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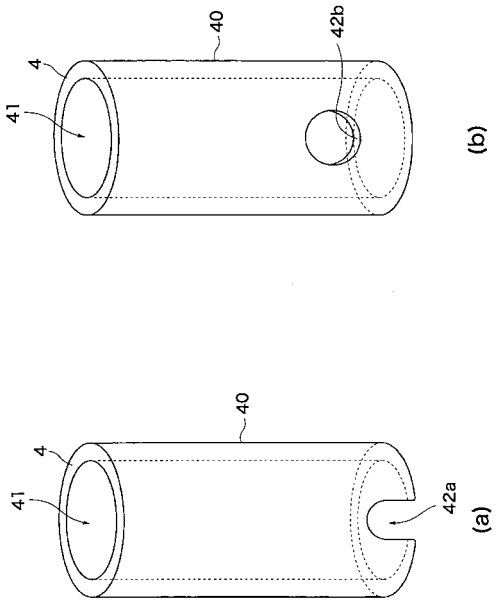
(54) BOOT SHAPE MAINTAINING BODY

(57) Disclosed is a boot shape keeper capable of holding a boot in a fixed shape, removing malodor from the insole of the boot by allowing the insole of the boot to be opened to outside air while the boot is held. The boot shape keeper 1, which is inserted into a shaft part 21 of a boot to keep a shape of the shaft part 21 of a boot, includes a cylindrical body part 30 made by forming a plastic sheet 10 having a gas pre-encapsulated into a cylindrical shape, and a through hole 42b provided at a lower portion of a side wall surface of the body part 30, or a groove portion formed at a lower end of the side wall of the body part 30, wherein the body part 30 has a fixed shape provided by the encapsulated gas.

Fig. 8



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Description

Technical Field

[0001] The present invention relates to a boot shape keeper for holding boots in a fixed shape.

Background Art

[0002] With long boots or the like put off and left at a main entrance or the like, the shaft part of the boot bends easily. If the boots are left in this state for a long time, a crease is formed at the bent part of the shaft part, and, further, shape off-set may occur. It is therefore necessary to maintain boots in such a way that the shaft part is not bent when the boots are not used for a long time.

[0003] In the past, in order to prevent such bending at the shaft part of a boot, a boot keeper is proposed (for example, refer to Patent Document 1). This boot keeper fits in the shaft part of a boot to hold the shape of the shaft part, and has a crease-smoothing member for smoothing a crease formed near the ankle joint of the shaft part. Further, Patent Document 2 discloses a technique on a shape holder formed by a transparent plastic bag having an outer shape which can expand inside the shaft part of the boot as air is fed from a compressed air feeding/discharging valve. According to the technique disclosed in Patent Document 2 can expand the bag by filling compressed air therein, so that with the shape holder fitted in the shaft part of the boot, the boot is not bent and stands upright, thus significantly contributing in holding the shape of the boot.

[0004] By the way, the insole part of the boot from the heel to the tiptoe where the leg is to be fitted absorbs the sweat from the sole. If a person keeps walking on the boots, friction is added to raise the temperature in the boots, making the environment where sweat-oriented germs are easy to breed. In order to prevent breeding of such germs, the humidity of the insole part must be discharged.

[0005] However, the boot keeper according to the technique disclosed in Patent Document 1 is configured as a column in which a cloth bag longer than the shaft part is enclosed. When the boot keeper with the above configuration is fitted in the shaft part of the boot, the insole part is sealed from the outside air. Because the technique disclosed in Patent Document 2 is also configured to expand the cloth bag in the shaft part of the boot, the insole part of the boot is likewise sealed from the outside air.

[0006] As a result, humidity in the insole part of the boot cannot be discharged, causing breeding of germs and releasing an offensive odor.

[Patent Document 1] Japanese Patent Application Laid-Open No. 2005-6915.

[Patent Document 2] Japanese Patent Application Laid-Open No. 2002-223813.

Disclosure of the Invention

Problem to be Solved by the Invention

[0007] Accordingly, the present invention has been devised in view of the foregoing problems, and it is an object of the invention to provide a boot shape keeper capable of holding a boot in a fixed shape, removing malodor from the insole part of the boot by allowing the insole part of the boot to be opened to outside air while the boot is held.

Means for Solving the Problem

[0008] A boot shape keeper according to Claim 1 of the present application is a boot shape keeper to be inserted into a shaft part of a boot to keep a shape of the shaft part of a boot, the boot shape keeper, **characterized in that** it has a cylindrical body part made by forming a plastic sheet having a gas pre-encapsulated into a cylindrical shape; and a through hole provided at a lower portion of a side wall surface of the body part, or a groove portion formed at a lower end of the side wall of the body part, wherein the body part has a fixed shape provided by the encapsulated gas.

[0009] The boot shape keeper according to Claim 2 of the present application is **characterized in that** at least one small through hole is further formed in a side surface of the body part according to Claim 1.

Effect of the Invention

[0010] Since the invention with the above-described configuration ensures a fixed shape, the shaft part does not bend but stands still, making it possible to keep the upright shape of the boot keeper. With the boot keeper being formed cylindrical and the presence of the groove portion and through hole, an offensive odor can be removed from the insole part of the boot by making the insole part communicatable with the outside air.

Best Mode for Carrying out the Invention

[0011] A boot shape keeper for holding boots in a fixed shape will be explained in detail below as the best mode for carrying out the invention, referring to the accompanying drawings.

First Embodiment

[0012] Fig. 1 shows a perspective view of a boot shape keeper 1 according to a first embodiment to which the invention is applied. This boot shape keeper 1 is formed mainly by rolling a plastic sheet 10 into a coupled cylindrical shape.

[0013] The plastic sheet 10 is a thermoplastic resin sheet, such as non-permeable polyethylene. The thermoplastic resin may be adequately selected from polypropylene, polyethylene terephthalate, nylon, vinyl chlo-

ride, polycarbonate, etc. in addition to polyethylene.

[0014] The plastic sheet 10 has strip air chambers 11 elongated in an up-down direction y and arranged in columns in a widthwise direction x as shown in Fig. 2. A gas is sealed in the air chambers 11 beforehand. The air chambers 11 are formed by placing two rectangular sheets constituting the plastic sheet 10 one on the other and press-bonding the rectangular sheets in the up-down direction, which is not restrictive, and may be realized by any well-known method. In the example of Fig. 2, the air chambers 11 are formed at a surface 10b of the plastic sheet 10. That is, the air chamber 11 is formed into a projecting shape on the surface as seen from a cross section.

