



US 20130008929A1

(19) **United States**

(12) **Patent Application Publication**
LIN

(10) **Pub. No.: US 2013/0008929 A1**

(43) **Pub. Date: Jan. 10, 2013**

(54) **AUXILIARY STRUCTURE FOR EASE OF
REMOVING COVERINGS**

(52) **U.S. Cl. 223/111**

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(21) Appl. No.: **13/177,548**

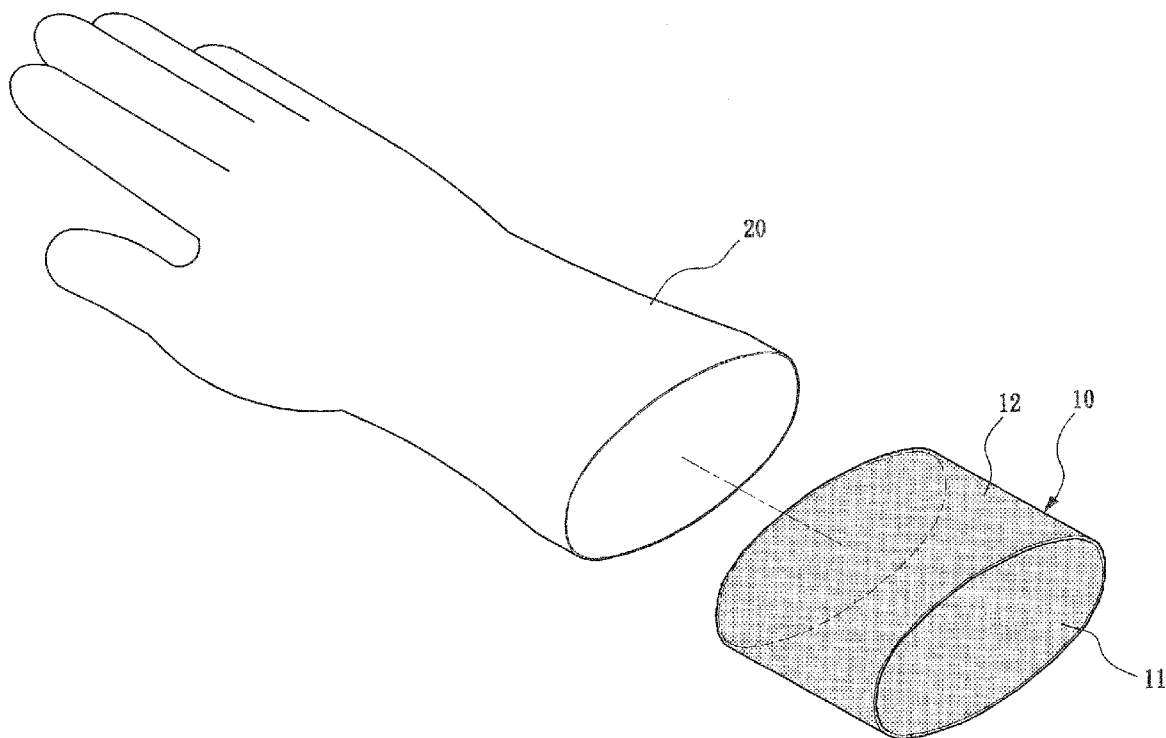
(22) Filed: **Jul. 6, 2011**

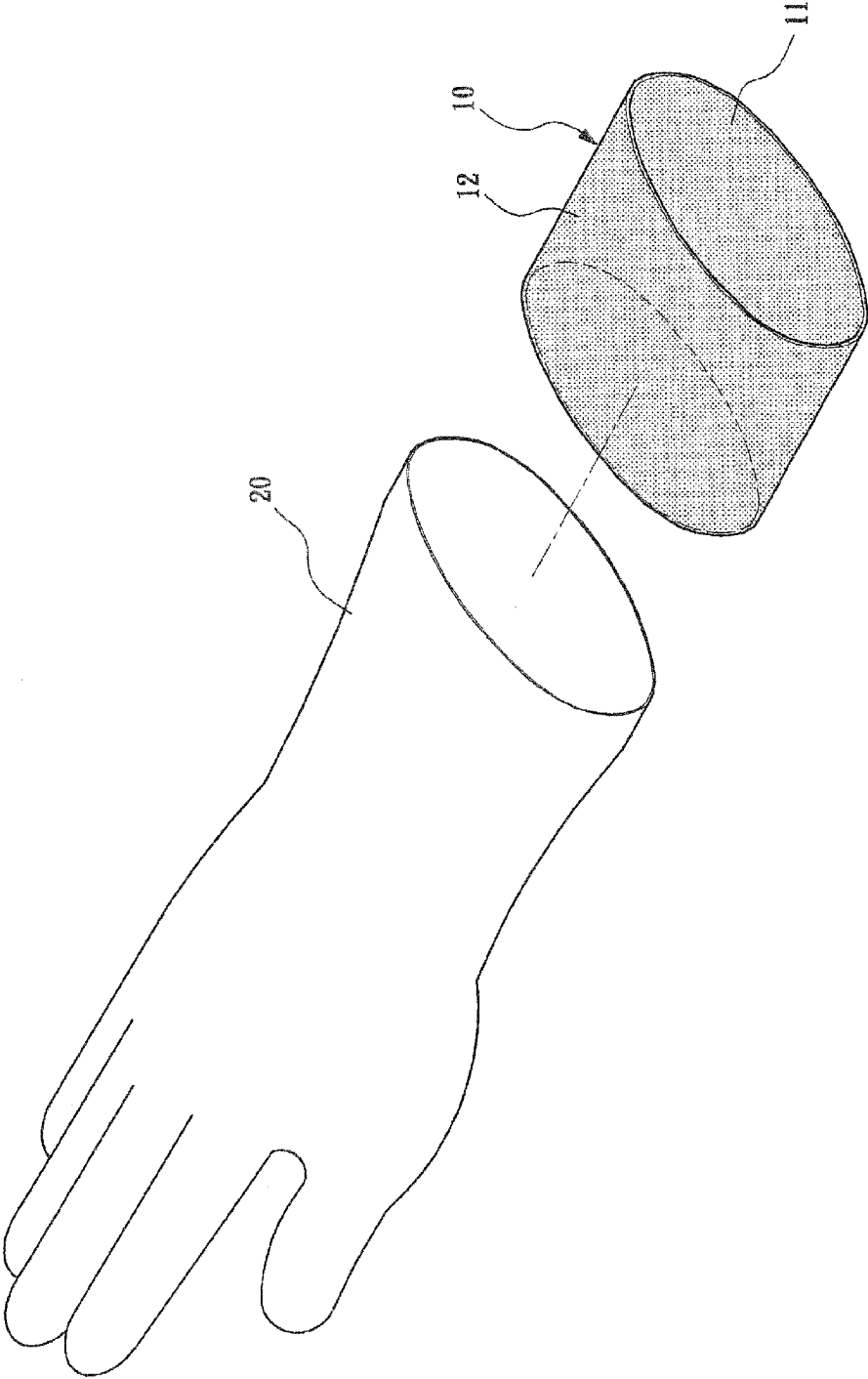
Publication Classification

(51) **Int. Cl.**
A47G 25/90 (2006.01)

(57) **ABSTRACT**

An auxiliary structure for ease of removing coverings is provided with a wearing portion that can be inserted with a body part of human (such as a hand), and an engaging portion that can be engaged with an inner surface of a covering (such as a glove); whereby, in operation, one portion of the covering will not contact with the body part of human, the covering can be easily removed from the body part of human by holding the covering and the auxiliary structure simultaneously and applying a removing force.





