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(54) **SHOE LAST**

SCHUHLEISTEN

FORME À CHAUSSURE

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Description

TECHNICAL FIELD

[0001] The present invention relates to a shoe last.

BACKGROUND

[0002] A shoe last is a parent body of a shoe, a forming module of a shoe, and is also termed a shoe tree. The shoe last is generally used to maintain a shape of a shoe that is not worn. The shoe last generally includes three parts, namely a front end which a shoe can be inserted into and supports a shoe surface, a middle central pipe or shaft, and a heel part. Leather of a common shoe absorbs moisture, such as foot sweat of a wearer of the shoe or rain and snow. Using a shoe last may prevent the moisture absorbed by the leather of the shoe from bending and deforming the shoe. Inside the shoe it is usually warm and wet, and this offers an ideal breeding place for microbes, especially bacteria. The microbes or bacteria feed on the shoe and may make a foot smelly and the bacteria inside the shoe usually infect the wearer with beriberi. It is extremely difficult to effect a radical cure of foot disease infected by bacteria inside the shoe, because after a medicine, an ointment and the like is used for treatment, if a shoe harboring bacteria is still worn, the foot is very easily infected with the disease again.

[0003] In the commonly known art, there is already a shoe last component, including a shoe last and an electric sterilizing device, such as an ultraviolet luminescent light. When the shoe last is inserted into a shoe for use, a sterilizing light in operating mode kills bacteria and other microbes that may be breeding inside the shoe, thereby preventing beriberi and foot odor. Shortcomings of the shoe last component lie in that: because a front end part of the shoe last is in a non-deformable structure and cannot be bent and deformed according to a size of an inner cavity of a front end of the shoe, universality of the shoe last component is decreased, that is, multiple shoe lasts with this function need to be equipped for multiple different styles or sizes of shoes.

[0004] WO 2007/106835 discloses an adjustable shoe tree equipped with a UV germicidal light source and electronic safeguards that prevent appreciable leakage of UV radiation outside the shoe.

SUMMARY

[0005] An objective of the present invention is to provide a shoe last to prevent the shortcomings in the BACKGROUND.

[0006] To achieve the foregoing objective, the present invention adopts the following technical solution: a shoe last, including a heel part and a fore sole part that has several built-in ultraviolet sterilizing lights, where the heel part is connected to the fore sole part through a connect-

ing part, an exterior edge of an end part of the fore sole part extends out several spreading claws that can be bent to a center, and the several ultraviolet sterilizing lights are disposed inside accommodation space surrounded and formed by the several spreading claws.

[0007] In an optimization for the present invention, the fore sole part is formed by a lower claw body, an upper claw cover, and several lamp holders disposed inside the lower claw body, the spreading claws include several lower spreading claws extending out from a front end of the lower claw body and several upper spreading claws extending out from a front end of the upper claw cover, the several lamp holders are separately fixedly connected to the inside of an end housing of a rear end of the lower claw body, the ultraviolet sterilizing lights are separately connected to the lamp holders, a cover housing of a rear end of the upper claw cover matches an external claw of an end housing of the lower claw body, a control part is disposed inside the heel part, a power cord passes through a housing body of the heel part to connect to the control part, and the lamp holders connect to the control part for controlling.

[0008] In an optimization for the present invention, the connecting part includes a connecting sleeve pipe, a corrugated shrinkable sleeve, and a return spring, a guide sliding hole accommodating the connecting sleeve pipe is disposed on a lower part of the heel part, one end of the connecting sleeve pipe is fixedly connected to the end housing of the lower claw body and the other end of the connecting sleeve pipe is connected to the guide sliding hole for guiding, the corrugated shrinkable sleeve covers the outside of the connecting sleeve pipe, with two ends of the corrugated shrinkable sleeve separately fixedly connected to the lower claw body and the heel part, and a connecting cable between the control part and the lamp holders passes through the connecting conduit.

[0009] In an optimization for the present invention, card slots are disposed on two sides outside the end housing of the lower claw body, card fasteners are disposed on two sides inside the cover housing of the upper claw cover, and the cover housing matches the end housing and is fastened to the card slot by using the card fastener.

[0010] In an optimization for the present invention, a drying component used for drying a shoe is disposed inside the end housing of the lower claw body and the drying component is connected to the control part.

[0011] In an optimization for the present invention, two sides of the front end of the lower claw body separately extend out two lower spreading claws, two sides of a front end of the upper claw cover separately extend out two side upper spreading claws, and the top side of the front end of the upper claw cover extends out one front upper spreading claw.

[0012] In an optimization for the present invention, two sides of the front end of the lower claw body separately extend out two lower spreading claws, and the top side of the front end of the upper claw cover extends out one

front upper spreading claw.

[0013] In an optimization for the present invention, a control panel is disposed on the heel part, and a touch control button connecting to the control part is disposed on the control panel.

