward the terminal of the upper on the side where the portion covering the heel portion of the foot is located is referred to as a rear.

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[0013] In addition, a median side in an anatomical normal position of the foot is referred to as the inner foot side, and a side opposite to the median side in the anatomical normal position of the foot is referred to as the outer foot side. That is, a side closer to the median line in the anatomical normal position is referred to as the inner foot side, and a side farther from the median line in the anatomical normal position is referred to as the outer foot side.

[0014] Furthermore, a height direction means a direction orthogonal to both the fore-rear direction and the left-right direction unless otherwise specified, and a thickness means a dimension in the height direction unless otherwise specified.

(First embodiment)

[0015] FIG. 1 is a perspective view of a shoe 1 according to a first embodiment of the present invention. FIG. 1 illustrates only a shoe 1 for a left foot. Since the shoe 1 has a bilaterally symmetrical structure for the left foot and the right foot, only the shoe 1 for the left foot is described in the present embodiment, and the description of the shoe 1 for the right foot is omitted. The shoe 1 is, for example, a shoe for running, walking, or climbing, or a shoe for sports such as tennis and basketball. The shoe 1 includes an upper 2 and a sole 3 located below the upper 2. The upper 2 covers a portion on the instep side of the foot. The sole 3 covers the sole.

[0016] The upper 2 includes an upper main body 20, a shoe tongue 21, and a shoelace 22.

[0017] A foot insertion opening 20a for inserting the foot of the wearer and an opening 20b communicating with the foot insertion opening 20a and extending forward from the foot insertion opening 20a are formed at an upper portion of the upper main body 20. A plurality of string passing portions 25 is provided around the opening 20b of the upper main body 20. The structure around the opening 20b will be described in detail later.

[0018] The shoe tongue 21 is a member for protecting the instep of the foot of the wearer. The shoe tongue 21

covers the opening 20b inside the upper main body 20. The shoe tongue 21 is fixed to the upper main body 20 by stitching, welding, bonding, or a combination thereof. As a material of the upper main body 20 and the shoe tongue 21, for example, a woven fabric, a knitted fabric, synthetic leather, or resin is used. In particular, in the shoe 1 in which air permeability and a lightweight property are required, it is preferable to use a double raschel warp knitted fabric knitted with a polyester yarn as the material of the upper main body 20 and the shoe tongue 21. Note that the materials of the upper main body 20 and the shoe tongue 21 are not limited to the exemplified materials.

[0019] The shoelace 22 is a string-like member passed through the plurality of string passing portions 25 of the upper main body 20, and is detachably attached to the upper main body 20.

[0020] The sole 3 includes an outsole 30 and a midsole 31. The sole 3 is fixed to the upper 2 by stitching, welding, bonding or a combination thereof. A lower surface of the outsole 30 is a ground contact surface 30 a to be contacted the ground. The midsole 31 is located on an upper surface of the outsole 30 and has a cushioning property. Note that the outsole 30 may be integrated with the midsole 31. The midsole 31 in which the outsole 30 is integrated is also referred to as a "unisole".

[0021] The sole 3 includes an insole that is not illustrated that covers a lower opening of the upper main body 20. The insole is fixed to an upper surface of the midsole 31 by adhesion or welding. Further, the insole is fixed to a lower edge of the upper main body 20 described above by suturing. Note that the sole 3 may have a structure in which the insole is omitted. In addition, the shoe 1 may include a footbed. If the shoe 1 includes a footbed, the footbed is installed on the sole 3 inside the upper 2.

[0022] Next, a structure around the opening 20b will be described in detail with reference to FIGS. 2 and 3. FIG. 2 is a top view of the upper 2 according to the first embodiment, illustrating a state before the shoelace 22 is pulled. FIG. 3 is a top view of the upper 2 according to the first embodiment, illustrating a state in which the shoelace 22 is pulled from the state illustrated in FIG. 2. Note that, in FIGS. 2 and 3, illustration of the shoe tongue 21 is omitted.

[0023] As illustrated in FIG. 2, the upper 2 includes a fore edge 20c, a first side edge 20d, a second side edge 20e, a plurality of first forming portions 23, a plurality of second forming portions 24, a plurality of string passing portions 25, and a shoelace 22. Hereinafter, when the plurality of string passing portions 25 is distinguished, they are referred to as an outer foot side string passing portion 26, an inner foot side string passing portion 27, a toe side string passing portion 28, and a heel side string passing portion 29. The configurations of the outer foot side string passing portion 27, the toe side string passing portion 28, and the heel side string passing portion 29 are not particularly limited as long as the shoelace 22 can be passed therethrough, but in the present embodiment,

they are through holes penetrating the upper main body 20 in the vertical direction.

[0024] The fore edge 20c is an edge on the fore side of the opening 20b. The fore edge 20c extends in the left-right direction. The first side edge 20d is an edge on the outer foot side of the opening 20b. The second side edge 20e is an edge on the inner foot side of the opening 20b. The first side edge 20d and the second side edge 20e extend in the fore-rear direction.

[0025] The first forming portions 23 protrude from the first side edge 20d toward the second side edge 20e. In the present embodiment, the first forming portions 23 are formed integrally with the upper main body 20, but may be formed separately from the upper main body 20. A plan view shape of the first forming portions 23 is not particularly limited, but is a rectangle with rounded corners in the present embodiment. The plan view shape of the first forming portions 23 may be a polygon or a semicircle. The number of first forming portions 23 is not particularly limited, but is three in the present embodiment. The three first forming portions 23 are separated from each other in the fore-rear direction. The first forming portion 23 is disposed above the shoe tongue 21 illustrated in FIG. 1.

[0026] The second forming portions 24 protrude from the second side edge 20e toward the first side edge 20d. The second forming portions 24 are formed integrally with the upper main body 20 in the present embodiment, but may be formed separately from the upper main body 20. A plan view shape of the second forming portions 24 is not particularly limited, but is a rectangle with rounded corners in the present embodiment. The plan view shape of the second forming portions 24 may be a polygon or a semicircle. The number of second forming portions 24 is not particularly limited, but is three in the present embodiment. The three second forming portions 24 are separated from each other in the fore-rear direction. The second forming portions 24 are disposed above the shoe tongue 21 illustrated in FIG. 1. The first forming portions 23 and the second forming portions 24 are alternately provided in the fore-rear direction. In the present embodiment, the first forming portions 23 and the second forming portions 24 are alternately provided from the fore side to the rear side in this order. The first forming portions 23 and the second forming portions 24 have a left-right symmetrical shape in the present embodiment, but may have a left-right asymmetrical shape.