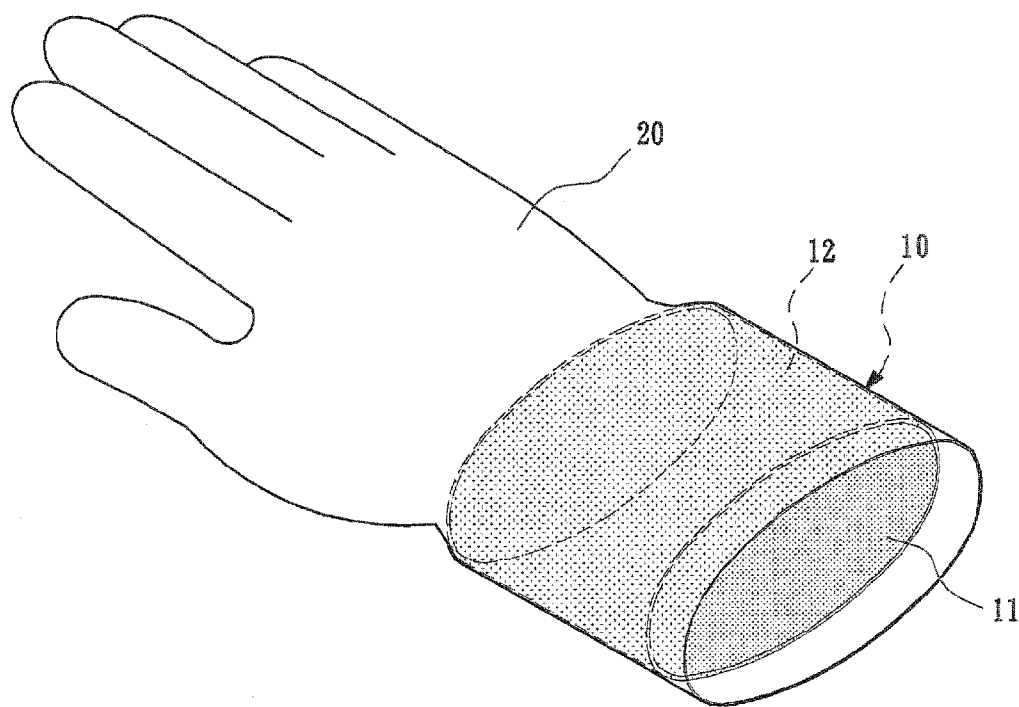
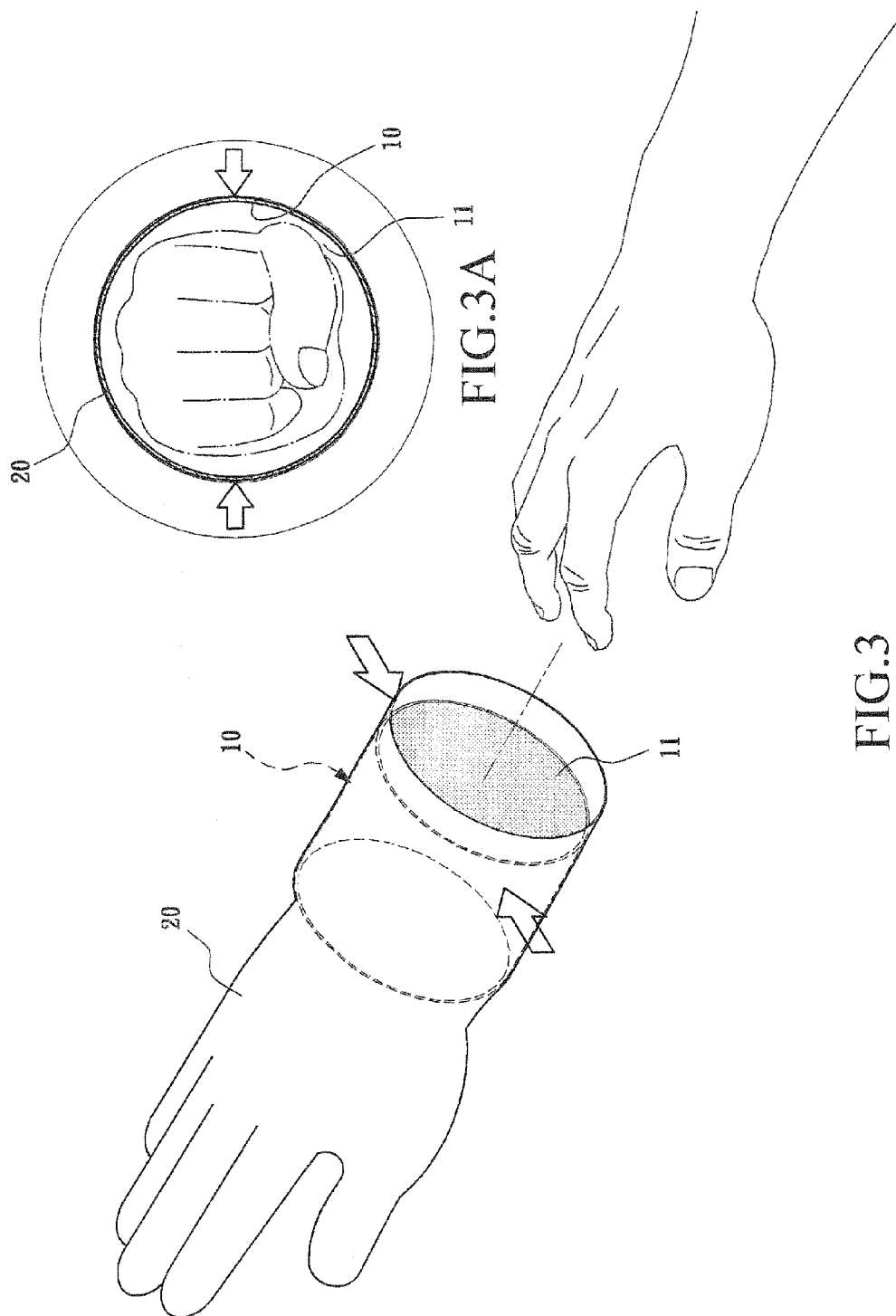