[0014] Compared with the technology in the BACKGROUND, the present invention has a compact and reasonable structure, is easy to use, secure and reliable, can not only sterilize the inside of a shoe to prevent a foot from infecting with bacteria, but also maintain a shape and appearance of the shoe; an exterior edge of an end part of a fore sole part extends out spreading claws that can be bent to a center, and this aims to enable automatically bending adjustment according to a size of an inner cavity of different styles of shoes, so that a shoe last can be smoothly disposed into the shoe and hold up a shoe vamp; in addition, an upper claw cover can be dismantled and replaced, a first objective is to facilitate replacement and maintenance of an ultraviolet sterilizing light or lamp and a second objective is to enable replacement of different styles of upper claw covers according to characteristics of different styles of shoes.

BRIEF DESCRIPTION OF DRAWINGS

[0015]

FIG. 1 is a schematic three-dimensional structural diagram of a shoe last A;

FIG. 2 is a schematic front sectional structural diagram of a shoe last A;

FIG. 3 is a schematic top-view structural diagram of an upper claw cover of a shoe last A;

FIG. 4 is a schematic exploded diagram of a shoe last A;

FIG. 5 is a schematic three-dimensional structural diagram of a shoe last B;

FIG. 6 is a schematic front sectional structural diagram of a shoe last B; and

FIG. 7 is a schematic exploded diagram of a shoe last B;

DESCRIPTION OF EMBODIMENTS

[0016] Embodiment 1: Refer to FIG. 1 to FIG. 7. A shoe last, including a heel part 1 and a fore sole part 3 that has several built-in ultraviolet sterilizing lights 5, where the heel part 1 is connected to the fore sole part 1 through a connecting part 2, an exterior edge of an end part of the fore sole part 3 extends out several spreading claws 31 that can be bent to a center, and the several ultraviolet sterilizing lights 5 are disposed inside accommodation

space 3a surrounded and formed by the several spreading claws 31.

[0017] In an optimization of the present invention, the fore sole part is formed by a lower claw body 33, an upper claw cover 32, and several lamp holders 4 disposed inside the lower claw body 33, the spreading claws 31 include several lower spreading claws 31 a extending out from a front end of the lower claw body 33 and several upper spreading claws 31 b extending out from a front end of the upper claw cover 32, the several lamp holders 4 are separately fixedly connected to the inside of an end housing 33a of a rear end of the lower claw body 33, the ultraviolet sterilizing lights 5 are separately connected to the lamp holders 4, a cover housing 32a of a rear end of the upper claw cover 32 matches an external claw of an end housing 33a of the lower claw body 33, a control part 7 is disposed inside the heel part 1, a power cord 6 passes through a housing body of the heel part 1 to connect to the control part 7, and the lamp holders 4 connect to the control part 7 for controlling.

[0018] The connecting part 2 includes a connecting sleeve pipe 21, a corrugated shrinkable sleeve 22, and a return spring 23, a guide sliding hole 11 accommodating the connecting sleeve pipe is disposed on a lower part of the heel part 1, one end of the connecting sleeve pipe 21 is fixedly connected to the end housing 33a of the lower claw body 33 and the other end of the connecting sleeve pipe 21 is connected to the guide sliding hole 11 for guiding, the corrugated shrinkable sleeve 22 covers the outside of the connecting sleeve pipe 21, with two ends of the corrugated shrinkable sleeve separately fixedly connected to the lower claw body 33 and the heel part 1, and a connecting cable 71 between the control part 7 and the lamp holders 4 passes through the connecting conduit 21.

[0019] Card slots 33b are disposed on two sides outside the end housing 33a of the lower claw body 33, card fasteners 32b are disposed on two sides inside the cover housing 32a of the upper claw cover 32, and the cover housing 32a matches the end housing 33a and is fastened to the card slot 33b by using the card fastener 32b. An objective of doing this is to facilitate replacement of different styles or sizes of upper claw covers 32 and facilitate replacement of ultraviolet lamps 5.

[0020] The foregoing heel part 1, lower claw body 33, and the lamp holders 4 are all formed by fastening two pieces of plastic parts in their respective structures. The foregoing cable cord 6 includes a plug that can be connected to a jacket. The control part includes an electronic switch, a counter, and/or an electronic ballast.

[0021] Embodiment 2: Refer to FIG. 2 and FIG. 6. On the basis of Embodiment 1, a drying component 8 used for drying a shoe is disposed inside the end housing 33a of the lower claw body 33 and the drying component 8 is connected to the control part 7.

[0022] Embodiment 3: Refer to FIG. 1 to FIG. 4. On the basis of Embodiment 1, a lamp holder 4 and an ultraviolet sterilizing light 5 connecting to the lamp holder

4 are disposed inside accommodation space surrounded and formed by several spreading claws 31. Two sides of the front end of the lower claw body 33 separately extend out two lower spreading claws 31 a, two sides of a front end of the upper claw cover 32 separately extend out two side upper spreading claws 31 b1, and the top side of the front end of the upper claw cover extends out one front upper spreading claw 31 b2.