[0027] In the present embodiment, the toe side string passing portion 28 is provided at a position corresponding to the center of the opening 20b in the left-right direction in fore of the opening 20b. The toe side string passing portion 28 is provided in fore of the outer foot side string passing portion 26 and the inner foot side string passing portion 27. The number of toe side string passing portions 28 is not particularly limited, but is one in the present embodiment.

[0028] The outer foot side string passing portion 26 includes one first string passing portion 26a provided in

the first forming portions 23 and one second string passing portion 26b spaced apart toward the outer foot side with respect to the first string passing portion 26a as one set. The number of sets of the outer foot side string passing portions 26 is not particularly limited, but is three in the present embodiment. The three sets of outer foot side string passing portions 26 are separated from each other in the fore-rear direction. The first string passing portion 26a and the second string passing portion 26b are provided side by side in the left-right direction. In the present embodiment, the second string passing portion 26b is located on the outer foot side of the first forming portions 23.

[0029] The inner foot side string passing portion 27 includes one third string passing portion 27a provided in the second forming portion 24 and one fourth string passing portion 27b spaced apart toward the inner foot side with respect to the third string passing portion 27a as one set. The number of sets of inner foot side string passing portions 27 is not particularly limited, but is three in the present embodiment. The three sets of inner foot side string passing portions 27 are separated from each other in the fore-rear direction. The third string passing portion 27a and the fourth string passing portion 27b are provided side by side in the left-right direction. In the present embodiment, the fourth string passing portion 27b is located on the inner foot side of the second forming portion 24. [0030] The heel side string passing portion 29 is provided behind the outer foot side string passing portion 26 and the inner foot side string passing portion 27. In the present embodiment, two heel side string passing portions 29 in total are provided, one each on the outer foot side and the inner foot side of the opening 20b. The two heel side string passing portions 29 are provided at symmetrical positions across the opening 20b. The heel side string passing portion 29 is provided near the boundary between the edge of the opening 20b and the edge of the foot insertion opening 20a.

[0031] The shoelace 22 is passed through the toe side string passing portion 28, the outer foot side string passing portion 26, the inner foot side string passing portion 27, and the heel side string passing portion 29. Although not illustrated, both end portions in a length direction of the shoelace 22 are tied in a bow knot or the like. The shoelace 22 is disposed above the shoe tongue 21 illustrated in FIG. 1. The shoelace 22 includes a first portion 22a alternately passed through the second string passing portion 26b and the third string passing portion 27a, and a second portion 22b alternately passed through the first string passing portion 26a and the fourth string passing portion 27b.

[0032] The first portion 22a extends obliquely rearward from the toe side string passing portion 28, is alternately passed through the second string passing portion 26b and the third string passing portion 27a, and is then passed through the heel side string passing portion 29 on the outer foot side. As illustrated in FIG. 2, before the shoelace 22 is pulled, the second string passing portion

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26b and the third string passing portion 27a are arranged to be shifted in the fore-rear direction and the left-right direction. Accordingly, the first portion 22a alternately passed through the second string passing portion 26b and the third string passing portion 27a extends in a zigzag shape in the left-right direction from the fore toward the rear.

[0033] The second portion 22b extends rearward from the toe side string passing portion 28, is alternately passed through the first string passing portion 26a and the fourth string passing portion 27b, and is then passed through the heel side string passing portion 29 on the inner foot side. As illustrated in FIG. 2, in a state before the shoelace 22 is pulled, the first string passing portion 26a and the fourth string passing portion 27b are arranged to be shifted in the fore-rear direction and the leftright direction. Accordingly, the second portion 22b alternately passed through the first string passing portion 26a and the fourth string passing portion 27b extends in a zigzag shape in the left-right direction from the fore toward the rear. In a state before the shoelace 22 is pulled, the first portion 22a and the second portion 22b do not intersect each other. In a state before the shoelace 22 is pulled, the position of the first portion 22a alternately passed through the second string passing portion 26b and the third string passing portion 27a and the position of the second portion 22b alternately passed through the first string passing portion 26a and the fourth string passing portion 27b are parallel to each other.

[0034] By pulling the first portion 22a and the second portion 22b rearward from the state illustrated in FIG. 2 as illustrated in FIG. 3, the first side edge 20d and the second side edge 20e of the upper main body 20 are attracted to each other. Thus, the distance in the left-right direction between the second string passing portion 26b and the third string passing portion 27a is reduced, and the distance in the left-right direction between the first string passing portion 26a and the fourth string passing portion 27b is reduced. Accordingly, the first portion 22a alternately passed through the second string passing portion 26b and the third string passing portion 27a approaches a state of linearly extending in the fore-rear direction, and the second portion 22b alternately passed through the first string passing portion 26a and the fourth string passing portion 27b approaches a state of linearly extending in the fore-rear direction. In a state where the shoelace 22 passed through the outer foot side string passing portion 26 and the inner foot side string passing portion 27 is pulled, the first portion 22a and the second portion 22b do not intersect each other. In a state where the shoelace 22 passed through the outer foot side string passing portion 26 and the inner foot side string passing portion 27 is pulled, the position of the first portion 22a alternately passed through the second string passing portion 26b and the third string passing portion 27a and the position of the second portion 22b alternately passed through the first string passing portion 26a and the fourth string passing portion 27b are parallel to each other.

[0035] Next, effects of the upper 2 according to the present embodiment will be described.

[0036] In the present embodiment, as illustrated in FIG. 2, the upper 2 includes the outer foot side string passing portion 26 including one first string passing portion 26a provided in the first forming portion 23 and one second string passing portion 26b spaced apart toward the outer foot side with respect to the first string passing portion 26a as one set. In addition, the upper 2 includes the inner foot side string passing portion 27 including one third string passing portion 27a provided in the second forming portion 24 and one fourth string passing portion 27b spaced apart toward the inner foot side with respect to the third string passing portion 27a as one set. The first forming portion 23 and the second forming portion 24 are alternately provided in the fore-rear direction, and the shoelace 22 has the first portion 22a that is alternately passed through the second string passing portion 26b and the third string passing portion 27a, and the second portion 22b that is alternately passed through the first string passing portion 26a and the fourth string passing portion 27b. With these configurations, as illustrated in FIG. 3, in a state where the shoelace 22 is pulled, the first portion 22a and the second portion 22b do not cross each other above the instep. Accordingly, as compared with the case where the shoelace 22 intersects above the instep, the pressure on the instep is reduced, and the tightening feeling on the instep can be reduced.