FIG.2



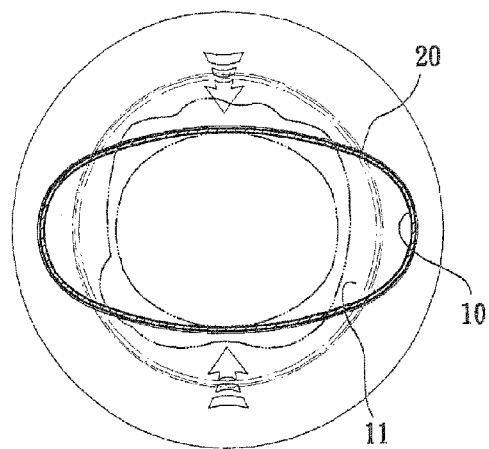


FIG. 4A

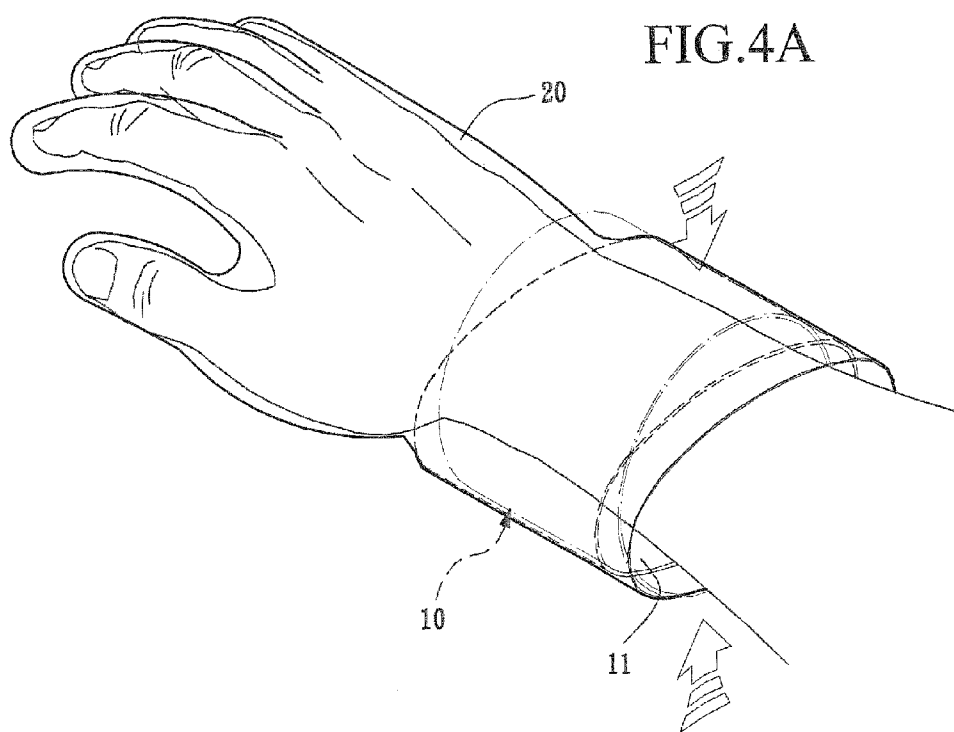


FIG. 4

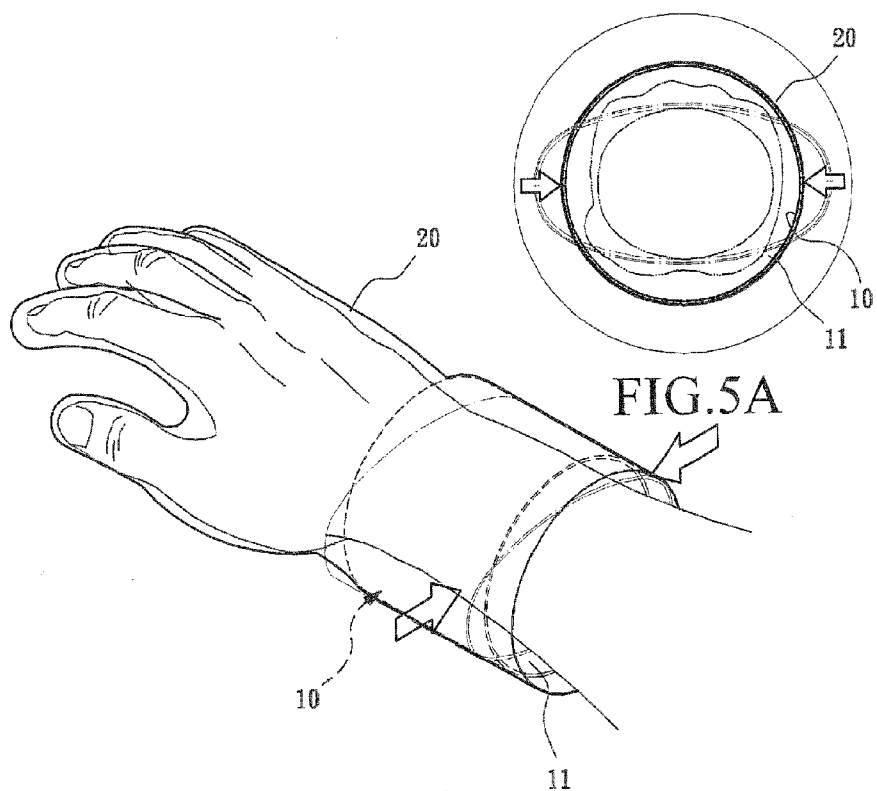