[0023] Embodiment 4: Refer to FIG. 5 to FIG. 7. On the basis of Embodiment 1, a lamp holder 4 and an ultraviolet sterilizing light 5 connecting to the lamp holder 4 are disposed inside accommodation space surrounded and formed by several spreading claws 31. Two sides of the front end of the lower claw body 33 separately extend out two lower spreading claws 31 a, two sides of a front end of the upper claw cover 32 separately extend out two front upper spreading claws 31b2. A control panel 12 is disposed on the heel part 1, and a touch control button 121 connecting to the control part 7 is disposed on the control panel 12.

[0024] Although the inventor has provided relatively detailed descriptions and illustrations on the technical solution in the present invention, it should be understood that, for a person skilled in the art, it is apparent that making modifications and/or changes to the foregoing embodiments or adopting an equivalent replacement solution shall not depart from the essence of spirits of the present invention, and terms in the present invention are used for description and understanding of the technical solution of the present invention and shall not be construed as limitation to the present invention.

Claims

1. A shoe last, comprising a heel part and a fore sole part that has several built-in ultraviolet sterilizing lights, wherein the heel part is connected to the fore sole part through a connecting part, wherein: an exterior edge of an end part of the fore sole part extends out several spreading claws that can be bent to a center, and the several ultraviolet sterilizing lights are disposed inside accommodation space surrounded and formed by the several spreading claws.
2. The shoe last according to claim 1, wherein: the fore sole part is formed by a lower claw body, an upper claw cover, and several lamp holders disposed inside the lower claw body, the spreading claws comprise several lower spreading claws extending out from a front end of the lower claw body and several upper spreading claws extending out from a front end of the upper claw cover, the several lamp holders are separately fixedly connected to the inside of an end housing of a rear end of the lower claw body, the ultraviolet sterilizing lights are separately connected to the lamp holders, a cover housing of a rear end of the upper claw cover matches an external

claw of an end housing of the lower claw body, a control part is disposed inside the heel part, a power cord passes through a housing body of the heel part to connect to the control part, and the lamp holders connect to the control part for controlling.

3. The shoe last according to claim 1 or 2, wherein: the connecting part comprises a connecting sleeve pipe, a corrugated shrinkable sleeve, and a return spring, a guide sliding hole accommodating the connecting sleeve pipe is disposed on a lower part of the heel part, one end of the connecting sleeve pipe is fixedly connected to the end housing of the lower claw body and the other end of the connecting sleeve pipe is connected to the guide sliding hole for guiding, the corrugated shrinkable sleeve covers the outside of the connecting sleeve pipe, with two ends of the corrugated shrinkable sleeve separately fixedly connected to the lower claw body and the heel part, and a connecting cable between the control part and the lamp holders passes through the connecting conduit.
4. The shoe last according to claim 2, wherein card slots are disposed on two sides outside the end housing of the lower claw body, card fasteners are disposed on two sides inside the cover housing of the upper claw cover, and the cover housing matches the end housing and is fastened to the card slot by using the card fastener.
5. The shoe last with a sterilizing function according to claim 2, wherein: a drying component used for drying a shoe is disposed inside the end housing of the lower claw body and the drying component is connected to the control part.
6. The shoe last according to claim 2, wherein two sides of the front end of the lower claw body separately extend out two lower spreading claws, two sides of a front end of the upper claw cover separately extend out two side upper spreading claws, and the top side of the front end of the upper claw cover extends out one front upper spreading claw.
7. The shoe last according to claim 2, wherein two sides of the front end of the lower claw body separately extend out two lower spreading claws and the top side of a front end of the upper claw cover extends out one front upper spreading claw.
8. The shoe last according to claim 2, wherein: a control panel is disposed on the heel part, and a touch control button connecting to the control part is disposed on the control panel.