[0037] In the present embodiment, as illustrated in FIG. 3, the outer foot side string passing portion 26 including one first string passing portion 26a and one second string passing portion 26b as one set, and the inner foot side string passing portion 27 including one third string passing portion 27a and one fourth string passing portion 27b as one set are alternately provided in the fore-rear direction. That is, since two string passing portions 25 are alternately provided on each of the outer foot side and the inner foot side of the opening 20b, a force to pull the first side edge 20d and the second side edge 20e toward each other when the shoelace 22 is pulled is stronger than that in a case where one string passing portion 25 is alternately provided on each of the outer foot side and the inner foot side of the opening 20b. Thus, the upper 2 can be reliably brought into close contact with the foot. [0038] In the present embodiment, as illustrated in FIG. 2, in the configuration in which the first forming portion 23 in which the first string passing portion 26a is formed and the second forming portion 24 in which the third string passing portion 27a is formed are alternately provided in the fore-rear direction, the following three effects can be obtained by providing the first string passing portion 26a and the second string passing portion 26b side by side in the left-right direction and providing the third string passing portion 27a and the fourth string passing portion 27b side by side in the left-right direction. First, since the first portion 22a and the second portion 22b do not intersect each other above the instep, an effect of reducing the pressure on the instep can be obtained. Second,

since there are no separation distance in the fore-rear direction between the first string passing portion 26a and the second string passing portion 26b and no separation distance in the fore-rear direction between the third string passing portion 27a and the fourth string passing portion 27b, the number of sets of the outer foot side string passing portion 26 and the inner foot side string passing portion 27 can be increased, and a string tightening effect on the upper main body 20 by the shoelace 22 can be enhanced. Third, even if the number of sets of the outer foot side string passing portion 26 and the inner foot side string passing portion 27 is further increased than in the example illustrated in FIG. 2, an effect that the first portion 22a and the second portion 22b do not cross each other can be obtained. That is, since the first string passing portion 26a and the second string passing portion 26b are provided side by side in the left-right direction and the third string passing portion 27a and the fourth string passing portion 27b are provided side by side in the leftright direction, it is possible to obtain a structure in which the first portion 22a and the second portion 22b do not cross each other even if the number of sets of the outer foot side string passing portion 26 and the inner foot side string passing portion 27 is increased while reducing the pressure on the instep and enhancing the string tightening effect on the upper main body 20.

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[0039] In the present embodiment, as illustrated in FIG. 3, since the first forming portion 23 and the second forming portion 24 are integrally formed with the upper main body 20, a structure in which the shoelaces 22 do not intersect can be achieved without adding a new member. [0040] In the present embodiment, as illustrated in FIG. 3, since the first portion 22a and the second portion 22b do not cross each other in a state where the shoelace 22 is pulled, there is no frictional resistance generated between the first portion 22a and the second portion 22b when the shoelace 22 is pulled, so that the shoelace 22 can be easily tightened.

[0041] In the present embodiment, as illustrated in FIG. 3, in a state in which the shoelace 22 is pulled, a state in which the first portion 22a and the second portion 22b extend linearly in the fore-rear direction without intersecting each other is approached. Thus, an angle formed when the shoelace 22 enters the string passing portion 25 and exits from the string passing portion 25 becomes gentle as compared with a case where the shoelace 22 intersects. Therefore, frictional resistance generated between the shoelace 22 and the string passing portion 25 when the shoelace 22 is pulled is reduced, so that the shoelace 22 is easily tightened.

[0042] In the present embodiment, as illustrated in FIG. 3, since the first portion 22a and the second portion 22b do not cross each other in a state where the shoelace 22 is pulled, the pressure on the instep is reduced as compared with a case where the shoelace 22 intersects, so that the shoe tongue 21 illustrated in FIG. 1 can be thinned or eliminated.

[0043] In the present embodiment, as illustrated in FIG.

3, since the first portion 22a and the second portion 22b do not intersect each other in a state where the shoelace 22 is pulled, the length of the shoelace 22 can be shortened as compared with the case where the shoelace 22 intersects. Accordingly, it is possible to reduce the weight of the shoe 1 and reduce the environmental load.

[0044] Note that, in the present embodiment, the case where the second string passing portion 26b is formed on the outer foot side of the first forming portion 23 has been exemplified, but the second string passing portion 26b may be formed in the first forming portion 23. In this way, the second string passing portion 26b and the third string passing portion 27a can be further brought close to each other in the left-right direction, and thus the position of the second string passing portion 26b and the position of the third string passing portion 27a can be aligned in the fore-rear direction in a state where the shoelace 22 is pulled. Thus, the position of the first portion 22a alternately passed through the second string passing portion 26b and the third string passing portion 27a is in a state of extending straight in the fore-rear direction, and frictional resistance generated between the shoelace 22 and the string passing portion 25 when the shoelace 22 is pulled is further reduced, so that the shoelace 22 is more easily tightened.

[0045] In addition, in the present embodiment, the case where the fourth string passing portion 27b is formed on the inner foot side of the second forming portion 24 has been exemplified, but the fourth string passing portion 27b may be formed in the second forming portion 24. In this way, the first string passing portion 26a and the fourth string passing portion 27b can be further brought close to each other in the left-right direction, and thus the position of the first string passing portion 26a and the position of the fourth string passing portion 27b can be aligned in the fore-rear direction in a state where the shoelace 22 is pulled. Thus, the position of the second portion 22b alternately passed through the first string passing portion 26a and the fourth string passing portion 27b is in a state of extending straight in the fore-rear direction, and frictional resistance generated between the shoelace 22 and the string passing portion 25 when the shoelace 22 is pulled is further reduced, so that the shoelace 22 is more easily tightened.

(Second embodiment)

[0046] FIG. 4 is a top view of an upper 2A according to a second embodiment, illustrating a state before a shoelace 22A is pulled. FIG. 5 is a top view of the upper 2A according to the second embodiment, illustrating a state in which the shoelace 22A is pulled from the state illustrated in FIG. 4. The upper 2A according to the second embodiment is different from the upper 2 according to the first embodiment in that a first forming portion 23A and a second forming portion 24A are extendable. The upper 2A according to the second embodiment is used instead of the upper 2 according to the first embodiment

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to constitute the shoe 1A. Note that, in the second embodiment, the same reference numerals are given to parts overlapping with the first embodiment described above, and description thereof is omitted.

[0047] The first forming portion 23A has elasticity like rubber, for example, and can extend from the first side edge 20d toward the second side edge 20e. As illustrated in FIG. 4, in a state before the shoelace 22A is pulled, the first forming portion 23A contracts so as to have the shortest length in the left-right direction. An end portion of the first forming portion 23A in a contracted state facing the inner foot side is located on the outer foot side with respect to the center of the opening 20b in the left-right direction. As illustrated in FIG. 5, in a state where the shoelace 22A is pulled, the first forming portion 23A extends so as to have the longest length in the left-right direction. The end portion of the first forming portion 23A in an extended state facing the inner foot side reaches the second side edge 20e.