FIG. 5

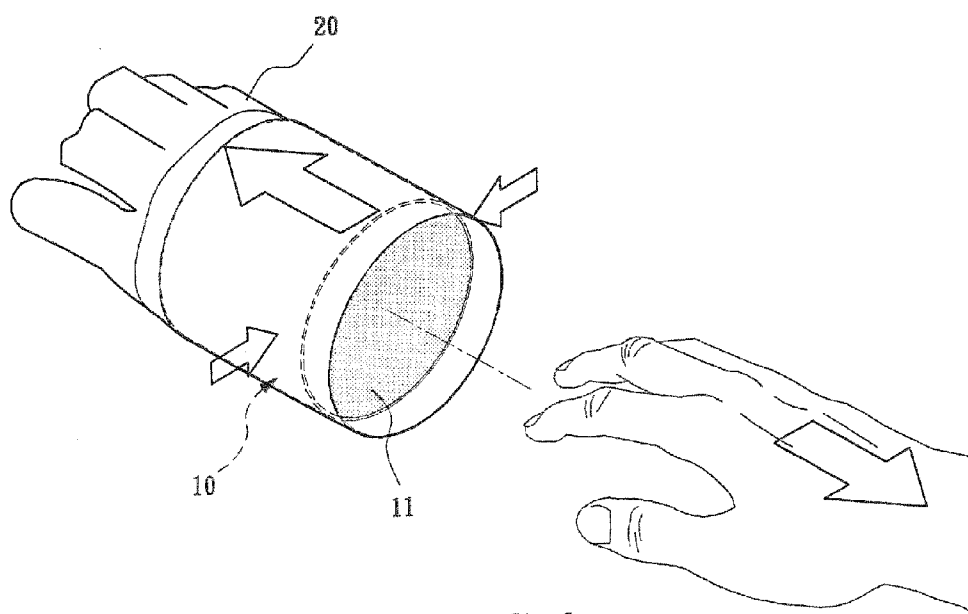


FIG. 6

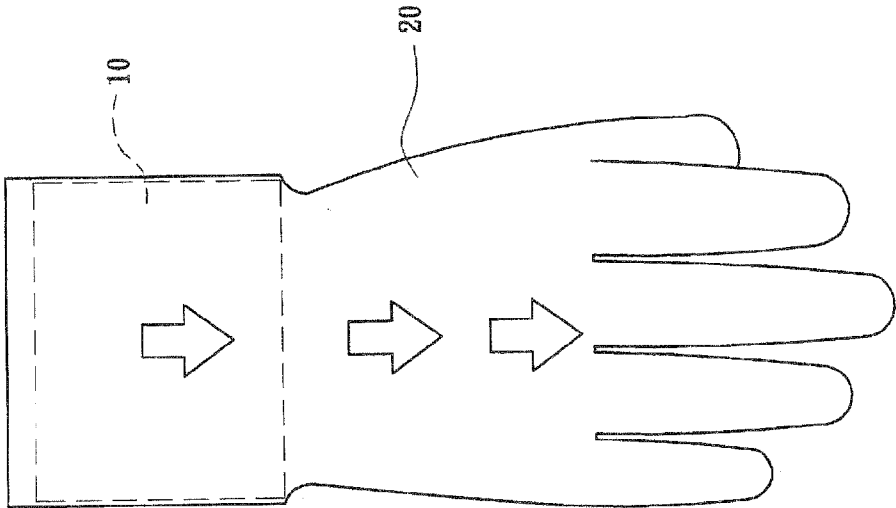


FIG. 8