Patentansprüche

1. Schuhleiste, umfassend einen Absatzteil und einen Vordersohleenteil, welcher mehrere integrierte UV-Sterilisationslampen aufweist, wobei der Absatzteil mit dem Vordersohleenteil durch einen Anschluss-
5 teil verbunden ist, wobei: eine Außenkante eines Endteils des Vordersohleenteils erstreckt sich aus mehreren Spreizkrallen, die zu einer Mitte gekrümmt werden können, und die mehreren UV-Sterilisationslampen sind innerhalb des Aufnahmeraums angeordnet, der durch die mehreren Spreizkrallen umgeben und gebildet ist.
2. Schuhleiste nach Anspruch 1, wobei: der Vordersohle-
15 lentheil ist durch einen unteren Krallenkörper, einen oberen Krallendeckel und mehrere Lampenträger, welche innerhalb des unteren Krallenkörpers angeordnet sind, gebildet, wobei die Spreizkrallen mehrere untere Spreizkrallen umfassen, die sich aus einer Stirnseite des unteren Krallenkörpers erstrecken und mehrere obere Spreizkrallen, die sich aus einer
20 Stirnseite des oberen Krallendeckels erstrecken, die mehreren Lampenträger sind getrennt voneinander fest mit dem Inneren eines Endgehäuses eines hinteren Endes des unteren Krallenkörpers verbunden, die UV-Sterilisationslampen sind getrennt voneinander mit den Lampenträgern verbunden, ein Deckelgehäuse eines hinteren Endes des oberen Krallendeckels stimmt mit einer externen Kralle eines End-
25 gehäuses des unteren Krallenkörpers überein, ein Steuerungsteil ist innerhalb des Absatzteils angeordnet, ein Netzanschlusskabel verläuft durch ein Gehäusekörper des Absatzteils, um sich mit dem Steuerungsteil zu verbinden, und die Lampenträger verbinden sich mit dem Steuerungsteil zur Steuerung.
30
3. Schuhleiste nach Anspruch 1 oder 2, wobei: der Anschluss-
40 steil umfasst ein Verbindungshülsenrohr, eine gewellte schrumpfbare Hülse und eine Rückstellfeder, ein Führungsgleitloch, welches das Verbindungshülsenrohr aufnimmt, ist an einem unteren Teil des Absatzteils angeordnet, ein Ende des Verbindungshülsenrohrs ist fest mit dem Endgehäuse des unteren Krallenkörpers verbunden und das andere Ende des Verbindungshülsenrohrs ist mit dem Führungsgleitloch zur Führung verbunden, die gewellten schrumpfbaren Hül-
45 sen stimmen mit der Außenseite des Verbindungshülsenrohrs überein, wobei zwei Enden der gewellten schrumpfbaren Hülse getrennt voneinander fest mit dem unteren Krallenkörper und dem Absatzteil verbunden sind, und ein Anschlusskabel verläuft zwischen dem Steuerungsteil und dem Lampenträger durch das Verbindungsrohr.
50
4. Schuhleiste nach Anspruch 2, wobei Kartenschlitze an zwei Seiten außerhalb des Endgehäuses des un-
55 teren Krallenkörpers angeordnet sind, Kartenbefestigungsmittel an zwei unteren Seiten innerhalb des Deckelgehäuses des oberen Krallendeckels angeordnet sind, und das Deckelgehäuse mit dem Endgehäuse übereinstimmt und an den Kartenschlitz mit Hilfe des Kartenbefestigungsmittels befestigt ist.
5. Schuhleiste mit sterilisierender Funktion nach Anspruch 2, wobei: ein zum Trocknen eines Schuhs verwendetes Trocknungselement innerhalb des Endgehäuses des unteren Krallenkörpers angeordnet ist und das Trocknungselement Verbindung mit dem Steuerungsteil verbunden ist.
6. Schuhleiste nach Anspruch 2, wobei sich zwei Seiten der Stirnseite des unteren Krallenkörpers getrennt voneinander aus zwei unteren Spreizkrallen erstrecken, zwei Seiten einer Stirnseite des oberen Krallendeckels aus zwei unteren Spreizkrallen erstrecken, und die Oberseite der Stirnseite des oberen Krallendeckels aus einer vorderen oberen Spreizkralle erstreckt.
7. Schuhleiste nach Anspruch 2, wobei sich zwei Seiten der Stirnseite des unteren Krallenkörpers getrennt voneinander aus zwei unteren Spreizkrallen erstrecken, und die Oberseite einer Stirnseite des oberen Krallendeckels aus einer vorderen oberen Spreizkralle erstreckt.
8. Schuhleiste nach Anspruch 2, wobei: eine Bedientafel am Absatzteil angeordnet ist, und eine berührungsempfindliche Steuerungstaste, welche mit dem Steuerungsteil verbunden ist, an der Bedientafel angeordnet ist.
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Revendications

1. Forme à chaussure, comprenant une partie de talon et une partie de semelle antérieure qui comporte plusieurs lampes de stérilisation UV intégrées, dans laquelle la partie de talon est raccordé à la partie de semelle antérieure via une pièce de connexion, dans laquelle : une arête extérieure d'une partie terminale de la partie de semelle antérieure s'étend hors de plusieurs griffes d'écartement qui peuvent être courbées vers un centre, et la pluralité de lampes de stérilisation UV sont disposées à l'intérieur de l'espace de logement entouré et formé par la pluralité de griffes d'écartement.
2. Forme à chaussure selon la revendication 1, dans laquelle : la partie de semelle antérieure est formée par un corps de griffe inférieur, un couvercle de griffe supérieur, et plusieurs supports de lampe disposés à l'intérieur du corps de griffe inférieur, les griffes d'écartement comprennent plusieurs griffes d'écar-