[0048] The planar view shape of the first forming portion 23A is not particularly limited, but is a rectangle with rounded corners in the present embodiment. The planar view shape of the first forming portion 23A may be a polygon or a semicircle. The number of the first forming portions 23A is not particularly limited, but is two in the present embodiment. The two first forming portions 23A are separated from each other in the fore-rear direction. A first string passing portion 26c through which the shoelace 22A passes is formed in a portion of the first forming portion 23A on the inner foot side. In the present embodiment, the annular first string passing portion 26c penetrating in the fore-rear direction is formed by folding back an end portion facing the inner foot side of the first forming portion 23A to the outer foot side and fixing the end portion to a middle portion of the first forming portion 23A by means of stitching or the like. An end portion facing the outer foot side of the first forming portion 23A is fixed to the first side edge 20d by sewing, welding, adhesion, or a combination thereof. In the present embodiment, the first forming portion 23A is formed separately from the upper main body 20, but may be formed integrally with the upper main body 20.

[0049] The second forming portion 24A has elasticity like rubber, for example, and can extend from the second side edge 20e toward the first side edge 20d. As illustrated in FIG. 4, in a state before the shoelace 22A is pulled, the second forming portion 24A contracts so that the length in the left-right direction becomes the shortest. An end portion of the second forming portion 24A in a contracted state facing the outer foot side is located on the inner foot side with respect to the center of the opening 20b in the left-right direction. As illustrated in FIG. 5, in a state where the shoelace 22A is pulled, the second forming portion 24A extends so as to have the longest length in the left-right direction. The end portion of the second forming portion 24A in an extended state facing the outer foot side reaches the first side edge 20d.

[0050] The planar view shape of the second forming

portion 24A is not particularly limited, but is a rectangle with rounded corners in the present embodiment. The planar view shape of the second forming portion 24A may be a polygon or a semicircle. The number of the second forming portions 24A is not particularly limited, but is one in the present embodiment. The first forming portion 23A and the second forming portion 24A are alternately provided in the fore-rear direction. A third string passing portion 27c through which the shoelace 22A passes is formed in a portion of the second forming portion 24A on the outer foot side. In the present embodiment, the annular third string passing portion 27c penetrating in the fore-rear direction is formed by folding back an end portion facing the outer foot side of the second forming portion 24A to the inner foot side and fixing the end portion to a middle portion of the second forming portion 24A by means of stitching or the like. An end portion facing the inner foot side of the second forming portion 24A is fixed to the second side edge 20e by sewing, welding, adhesion, or a combination thereof. In the present embodiment, the second forming portion 24A is formed separately from the upper main body 20, but may be formed integrally with the upper main body 20. In the present embodiment, the first forming portion 23A and the second forming portion 24A are alternately provided from the fore side to the rear side in this order. The first forming portion 23A and the second forming portion 24A have a left-right symmetrical shape in the present embodiment, but may have a left-right asymmetrical shape.

[0051] The toe side string passing portion 28A is provided in fore of the outer foot side string passing portion 26A and the inner foot side string passing portion 27A. In the present embodiment, two toe side string passing portions 28A in total are provided, one each on the outer foot side and the inner foot side of the opening 20b. The two toe side string passing portions 28A are provided at symmetrical positions across the opening 20b. The toe side string passing portion 28A on the outer foot side is provided near the boundary between the first side edge 20d and the fore edge 20c. The toe side string passing portion 28A on the inner foot side is provided near the boundary between the second side edge 20e and the fore edge 20c. The configuration of the toe side string passing portion 28A is not particularly limited as long as the shoelace 22A can pass therethrough, but in the present embodiment, the toe side string passing portion is a through hole penetrating the upper main body 20 in the vertical direction.

[0052] The outer foot side string passing portion 26A includes one first string passing portion 26c provided in the first forming portion 23A and one second string passing portion 26d spaced apart toward the outer foot side with respect to the first string passing portion 26c as one set. The configuration of the first string passing portion 26c is not particularly limited as long as the shoelace 22A can pass therethrough, but in the present embodiment, the first string passing portion 26c is formed by folding back a part of the first forming portion 23A as described

above. The configuration of the second string passing portion 26d is not particularly limited as long as the shoe-lace 22A can pass therethrough, but in the present embodiment, the second string passing portion 26d is a through hole penetrating the upper main body 20 in the vertical direction. The number of sets of the outer foot side string passing portions 26A is not particularly limited, but is two in the present embodiment. The two sets of outer foot side string passing portions 26A are separated from each other in the fore-rear direction. The first string passing portion 26c and the second string passing portion 26d are provided side by side in the left-right direction. The second string passing portion 26d is located on the outer foot side of the first forming portion 23A.

[0053] The inner foot side string passing portion 27A includes one third string passing portion 27c provided in the second forming portion 24A and one fourth string passing portion 27d spaced apart toward the inner foot side with respect to the third string passing portion 27c as one set. The configuration of the third string passing portion 27c is not particularly limited as long as the shoelace 22A can pass therethrough, but in the present embodiment, the third string passing portion 27c is formed by folding back a part of the second forming portion 24A as described above. The configuration of the fourth string passing portion 27d is not particularly limited as long as the shoelace 22A can pass therethrough, but in the present embodiment, the fourth string passing portion 27d is a through hole penetrating the upper main body 20 in the vertical direction. The number of sets of inner foot side string passing portions 27A is not particularly limited, but is one set in the present embodiment. The third string passing portion 27c and the fourth string passing portion 27d are provided side by side in the left-right direction. The fourth string passing portion 27d is located on the inner foot side of the second forming portion 24A. [0054] The heel side string passing portion 29A is provided behind the outer foot side string passing portion 26A and the inner foot side string passing portion 27A. In the present embodiment, two heel side string passing portions 29A in total are provided, one each on the outer foot side and the inner foot side of the opening 20b. The two heel side string passing portions 29A are provided at symmetrical positions across the opening 20b. The heel side string passing portion 29A is provided near the boundary between the edge of the opening 20b and the edge of the foot insertion opening 20a. The configuration of the heel side string passing portion 29A is not particularly limited as long as the shoelace 22A can pass therethrough, but in the present embodiment, the heel side string passing portion is a through hole penetrating the upper main body 20 in the vertical direction.

[0055] The shoelace 22A is passed through the toe side string passing portion 28A, the outer foot side string passing portion 26A, the inner foot side string passing portion 27A, and the heel side string passing portion 29A. The shoelace 22A includes a first portion 22c alternately passed through the second string passing portion 26d

and the third string passing portion 27c, a second portion 22d alternately passed through the first string passing portion 26c and the fourth string passing portion 27d, and a third portion 22e extending between the two toe side string passing portions 28A and connecting the first portion 22c and the second portion 22d. The third portion 22e extends in the left-right direction across the opening 20b.