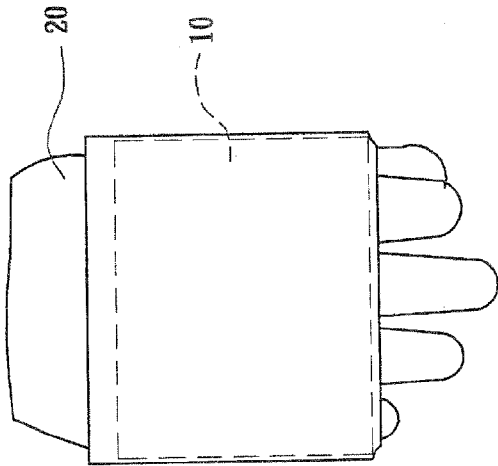


FIG. 7

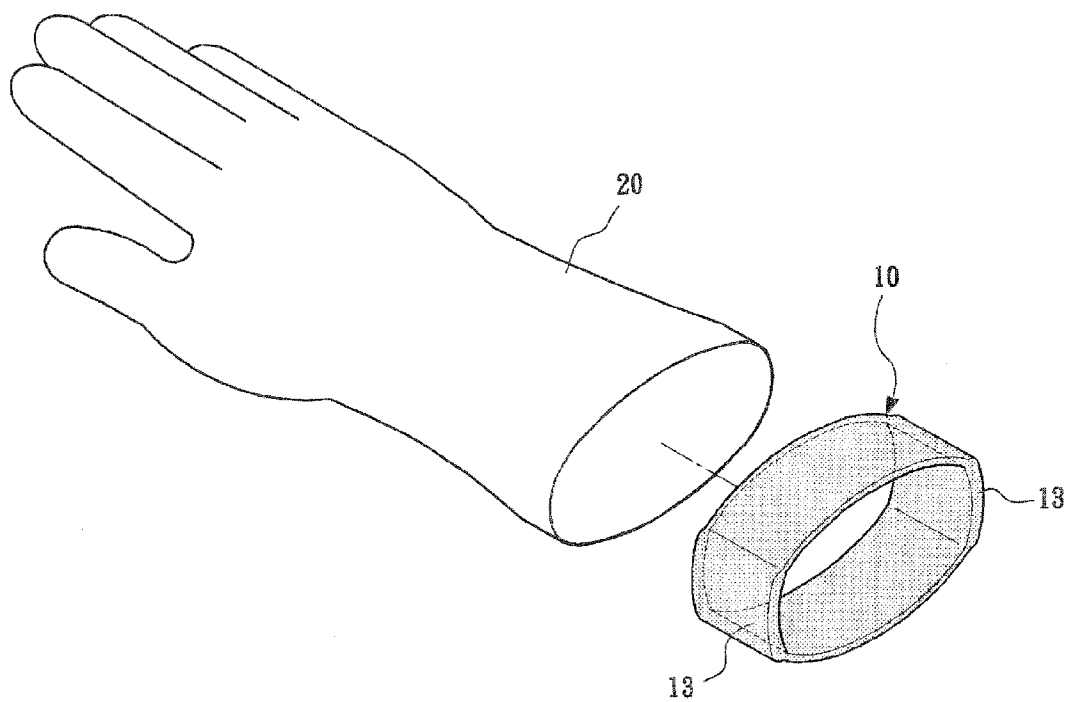


FIG. 9

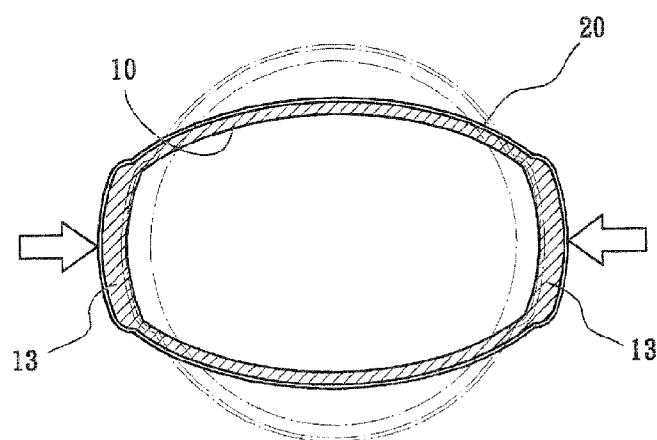