- tement inférieures s'étendant depuis un bout avant du corps de griffe inférieur et plusieurs griffes d'écartement supérieur s'étendant depuis un bout avant du couvercle de griffe supérieur, la pluralité de supports de lampes sont raccordés séparément de manière fixe avec l'intérieur d'un boîtier terminal d'une extrémité arrière du corps de griffe inférieur, les lampes de stérilisation UV sont raccordées séparément aux supports de lampes, un boîtier de couvercle d'une extrémité arrière du couvercle de griffe supérieur coïncide avec une griffe externe d'un boîtier terminal du corps de griffe inférieur, une pièce de commande est disposée à l'intérieur de la partie de talon, un câble d'alimentation électrique traverse un corps de boîtier de la partie de talon pour se raccorder à la pièce de commande, et les supports de lampes sont raccordés à la pièce de commande pour la commande.
3. Forme à chaussure selon la revendication 1 ou 2, dans laquelle : la pièce de raccordement comprend une conduite à manchon de raccordement, un manchon rétrécissable ondulé, et un ressort de rappel, un trou coulissant de guidage logeant la conduite à manchon de raccordement est disposé sur une partie inférieure de la partie de talon, une extrémité de la conduite à manchon de raccordement est raccordée de manière fixe au boîtier terminal du corps de griffe inférieur et l'autre extrémité de la conduite à manchon de raccordement est raccordée au trou coulissant de guidage pour le guidage, le manchon rétrécissable ondulé couvre la face extérieure de la conduite à manchon de raccordement, avec deux extrémités du manchon rétrécissable ondulé étant raccordé séparément de manière fixe au corps de griffe inférieur et à la partie de talon, et un câble de raccordement entre la partie de commande et le support de lampe traverse le conduit de raccordement.
4. Forme à chaussure selon la revendication 2, dans laquelle des fentes pour cartes sont disposées sur deux côtés à l'extérieur du boîtier terminal du corps de griffe inférieur, des moyens de fixation de carte sont disposés sur deux côtés à l'intérieur du boîtier de couvercle de griffe supérieur, et le boîtier de couvercle correspond au boîtier terminal et est fixé à la fente pour carte à l'aide du moyen de fixation de carte.
5. Forme à chaussure avec fonction stérilisante selon la revendication 2, dans laquelle : un composant de séchage utilisé pour le séchage d'une chaussure est disposé à l'intérieur du boîtier terminal du corps de griffe inférieur et le composant de séchage est raccordé à la pièce de commande.
6. Forme à chaussure selon la revendication 2, dans laquelle deux côtés du bout avant du corps de griffe inférieur s'étendent séparément depuis deux griffes d'écartement inférieures, deux côtés d'un bout avant du couvercle de griffe supérieur s'étendent séparément depuis deux griffes d'écartement supérieures latérales, et la face supérieure du bout avant du couvercle de griffe supérieur s'étend depuis une griffe d'écartement avant supérieure.
7. Forme à chaussure selon la revendication 2, dans laquelle deux côtés du bout avant du corps de griffe inférieur s'étendent séparément depuis deux griffes d'écartement inférieures, et la face supérieure d'un bout avant du couvercle de griffe supérieur s'étend depuis une griffe d'écartement avant supérieure.
8. Forme à chaussure selon la revendication 2, dans laquelle : un panneau de commande est disposé sur la partie de talon, et un bouton de commande à effleurement raccordé à la pièce de commande est disposé sur le panneau de commande.