[0056] The first portion 22c extends obliquely rearward from the toe side string passing portion 28A on the outer foot side, is alternately passed through the second string passing portion 26d and the third string passing portion 27c, and is then passed through the heel side string passing portion 29A on the outer foot side. As illustrated in FIG. 4, in a state before the shoelace 22A is pulled, the second string passing portion 26d and the third string passing portion 27c are arranged to be shifted in the forerear direction and the left-right direction. Accordingly, the first portion 22c alternately passed through the second string passing portion 26d and the third string passing portion 27c extends in a zigzag shape in the left-right direction from the fore toward the rear.

[0057] The second portion 22d extends rearward from the toe side string passing portion 28A on the inner foot side, is alternately passed through the first string passing portion 26c and the fourth string passing portion 27d, and is then passed through the heel side string passing portion 29A on the inner foot side. As illustrated in FIG. 4, in a state before the shoelace 22A is pulled, the first string passing portion 26c and the fourth string passing portion 27d are arranged to be shifted in the fore-rear direction and the left-right direction. Accordingly, the second portion 22d alternately passed through the first string passing portion 26c and the fourth string passing portion 27d extends in a zigzag shape in the left-right direction from the fore toward the rear. In the state before the shoelace 22A is pulled, the first portion 22c and the second portion 22d partially cross each other. That is, in the state before the shoelace 22A is pulled, the position where the first portion 22c and the second portion 22d do not intersect each other and the position where the first portion 22c and the second portion 22d intersect each other are mixed.

[0058] When the first portion 22c and the second portion 22d are pulled rearward as illustrated in FIG. 5 from the state illustrated in FIG. 4, the first forming portion 23A extends from the first side edge 20d toward the second side edge 20e, and the second forming portion 24A extends from the second side edge 20e toward the first side edge 20d. Thus, the distance in the left-right direction between the second string passing portion 26d and the third string passing portion 27c is reduced, and the distance in the left-right direction between the first string passing portion 26c and the fourth string passing portion 27d is reduced. Accordingly, the first portion 22c alternately passed through the second string passing portion 26d and the third string passing portion 27c approaches a state of linearly extending in the fore-rear direction, and

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the second portion 22d alternately passed through the first string passing portion 26c and the fourth string passing portion 27d approaches a state of linearly extending in the fore-rear direction. Although the first portion 22c and the second portion 22d partially intersect with each other in a state before the shoelace 22A is pulled as illustrated in FIG. 4, the first portion 22c and the second portion 22d do not intersect with each other in a state where the shoelace 22A is pulled as illustrated in FIG. 5. [0059] The present embodiment can achieve effects similar to those of the first embodiment described above. Further, in the present embodiment, the first forming portion 23A can extend from the first side edge 20d toward the second side edge 20e, and the second forming portion 24A can extend from the second side edge 20e toward the first side edge 20d. Accordingly, since the first forming portion 23A and the second forming portion 24A can be arranged in a contracted state before the shoelace 22A is pulled, the first forming portion 23A and the second forming portion 24A do not interfere when the shoe 1A is worn. On the other hand, after the shoelace 22A is pulled, the first forming portion 23A and the second forming portion 24A extend so as to cover the opening 20b, so that the instep of the foot of the wearer can be protected.

[0060] In the present embodiment, since a part of the first forming portion 23A is used as the first string passing portion 26c, it is not necessary to separately form the first string passing portion 26c in the upper main body 20. Further, in the present embodiment, since a part of the second forming portion 24A is used as the third string passing portion 27c, it is not necessary to separately form the third string passing portion 27c in the upper main body 20.

[0061] Note that, in the present embodiment, the case where the first forming portion 23A and the second forming portion 24A are formed by a shrinkable and stretchable material has been exemplified, but may be formed by a foldable material having flexibility.

(Third embodiment)

[0062] FIG. 6 is a top view of the upper 2B according to a third embodiment, illustrating a state before a shoelace 22B is pulled. FIG. 7 is a top view of the upper 2B according to the third embodiment, illustrating a state in which the shoelace 22B is pulled from the state illustrated in FIG. 6. The upper 2B according to the third embodiment is different from the upper 2 according to the first embodiment in the positional relationship between a first string passing portion 26e and a second string passing portion 26f and the positional relationship between a third string passing portion 27e and a fourth string passing portion 27f. The upper 2B according to the third embodiment is used instead of the upper 2 according to the first embodiment to constitute a shoe 1B. Note that, in the third embodiment, the same reference numerals are given to parts overlapping with the first embodiment described above, and description thereof is omitted.

[0063] The number of the first forming portions 23B is not particularly limited, but is two in the present embodiment. The two first forming portions 23B are separated from each other in the fore-rear direction. The number of the second forming portions 24B is not particularly limited, but is two in the present embodiment. The two second forming portions 24B are separated from each other in the fore-rear direction. In the present embodiment, the second forming portion 24B and the first forming portion 23B are alternately provided from the fore side to the rear side in this order.

[0064] The configurations of the outer foot side string passing portion 26B, the inner foot side string passing portion 27B, the toe side string passing portion 28B, and the heel side string passing portion 29B are not particularly limited as long as the shoelace 22B can be passed therethrough, but in the present embodiment, they are through holes penetrating the upper main body 20 in the vertical direction.

[0065] In the present embodiment, one toe side string passing portion 28B is provided on the outer foot side of the opening 20b. The toe side string passing portion 28B is provided in fore of the outer foot side string passing portion 26B. The toe side string passing portion 28B is provided near the boundary between the first side edge 20d and the fore edge 20c.

[0066] The outer foot side string passing portion 26B includes one first string passing portion 26e provided in the first forming portion 23B and one second string passing portion 26f spaced apart toward the outer foot side with respect to the first string passing portion 26e as one set. The number of sets of the outer foot side string passing portions 26B is not particularly limited, but is two in the present embodiment. The two sets of outer foot side string passing portions 26B are separated from each other in the fore-rear direction. The first string passing portion 26e and the second string passing portion 26f are provided to be shifted in the fore-rear direction and the left-right direction. In the pair of outer foot side string passing portions 26B, the second string passing portion 26f is spaced apart toward the outer foot side and the rear side with respect to the first string passing portion 26e. The second string passing portion 26f is located on the outer foot side of the first side edge 20d.