FIG. 10

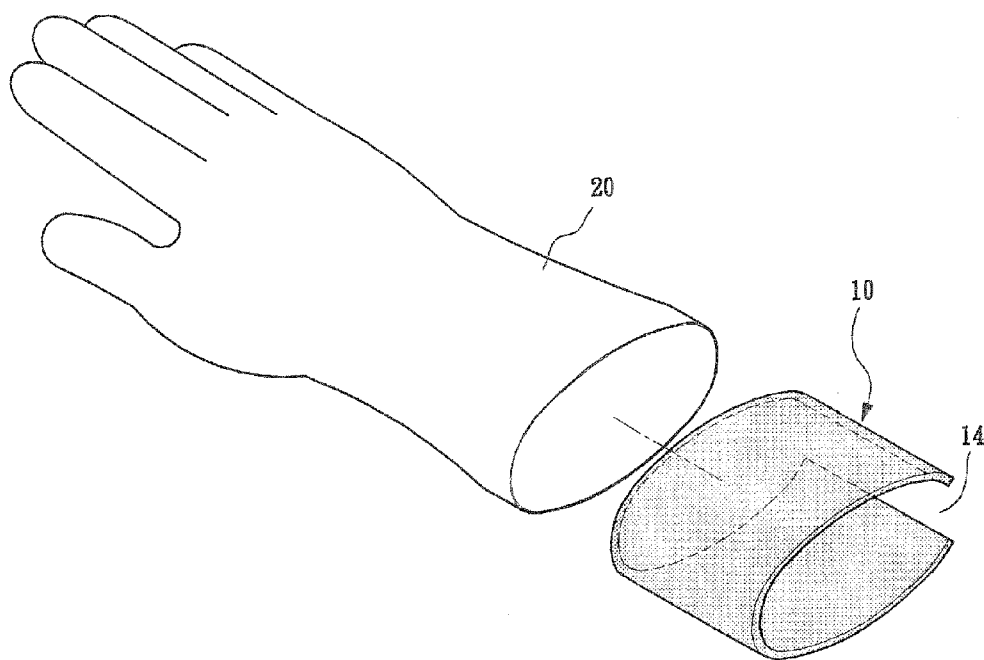


FIG. 11

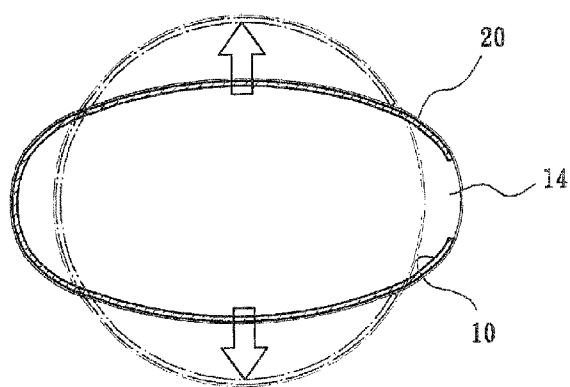


FIG. 12