[0015] After producing such a plastic sheet 10, the plastic sheet 10 is rolled in the widthwise direction x. At this time, as shown in Fig. 1, the plastic sheet 10 is rolled in the widthwise direction x in such a way that a top surface 10b of the plastic sheet 10 where the air chambers 11 are formed are rolled in the widthwise direction x. The ends in the widthwise direction x are coupled together to form a cylinder, thereby forming a through hole 13 penetrating in the up-down direction y.

[0016] At this time, the air chambers 11 have not been formed at a rear surface 10a of the plastic sheet 10 yet, and the rear surface 10a is a smooth surface. Accordingly, the plastic sheet 10 can be easily rolled into a cylinder form so that the rear surface 10a becomes outside, and the top surface 10b becomes inside.

[0017] At the time of actually using the boot shape keeper 1 formed into a cylindrical shape, the boot shape keeper 1 is fitted in a shaft part 21 of the boot 2 as shown, for example, in Fig. 3. As a result, each of the air chambers 11 which constitute the boot shape keeper 1 is pressed between the adjoining air chambers 11, as shown in the horizontal sectional view in Fig. 4. The pressure among these air chambers 11 applies an expansion force f which urges the air chambers 11 outward. Although the outside of the boot shape keeper 1 circumscribes the internal surface of the fitted shaft part 21, the expansion force f based on the pressure between the air chambers 11 is applied to the shaft part 21. As a result, since the force to urge the air chambers 11 outward is normally applied to the shaft part 21, the shaft part 21 of the boot 2 does not bend but stands upright, thus contributing to keeping the shape. Particularly, according to the invention, the boot shape keeper 1 can be fitted without projecting from the shaft part 21, thus making it possible to give a customer an image of standing upright at the time the boots are displayed as an exhibit.

[0018] The volumes, sizes, positions, pitches, quantity, shapes, etc. of the air chambers 11 are adjusted beforehand so that the desired expansion force f is applied by the pressure among the air chambers 11. It is desirable that the individual dimensions, such as the sizes and volumes, should be uniform in order to exert stable expansion force f. The air chambers 11 may be formed as mutually-independent spaces, or may be formed as mutually continuous spaces. In case of making the air chambers 11 continuous, a bypass or the like may be provided to interconnect the air chambers 11.

[0019] As shown in Fig. 3B, there may be a case where the shaft part 21 of the boot 2 has a streamline shape. When the boot shape keeper 1 is fitted in the shaft part 21 with such a shape, as shown in Fig. 3B, the gas in the air chambers 11 is distributed into a swelling portion of the shaft part 21 from a recessed portion thereof. Particularly, the air chambers 11 are formed like strips in the up-down direction, so that the gas enclosed in the air chambers 11 easily moves in the up-down direction to be distributable. The provision of the air chambers 11 allows the gas to be distributed along the streamline of the shaft part 21, exerting the expansion force. As a result, excessive expansion force is not locally applied to the leather that constitutes the shaft part 21, making it possible to achieve shape maintenance friendly to the leather constituting the shaft part 21.

[0020] The through hole 13 is formed by rolling the boot shape keeper 1 in the widthwise direction x into a cylindrical shape. As shown in Fig. 3, therefore, an insole part 23 as space including the insole of the boot 2 is released to the outside air via the through hole 13. It is desirable to raise the boot shape keeper 1 to the height which does not reach a heel part 24 at the time of fitting the boot shape keeper 1 in the shaft part 21. This makes it possible to enhance the openness of the insole part 23 to the outside air.

[0021] This allows the humidity in the insole part 23 of the boot 2 to be discharged to prevent breeding of germs, thus suppressing an offensive odor.

[0022] The foregoing description of the embodiment has been given of the case where the air chambers 11 explained are formed at the top surface 10b of the plastic sheet 10. As the plastic sheet 10 is formed into a cylindrical shape so that the top surfaces 10b of the air chambers 11 form the inner wall, it is possible to enhance the degree of pressure between the air chambers 11 which project inward. This makes it possible to exert the expansion force f.

[0023] However, the air chambers 11 should not necessarily be formed at the top surface 10b of the plastic sheet 10. For example, regardless of whether or not the air chambers 11 are formed at the top surface 10b, the air chambers 11 may simply be formed in a string.

Second Embodiment

[0024] Fig. 5A shows a perspective view of a boot shape keeper 3 according to a second embodiment to which the invention is applied. This boot shape keeper 3 has a body part 30 formed by rolling a plastic sheet with a gas enclosed therein beforehand into a cylindrical shape, and at least one projecting part 32 projecting downward from the lower end of the body part 30. A through hole 31 is formed in the cylindrically formed body part 30. Although the following description will be given

of a case where two projecting parts 32 are formed, which is not restrictive, the projecting parts 32 may be formed in any quantity, any volume and any shape.

[0025] The plastic sheet is a thermoplastic resin sheet, such as non-permeable polyethylene. The thermoplastic resin may be adequately selected from polypropylene, polyethylene terephthalate, nylon, vinyl chloride, polycarbonate, etc. in addition to polyethylene.

[0026] The body part 30 can maintain the fixed shape with the air enclosed therein. The projecting part 32 has a gas enclosed therein beforehand, and is configured so as to feed the gas at least between the body part 30 and the projecting part 32 or discharge the gas therefrom. That is, the internal spaces of the projecting parts 32 and the internal space of the body part 30 are connected mutually.

[0027] The projecting part 32 can be elastically contracted up and down. Since the internal spaces of the projecting parts 32 are connected to the internal space of the body part 30, pressing the projecting part 32 from the bottom causes the projecting parts 32 to elastically contract as shown in Fig. 5B. As a result, the height of the boot shape keeper 3 can be set low. In the meantime, the gases in the projecting parts 32 are fed into the body part 30. The projecting parts 32 may be pressed in to be contracted by adjusting the quantity of the gases to be enclosed in the body part 30 and the projecting parts 32, so that the gas fed into the body part 30 causes to act as the expansion force f.

[0028] According to the invention, particularly, the provision of the projecting parts 32 smaller in volume than the body part 30 can allow the projecting parts 32 to be easily and elastically contracted.

[0029] The body part 30 and the projecting part 32 may be made of an elastic material with a fixed form, such as urethane. As the projecting parts 32 are formed with a smaller area than the body part 30, the projecting parts 32, when pressed, can easily and elastically be contracted.