[0067] The inner foot side string passing portion 27B includes one third string passing portion 27e provided in the second forming portion 24B and one fourth string passing portion 27f spaced apart toward the inner foot side with respect to the third string passing portion 27e as one set. The number of sets of the inner foot side string passing portions 27B is not particularly limited, but is two in the present embodiment. The two sets of inner foot side string passing portions 27B are separated from each other in the fore-rear direction. The third string passing portion 27e and the fourth string passing portion 27f are provided to be shifted in the left-right direction and the fore-rear direction. In one set of inner foot side string

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passing portions 27B, the fourth string passing portion 27f is spaced apart toward the inner foot side and the fore side with respect to the third string passing portion 27e. The fourth string passing portion 27f is located on the inner foot side of the second side edge 20e. Among the two sets of inner foot side string passing portions 27B, the fourth string passing portion 27f positioned at the foremost side is provided at a position symmetrical with respect to the toe side string passing portion 28B with the opening 20b interposed therebetween. In the present embodiment, the first string passing portion 26e is spaced apart toward the outer foot side and the rear side with respect to the third string passing portion 27e, but the first string passing portion 26e and the third string passing portion 27e may be provided side by side in the fore-rear direction.

[0068] The heel side string passing portion 29B is provided behind the outer foot side string passing portion 26B and the inner foot side string passing portion 27B. In the present embodiment, two heel side string passing portions 29B in total are provided, one each on the outer foot side and the inner foot side of the opening 20b. The two heel side string passing portions 29B are provided at symmetrical positions across the opening 20b. The heel side string passing portion 29B is provided near the boundary between the edge of the opening 20b and the edge of the foot insertion opening 20a.

[0069] The shoelace 22B is passed through the toe side string passing portion 28B, the outer foot side string passing portion 26B, the inner foot side string passing portion 27B, and the heel side string passing portion 29B. The shoelace 22B includes a first portion 22f alternately passed through the second string passing portion 26f and the third string passing portion 27e, a second portion 22g alternately passed through the first string passing portion 26e and the fourth string passing portion 27f, and a third portion 22h extending between the toe side string passing portion 28B and the fourth string passing portion 27f located at the foremost position and connecting the first portion 22f and the second portion 22g. The third portion 22h extends in the left-right direction across the opening 20b.

[0070] The first portion 22f extends obliquely rearward from the toe side string passing portion 28B, is alternately passed through the third string passing portion 27e and the second string passing portion 26f, and is then passed through the heel side string passing portion 29B on the outer foot side. As illustrated in FIG. 6, before the shoelace 22B is pulled, the second string passing portion 26f and the third string passing portion 27e are arranged to be shifted in the fore-rear direction and the left-right direction. Accordingly, the first portion 22f alternately passed through the second string passing portion 26f and the third string passing portion 27e extends in a zigzag shape in the left-right direction from the fore toward the rear.

[0071] The second portion 22g extends obliquely rearward from the fourth string passing portion 27f located

at the foremost position and is alternately passed through the first string passing portion 26e and the fourth string passing portion 27f, and is then passed through the heel side string passing portion 29B on the inner foot side. As illustrated in FIG. 6, before the shoelace 22B is pulled, the first string passing portion 26e and the fourth string passing portion 27f are arranged to be shifted in the forerear direction and the left-right direction. Accordingly, the second portion 22g alternately passed through the first string passing portion 26e and the fourth string passing portion 27f extends in a zigzag shape in the left-right direction from the fore to the rear. In a state before the shoelace 22B is pulled, the first portion 22f and the second portion 22g do not cross each other. In a state before the shoelace 22B is pulled, the position of the first portion 22f alternately passed through the second string passing portion 26f and the third string passing portion 27e and the position of the second portion 22g alternately passed through the first string passing portion 26e and the fourth string passing portion 27f are parallel to each other.

[0072] When the first portion 22f and the second portion 22g are pulled rearward from the state illustrated in FIG. 6 as illustrated in FIG. 7, the first side edge 20d and the second side edge 20e of the upper main body 20 are attracted to each other. Thus, the distance in the left-right direction between the second string passing portion 26f and the third string passing portion 27e is reduced, and the distance in the left-right direction between the first string passing portion 26e and the fourth string passing portion 27f is reduced. Accordingly, the first portion 22f alternately passed through the second string passing portion 26f and the third string passing portion 27e approaches a state of linearly extending in the fore-rear direction, and the second portion 22g alternately passed through the first string passing portion 26e and the fourth string passing portion 27f approaches a state of linearly extending in the fore-rear direction. In a state in which the shoelace 22B passed through the outer foot side string passing portion 26B and the inner foot side string passing portion 27B is pulled, the first portion 22f and the second portion 22g do not intersect each other. In a state where the shoelace 22B passed through the outer foot side string passing portion 26B and the inner foot side string passing portion 27B is pulled, the position of the first portion 22f alternately passed through the second string passing portion 26f and the third string passing portion 27e and the position of the second portion 22g alternately passed through the first string passing portion 26e and the fourth string passing portion 27f are parallel to each other. The present embodiment can achieve effects similar to those of the first embodiment described above.

[0073] The configuration described in the above embodiment illustrates an example of the content of the present invention, and can be combined with another known technique, and a part of the configuration can be omitted or changed without departing from the gist of the present invention. In the above-described first to third

embodiments, the case where the string passing portion 25 is a through hole or the case where the string passing portion 25 is formed by folding back a part of the first forming portion 23A or the second forming portion 24A has been exemplified, but the present invention is not limited thereto. The string passing portion 25 may be, for example, an eyelet, a hook-shaped string hooking portion, or a ring-shaped member formed by metal or resin.

Reference Signs List

1, 1A, 1B SHOE

[0074]

2, 2A, 2B UPPER 15 3 SOLE 20 UPPER MAIN BODY 20a FOOT INSERTION OPENING 20b OPENING 20c Fore EDGE 20 20d FIRST SIDE EDGE 20e SECOND SIDE EDGE 21 SHOE TONGUE 22, 22A, 22B SHOELACE 22a, 22c, 22f FIRST PORTION 25 22b, 22d, 22g SECOND PORTION 22e, 22h THIRD PORTION 23, 23A, 23B FIRST FORMING PORTION 24, 24A, 24B SECOND FORMING PORTION 25 STRING PASSING PORTION 30 26, 26A, 26B OUTER FOOT SIDE STRING PASS-ING PORTION 26a, 26c, 26e FIRST STRING PASSING PORTION 26b, 26d, 26f SECOND STRING PASSING POR-TION 35 27, 27A, 27B INNER FOOT SIDE STRING PASS-ING PORTION 27a, 27c, 27e THIRD STRING PASSING PORTION 27b, 27d, 27f FOURTH STRING PASSING POR-40 TION 28, 28A, 28B TOE SIDE STRING PASSING POR-TION 29, 29A, 29B HEEL SIDE STRING PASSING POR-TION 45 30 OUTSOLE 30a GROUND CONTACT SURFACE