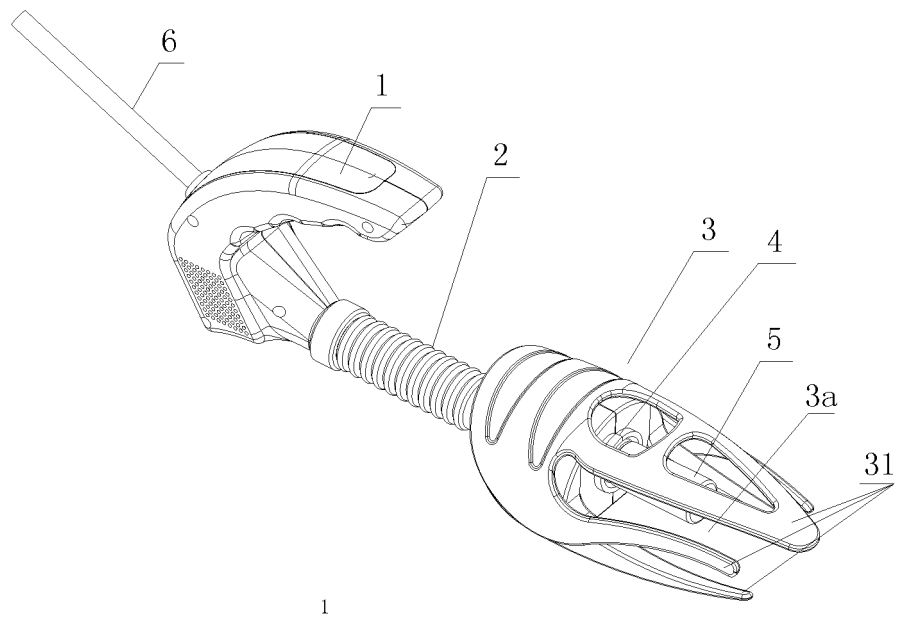


Fig.1

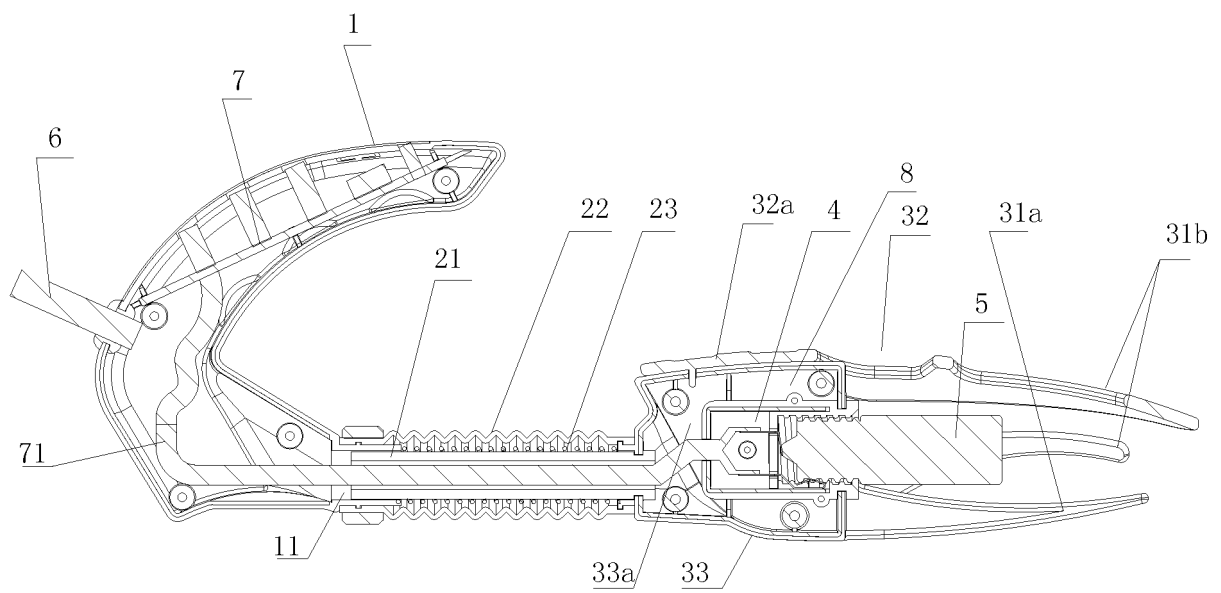


Fig.2

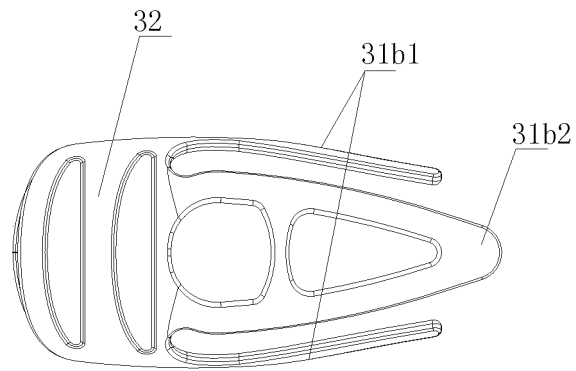


Fig.3