[0030] At the time of actually using the boot shape keeper 3 formed into a cylindrical shape, the boot shape keeper 3 is fitted in the shaft part 21 of the boot 2 as shown, for example, in Fig. 6A. Since the body part 30 has air enclosed therein to keep a fixed shape, the shaft part 21 does not bend but stands upright, so that the shaft part 21 can hold the upright shape. If the boot 2 like a half boot, etc. has a short shaft part 21, as shown in Fig. 6B, the boot shape keeper 3 is fitted in the shaft part 21, and then pressed downward to contract the projecting parts 32. This makes it possible to lower the height of the boot shape keeper 3 to match with the length of the shaft part 21.

[0031] At the time of displaying the boots 2 as an exhibit, therefore, it is also possible to give the image that the boots 2 naturally stand still by making each boot shape keeper 3 not visible from the customer's field of view. Regardless of whether the boot 2 is a long boot with a long shaft parts 21 or a half boot, etc. with a short shaft part 21, i.e., regardless of the length of the shaft part of the boot, the height can be adjusted with the boot shape keeper 3 whose projecting parts 32 are configured to be elastically contractable, so that the boot shape keeper 3 cannot be seen from the customer's field of view.

[0032] The through hole 31 is formed by making the boot shape keeper 3 into a cylindrical shape. As shown in Fig. 6, therefore, the insole part 23 as the space including the insole of the boot 2 is released to the outside air via the through hole 13. This makes it possible to discharge the humidity in the insole part 23 of the boot 2 to prevent breeding of germs, thus suppressing an offensive odor.

[0033] Figs. 7A and 7B show a boot shape keeper 7 which reflects the technical ideas of both of the first embodiment and the second embodiment.

[0034] The boot shape keeper 7 has strip air chambers 11 elongated in the up-down direction y and arranged in columns in the widthwise direction x with a gas sealed in the air chambers 11 beforehand. The air chambers 11 are formed by placing two rectangular sheets constituting the plastic sheet 10 one on the other and thermocompression bonding the rectangular sheets in the up-down direction. Some air chambers 11 are elongated by a length corresponding to the projecting part 32. These air chambers 11 are continual to one another via the bypass (not shown), so that air can be fed to the entire boot via at least one air feeding inlet.

[0035] The plastic sheet 10 with the flat shape is rolled in the widthwise direction x into a cylindrical shape, thus providing the boot shape keeper 7 with such a shape as shown in Fig. 7B.

[0036] In this boot shape keeper 7, outward expansion force can be applied by the pressure from the adjacent air chambers 11. In addition, as the projecting part 32 is provided to be elastically contractable, the height can be adjusted. Further, the expansion force f may be exerted by the gas fed into the body part 30 by contracting the projecting part 32 with pressure.

Third Embodiment

[0037] Figs. 8A and 8B show perspective views of a boot shape keeper 4 according to a third embodiment to which the invention is applied. This boot shape keeper 4 has a body part 40 formed by rolling a plastic sheet with a gas enclosed therein beforehand into a cylindrical shape, and a through hole 42b provided in the lower portion of the side wall of the body part 40, or a groove portion 42a formed in the lower end of the side wall of the body part 40. The groove portion 42a and through hole 42b may have any shape or may be formed in any quantity. The through hole 42b is connected to the through hole 41 in the cylindrical body part 40. Although the location at which the through hole 42b is formed is adjusted beforehand in connection with at least the position of the insole part 23 of the boot 2, it is desirable that the through

hole 42b should be formed at any position at least at the lower half. The body part 40 can maintain the fixed shape with the air enclosed therein.

[0038] At the time of actually using the boot shape keeper 4 formed into a cylindrical shape, the boot shape keeper 4 is fitted in the shaft part 21 of the boot 2 as shown, for example, in Figs. 9A and 9B. Since the body part 40 has air enclosed therein to keep a fixed shape, the shaft part 21 does not bend but stands upright, thus significantly contributing to maintaining the upright shape.

[0039] As shown in Fig. 9A, the insole part 23 as the space including the insole of the boot 2 is released to the outside air via the groove portion 42a and the through hole 41. This makes it possible to discharge the humidity in the insole part 23 of the boot 2 to prevent breeding of germs, thus suppressing an offensive odor. From the viewpoint of easier production, it is desirable that the groove portion 42a should have a rectangular shape or a rectangular shape with rounded corners.

[0040] As shown in Fig. 9B, the insole part 23 as the space including the insole of the boot 2 is released to the outside air via the through hole 42b and the through hole 41. This makes it possible to discharge the humidity in the insole part 23 of the boot 2 to prevent breeding of germs, thus suppressing an offensive odor.

[0041] Of course, at least two groove portions 42a may be provided to demonstrate a function similar to that of the projecting parts 32 in the second embodiment.

[0042] Furthermore, according to this embodiment, at least one small through hole may be further formed in the side surface of the body part 40. Multiple small through holes may be formed in the side surface of the body part 40 which faces the inner wall of the shaft part 21, thereby improving the permeability and ventilatory.

[0043] According to the third embodiment, of course, the body part 30 may be formed of an elastic material with a fixed shape, such as urethane, in place of a plastic sheet.

Brief Description of the Drawings

[0044]

[Fig. 1] A perspective view of a boot shape keeper according to a first embodiment to which the invention is applied.

[Fig. 2] A diagram for explaining air chambers arranged on a plastic sheet.

[Fig. 3] A diagram showing an example in which the boot shape keeper formed cylindrical is actually fitted in the shaft part of a boot.

[Fig. 4] A horizontal cross-sectional view of the boot shape keeper.

[Fig. 5] A perspective view of a boot shape keeper according to a second embodiment to which the invention is applied. [Fig. 6] A diagram showing another example of the second embodiment.

[Fig. 7] A diagram showing an example of a boot shape keeper which reflects the technical ideas of both of the first embodiment and the second embodiment.

[Fig. 8] A perspective view of a boot shape keeper according to a third embodiment to which the invention is applied. [Fig. 9] A diagram showing an example in which the boot shape keeper according to the third embodiment is actually fitted in the shaft part.

Description of Reference Number

[0045]

1	Boot shape keeper
2	Boot
10	Plastic sheet
11	Air chamber
13	Through hole
21	Shaft part
23	Insole part
24	Heel part
30	Body part
31	Through hole
32	Projecting part

Claims

1. A boot shape keeper to be inserted into a shaft part of a boot to keep a shape of the shaft part of a boot, the boot shape keeper comprising:

a cylindrical body part made by forming a plastic sheet having a gas pre-encapsulated into a cylindrical shape; and

a through hole provided at a lower portion of a side wall surface of the body part, or a groove portion formed at a lower end of the side wall of the body part,

wherein the body part has a fixed shape provided by the encapsulated gas.