Claims

31 MIDSOLE

1. An upper formed with a foot insertion opening and an opening communicating with the foot insertion opening and extending forward from the foot insertion opening, the upper comprising:

> a first side edge that is an edge on an outer foot side of the opening;

a second side edge that is an edge on an inner foot side of the opening;

a first forming portion that protrudes from the first side edge toward the second side edge; a second forming portion that protrudes from the second side edge toward the first side edge; an outer foot side string passing portion including one first string passing portion provided in the first forming portion and one second string passing portion spaced apart toward the outer foot side with respect to the first string passing portion as one set;

an inner foot side string passing portion including one third string passing portion provided in the second forming portion and one fourth string passing portion spaced apart toward the inner foot side with respect to the third string passing portion as one set; and

a shoelace passing through the outer foot side string passing portion and the inner foot side string passing portion, wherein

the first forming portion and the second forming portion are alternately provided in a fore-rear direction, and

the shoelace includes

a first portion alternately passed through the second string passing portion and the third string passing portion, and

a second portion alternately passed through the first string passing portion and the fourth string passing portion.

The upper according to claim 1, wherein

the first string passing portion and the second string passing portion are provided side by side in a left-right direction, and

the third string passing portion and the fourth string passing portion are provided side by side in the left-right direction.

3. The upper according to claim 1 or 2, wherein

the first forming portion is stretchable from the first side edge toward the second side edge, and the second forming portion is stretchable from the second side edge toward the first side edge.

- The upper according to any one of claims 1 to 3, wherein the first forming portion and the second forming portion are integrally formed with the upper.
- 5. A shoe comprising: the upper according to any one of claims 1 to 4; and a sole located below the upper.