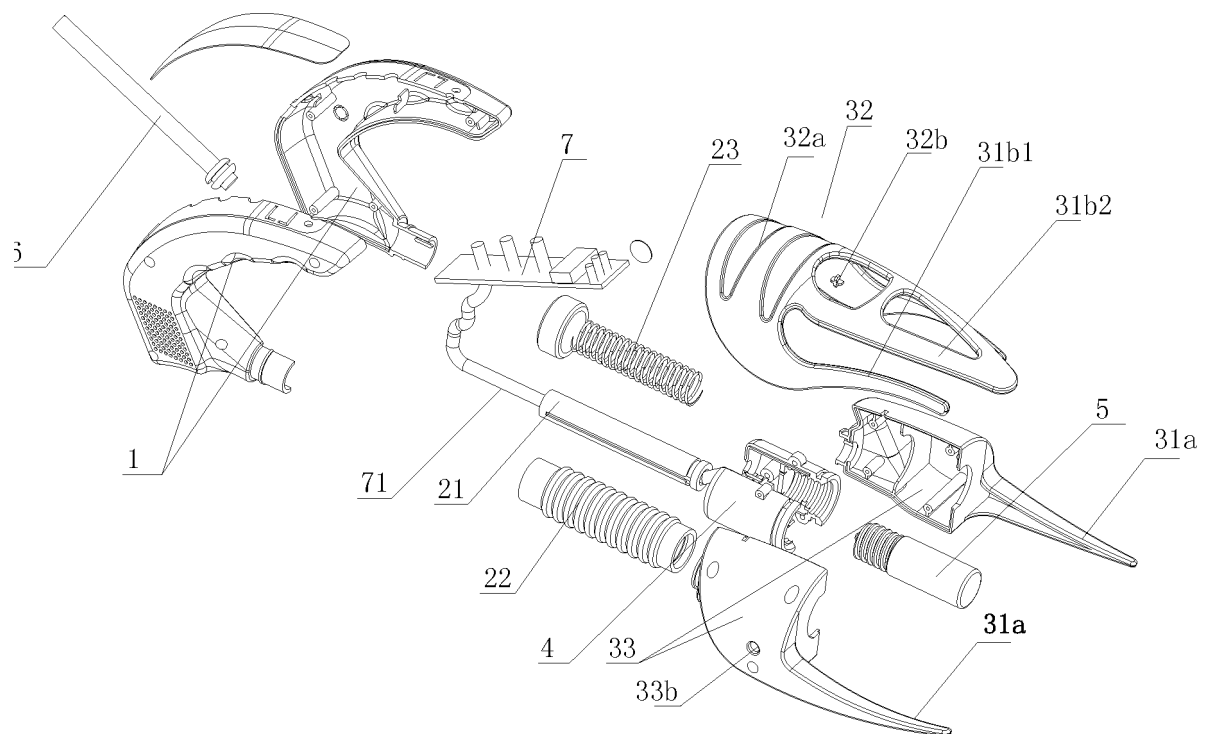


Fig.4

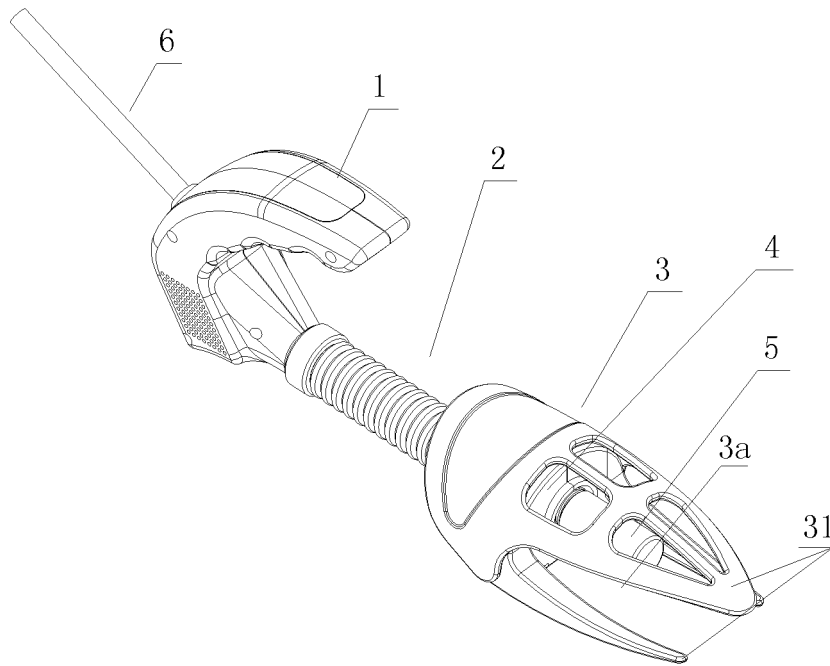


Fig.5

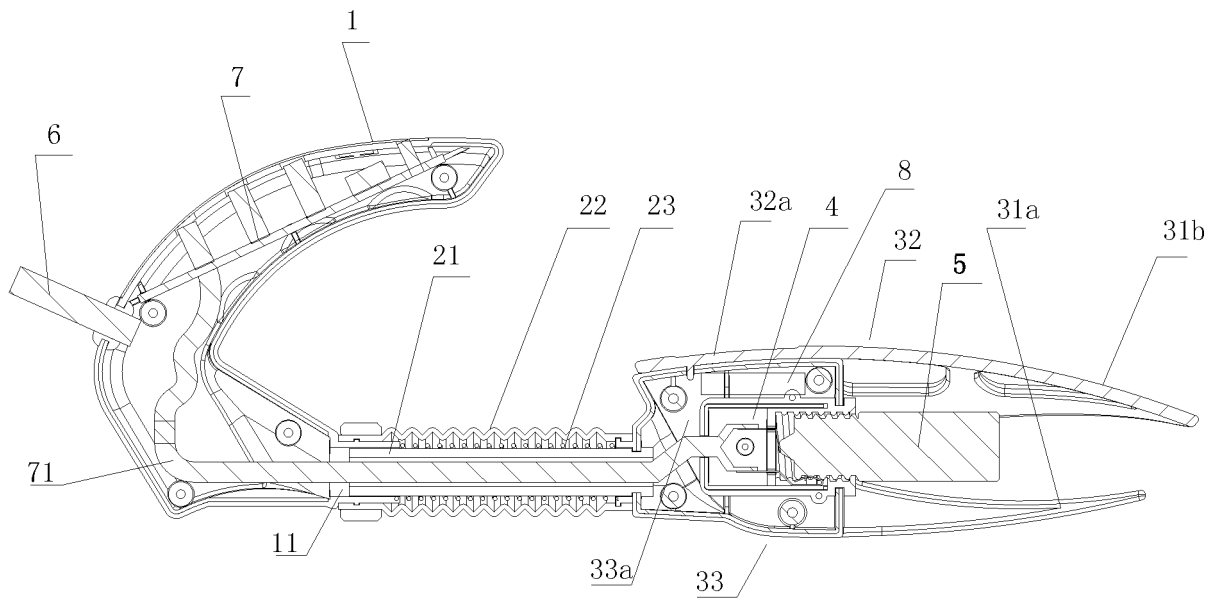