2. The boot shape keeper according to claim 1, wherein at least one small through hole is further formed in a side surface of the body part.

Fig. 1

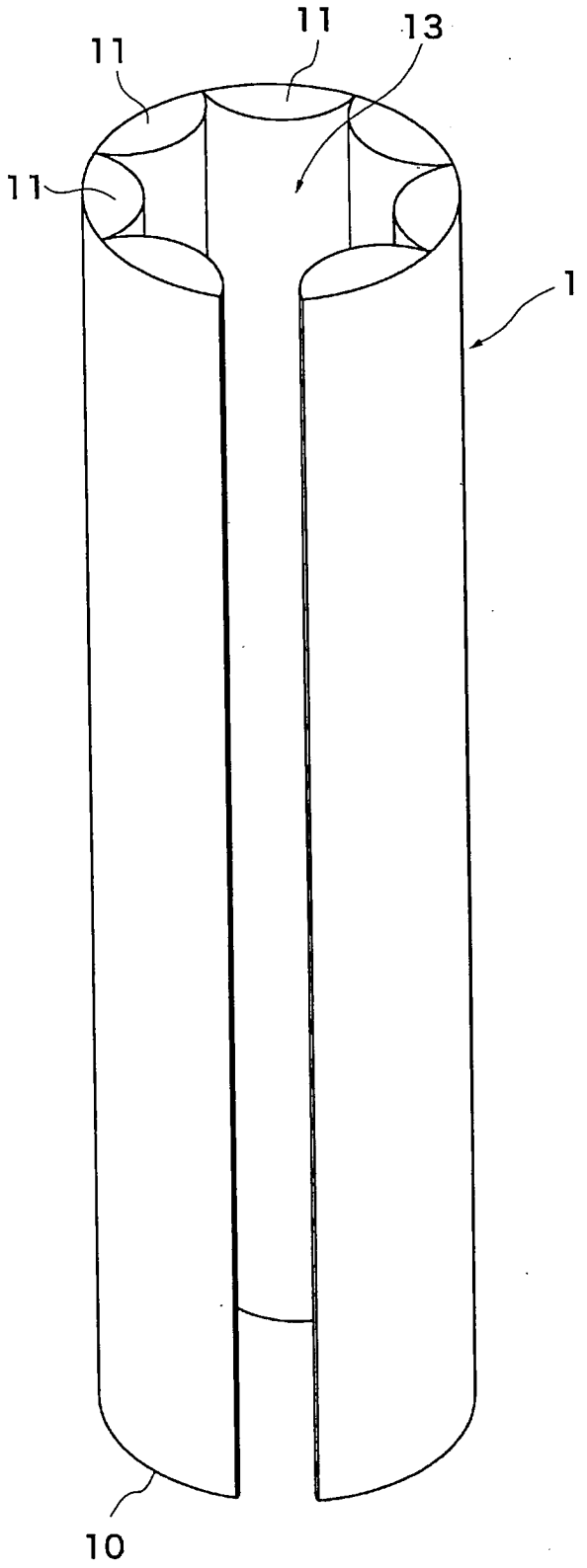


Fig. 2

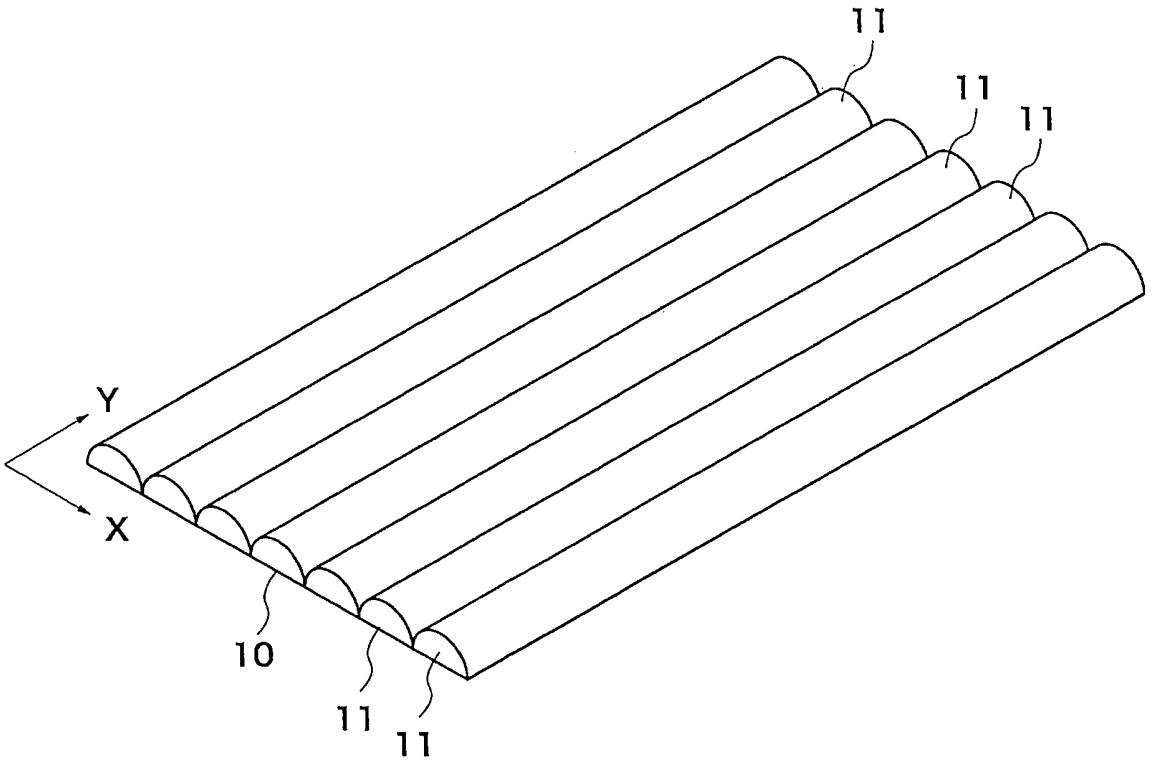


Fig. 3

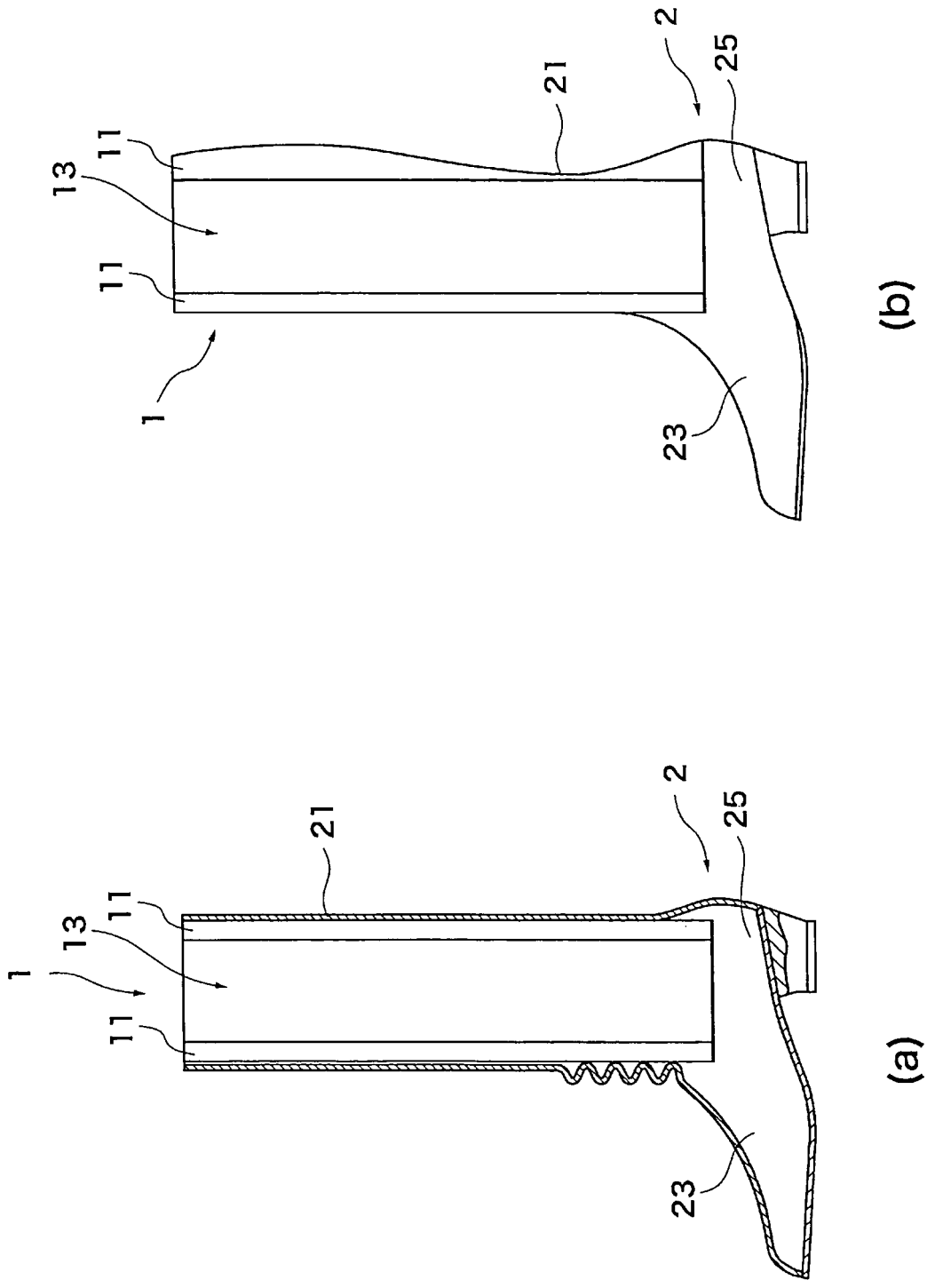


Fig. 4

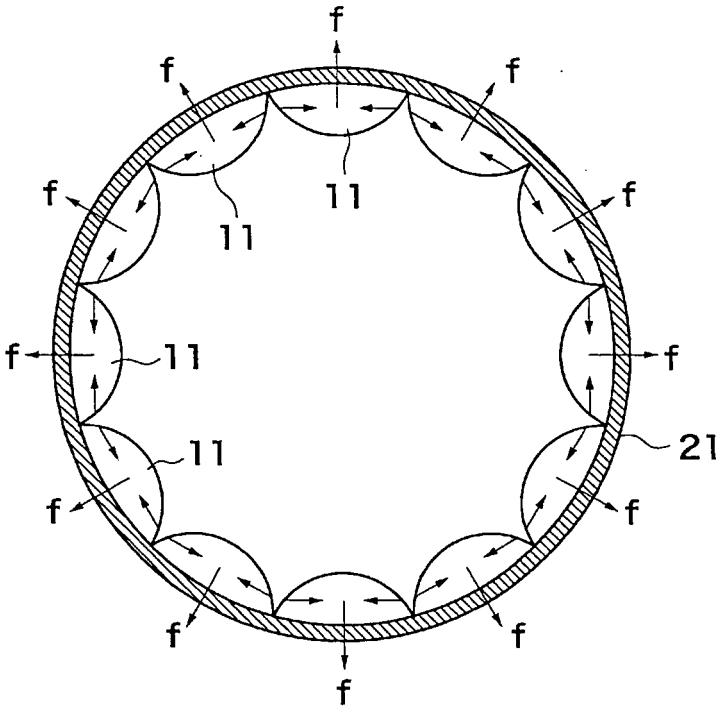


Fig. 5

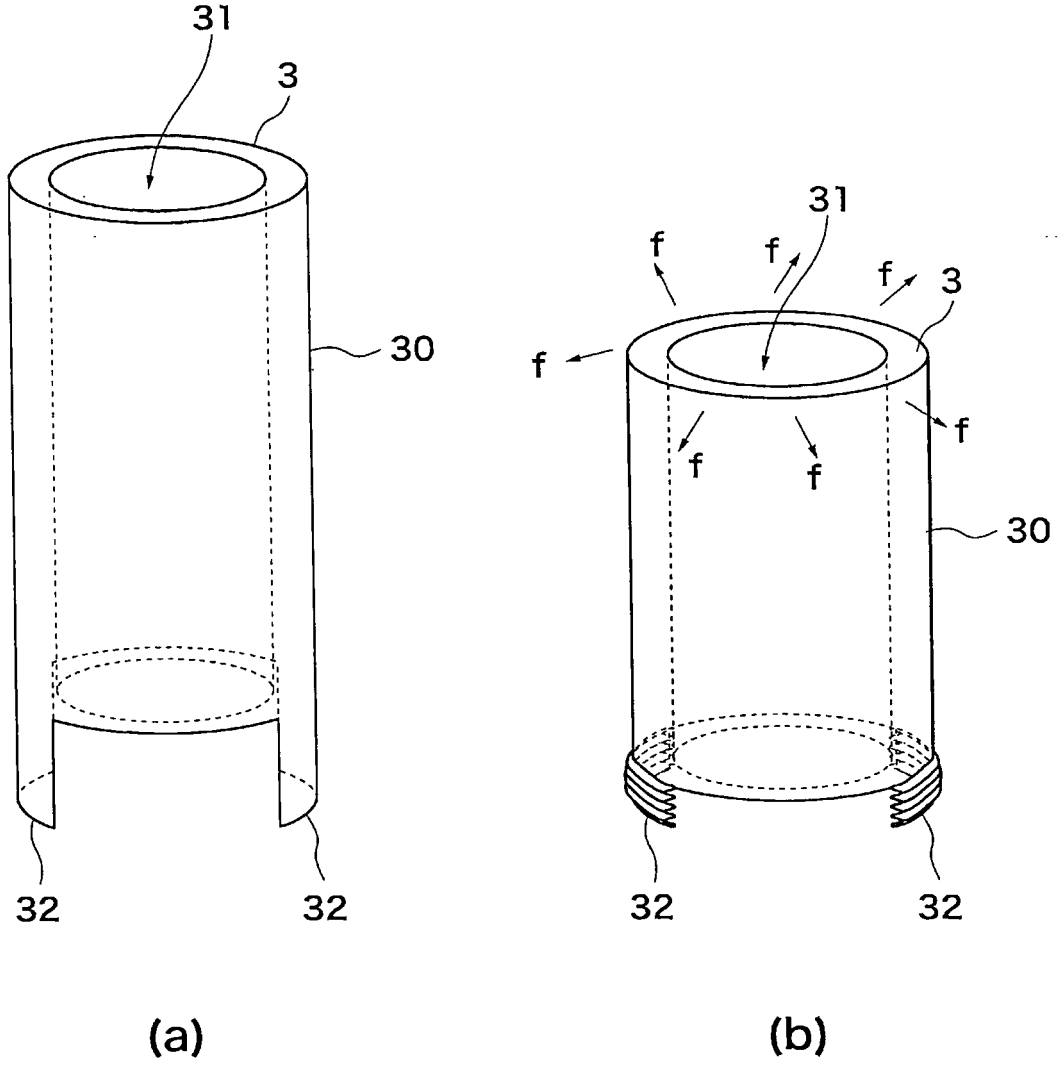