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FIG.1

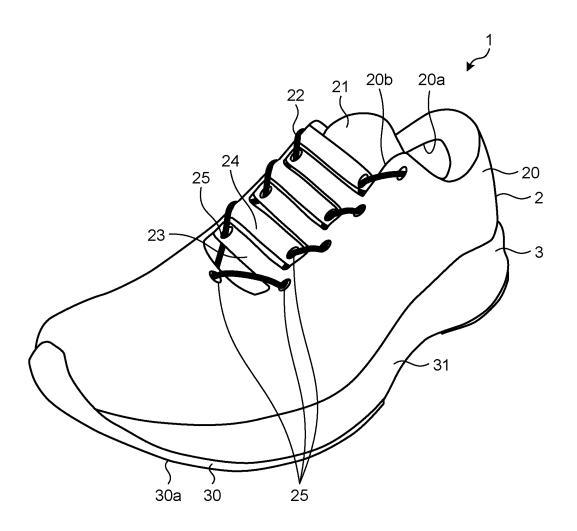


FIG.2

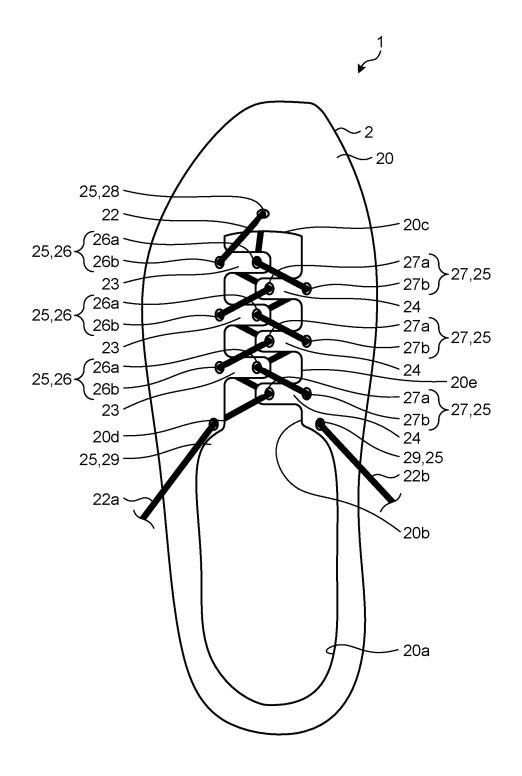


FIG.3

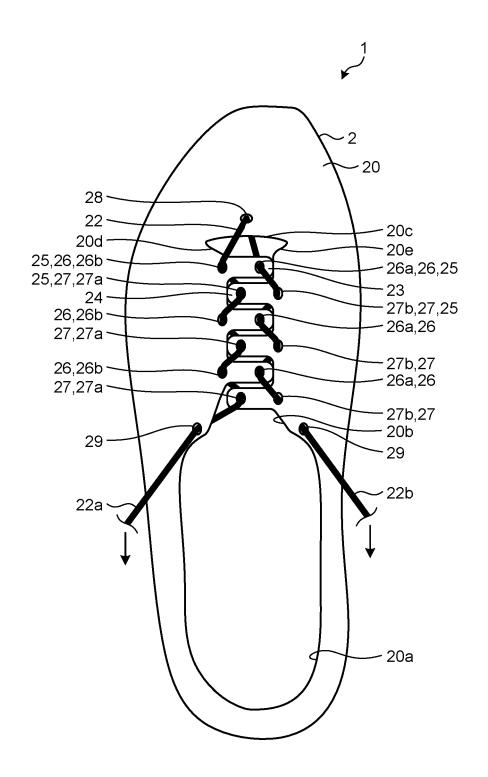


FIG.4

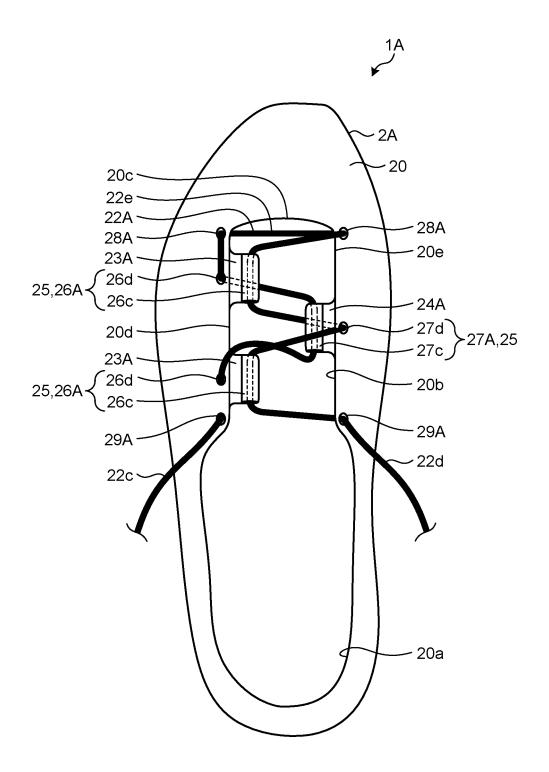


FIG.5

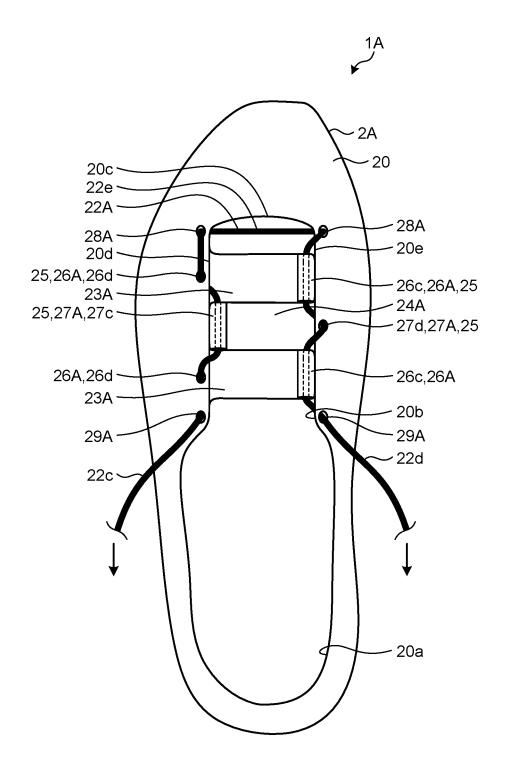


FIG.6

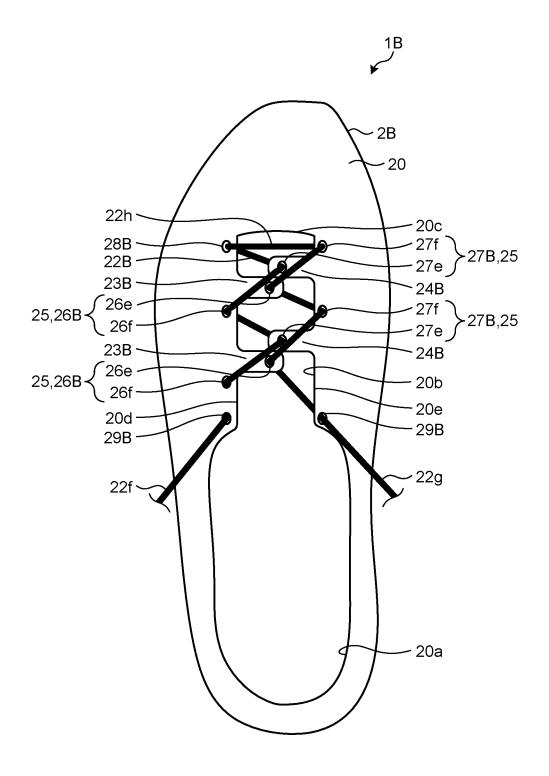
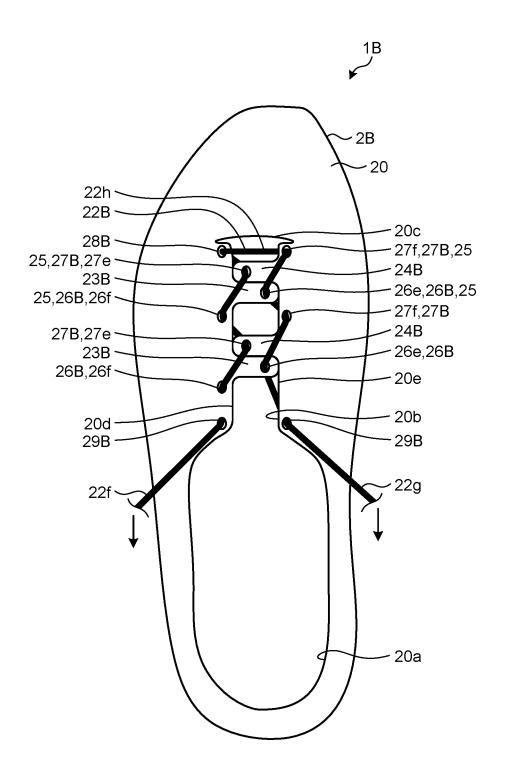


FIG.7



INTERNATIONAL SEARCH REPORT International application No. PCT/JP2020/045732 A. CLASSIFICATION OF SUBJECT MATTER 5 Int. Cl. A43B23/02(2006.01)i FI: A43B23/02 105Z According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED 10 Minimum documentation searched (classification system followed by classification symbols) Int. Cl. A43B23/02 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Published examined utility model applications of Japan Published unexamined utility model applications of Japan Registered utility model specifications of Japan Published registered utility model applications of Japan 15 1922-1996 1994-2020 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) 20 DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Category* Relevant to claim No. JP 2020-162885 A (MIZUNO INC.) 08 October 2020 1 - 5Α (2020-10-08)25 JP 2019-528840 A (FIT SQUARED SHOES LLC) 17 1-5 Α October 2019 (2019-10-17) JP 2020-163174 A (ASICS CORP.) 08 October 2020 1 - 530 Α (2020-10-08)Α JP 3222409 U (NIKE INNOVATE CV) 01 August 2019 1 - 5(2019 - 08 - 01)35 US 2006/0000116 A1 (SALOMON S.A.) 05 January 2006 1 - 5Α (2006-01-05) \bowtie Further documents are listed in the continuation of Box C. See patent family annex. 40 Special categories of cited documents: later document published after the international filing date or priority "A" document defining the general state of the art which is not considered to be of particular relevance date and not in conflict with the application but cited to understand the principle or theory underlying the invention earlier application or patent but published on or after the international "E" "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive filing date document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) step when the document is taken alone "L" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art 45 "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 50 23.12.2020 12.01.2021 Name and mailing address of the ISA/ Authorized officer Japan Patent Office 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan Telephone No.

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INTERNATIONAL SEARCH REPORT International application No. PCT/JP2020/045732

5	C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT						
	Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.				
10	A	WO 2020/129117 A1 (ASICS CORPORATION) 25 June 2020 (2020-06-25)	1-5				
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INTERNATIONAL SEARCH REPORT Information on patent family members

International application No. PCT/JP2020/045732

5	Patent Documents referred to in the Report	Publication Date	Patent Family	Publication Date
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10	JP 2020-163174 A JP 3222409 U	08.10.2020 01.08.2019	KR 10-2019-0045280 A CN 109890237 A (Family: none) JP 3222268 U US 2018/0020767 A1 JP 3222495 U	
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20	A1 WO 2020/129117 A1		FR 2872389 A1 (Family: none)	
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REFERENCES CITED IN THE DESCRIPTION

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