Fig.6

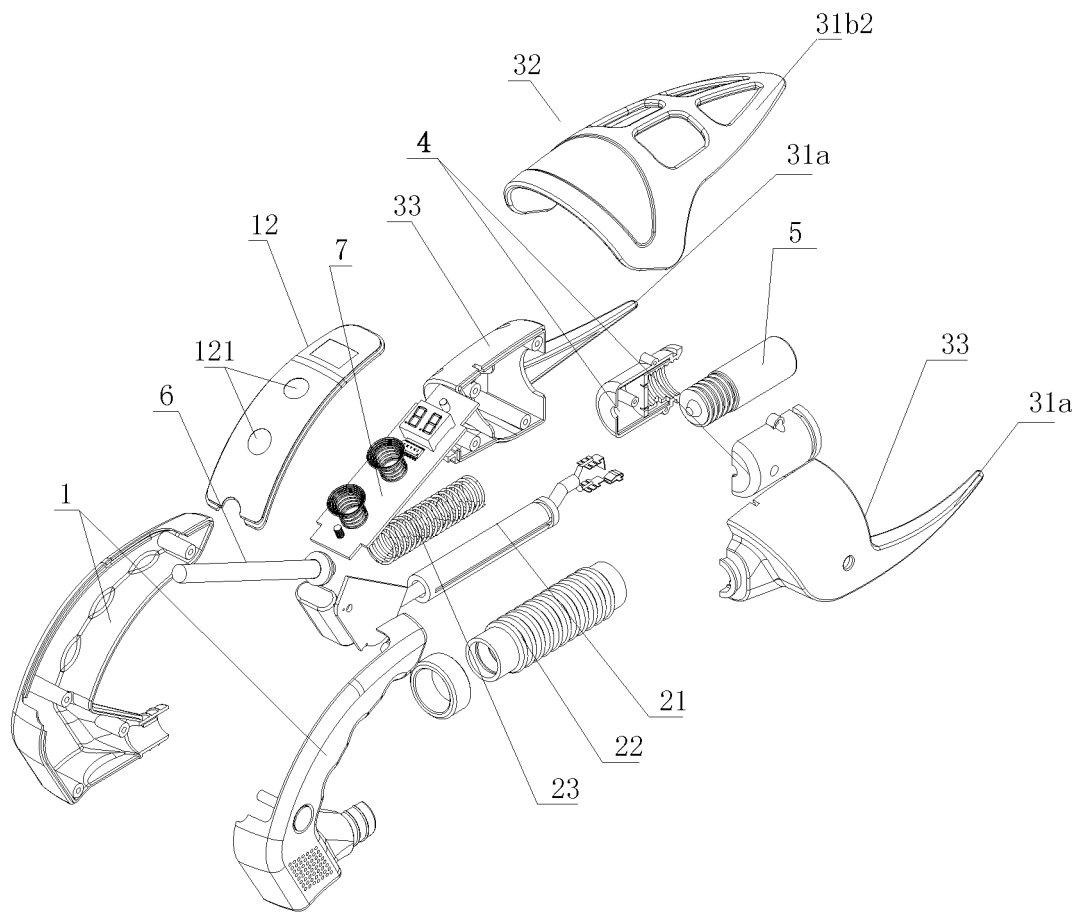


Fig.7

REFERENCES CITED IN THE DESCRIPTION

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