Fig. 6

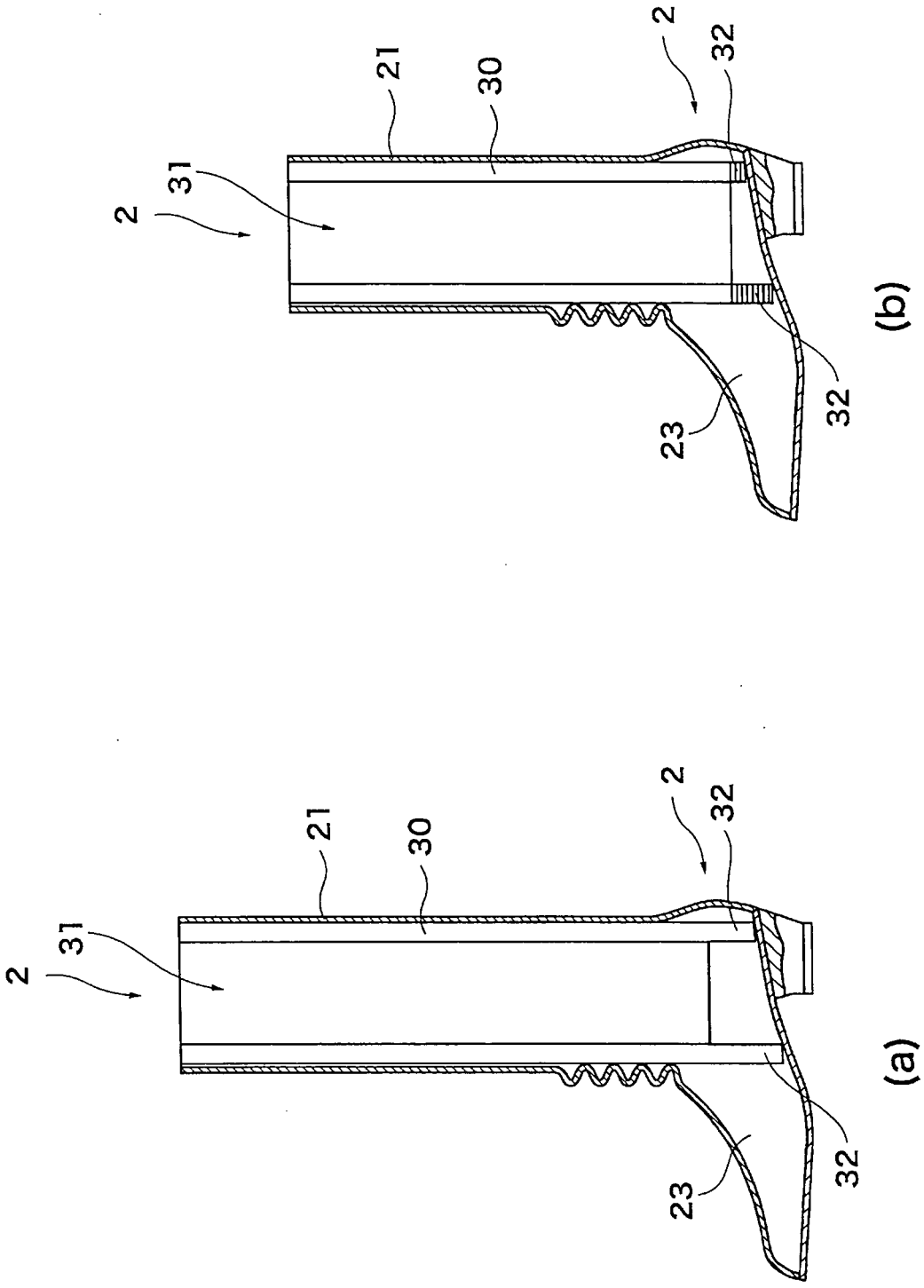


Fig. 7

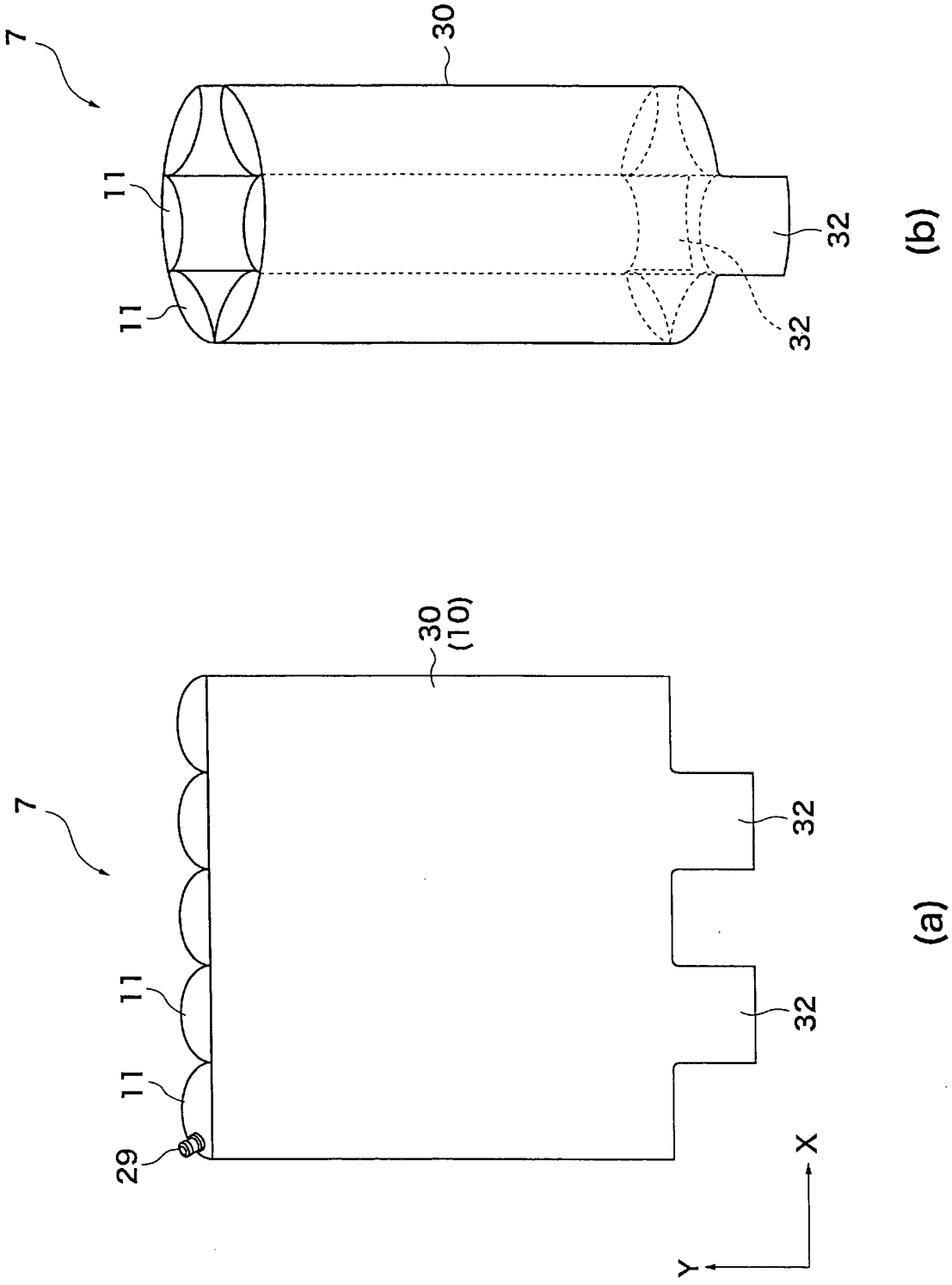


Fig. 8

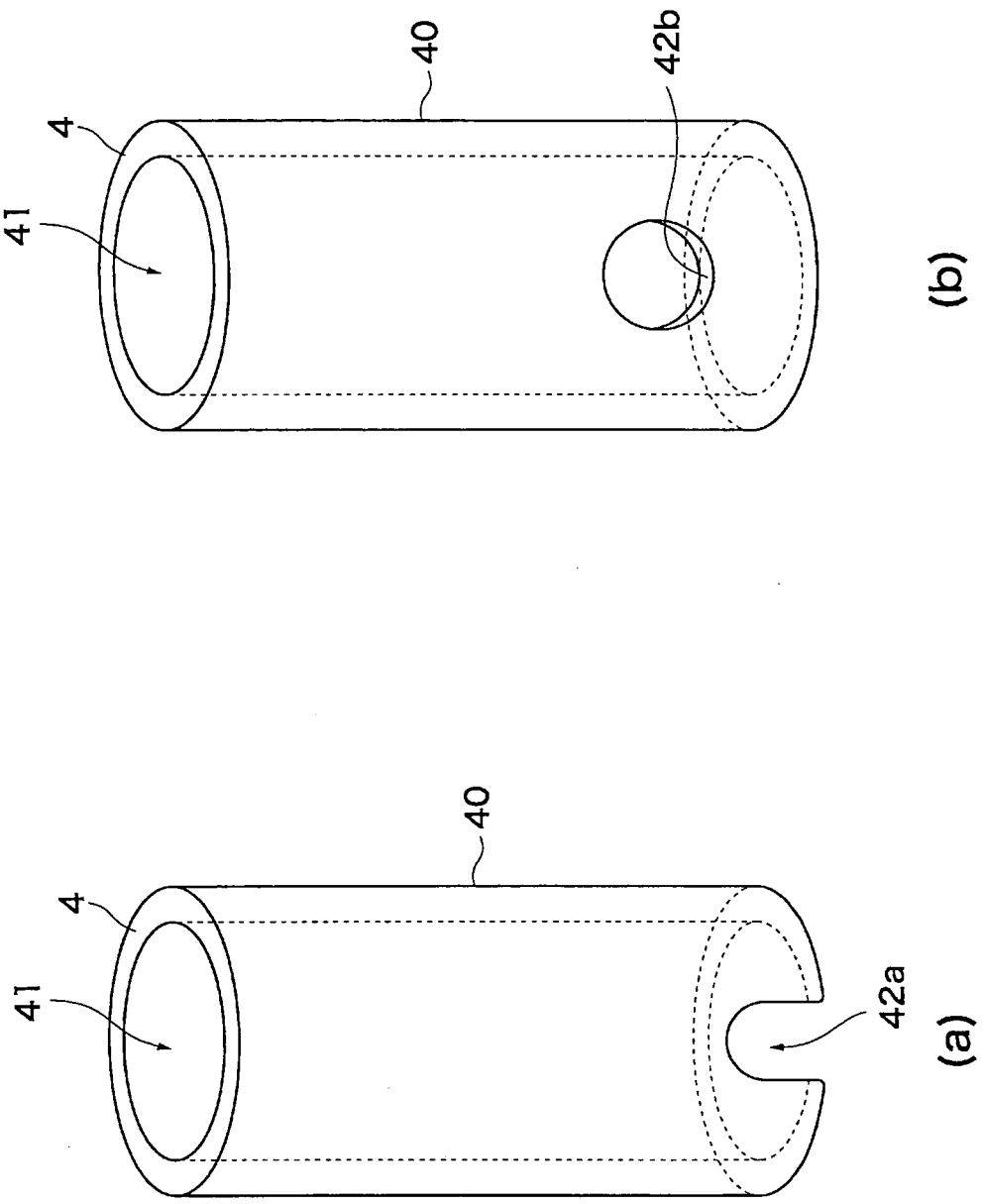
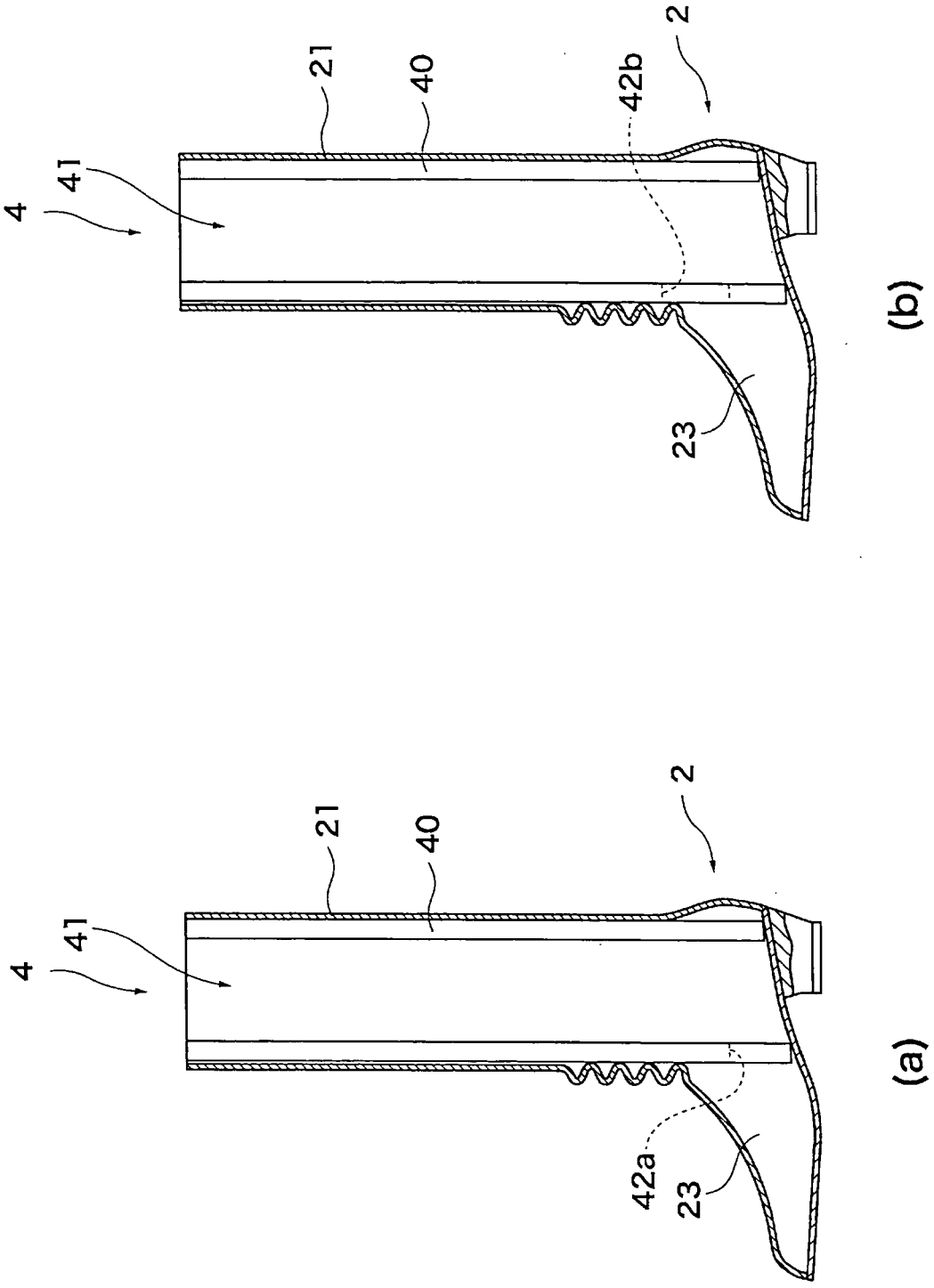


Fig. 9



INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2008/055533

A. CLASSIFICATION OF SUBJECT MATTER
A43D3/14(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A43D3/14, 3/04, A47G25/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Jitsuyo Shinan Koho 1922-1996 Jitsuyo Shinan Toroku Koho 1996-2008
Kokai Jitsuyo Shinan Koho 1971-2008 Toroku Jitsuyo Shinan Koho 1994-2008

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 54-171952 U (Yamada Kabushiki Kaisha), 05 December, 1979 (05.12.79), (Family: none)	1,2
A	JP 57-141505 U (Nippon Gomu Kabushiki Kaisha), 04 September, 1982 (04.09.82), (Family: none)	1,2
A	JP 55-32166 U (Toppu Sangyo Kabushiki Kaisha), 01 March, 1980 (01.03.80), (Family: none)	1,2
A	JP 58-70109 U (Toshihiko OKABE et al.), 12 May, 1983 (12.05.83), (Family: none)	1,2

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:
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"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
24 June, 2008 (24.06.08)	08 July, 2008 (08.07.08)
Name and mailing address of the ISA/ Japanese Patent Office Facsimile No.	Authorized officer Telephone No.

Form PCT/ISA/210 (second sheet) (April 2007)

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- JP 2005006915 A **[0006]**
- JP 2002223813 A **[0006]**