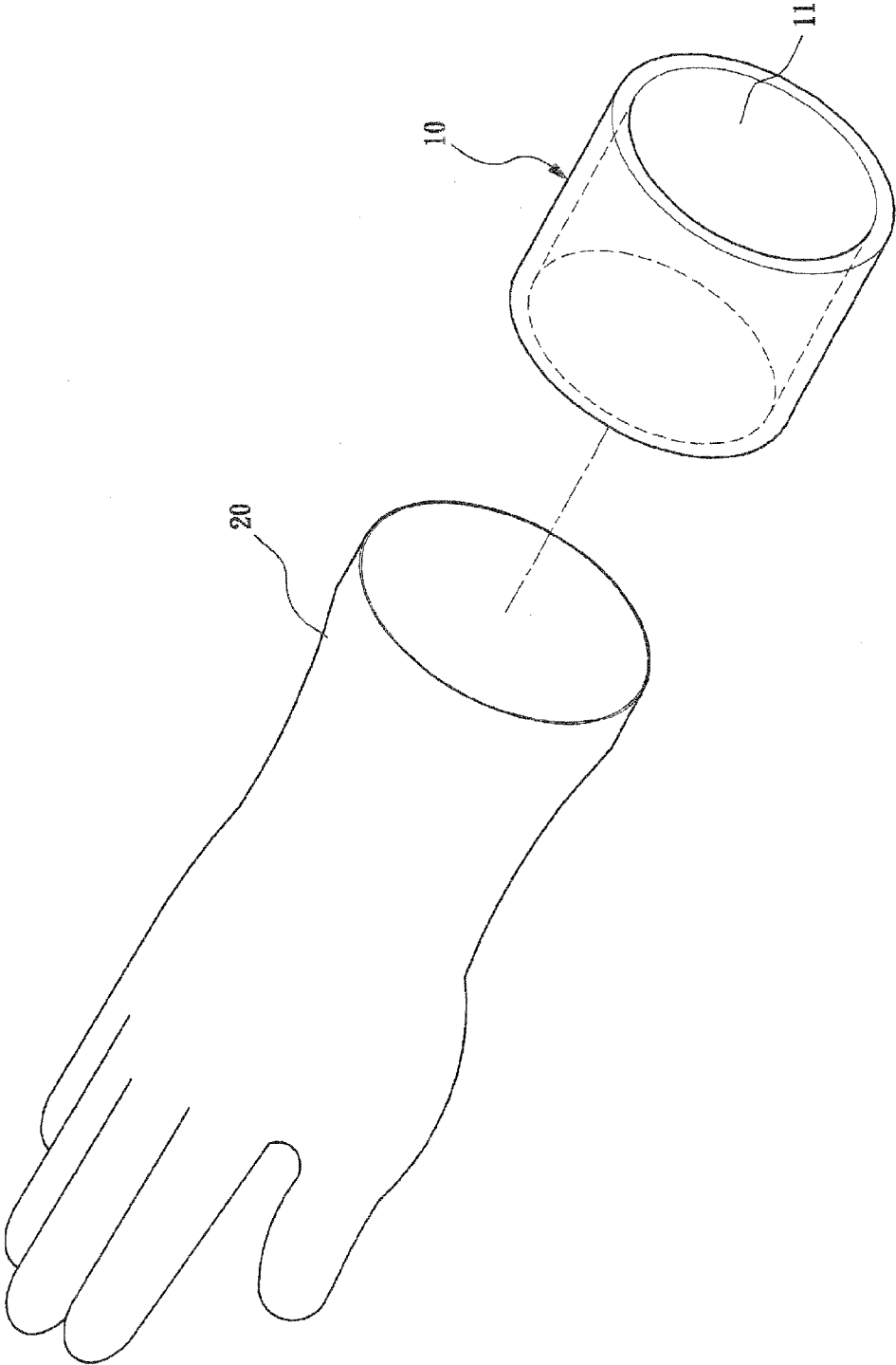


FIG.13

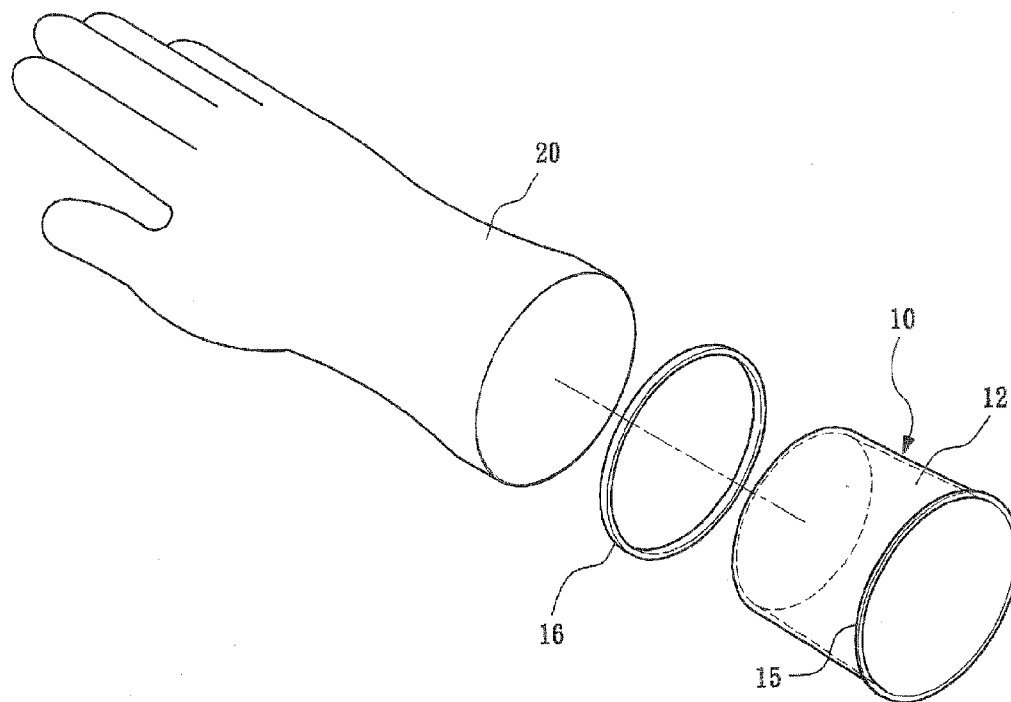


FIG.14

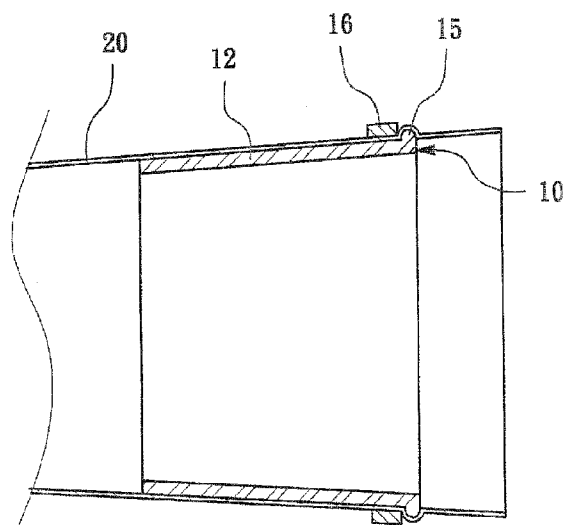


FIG.15

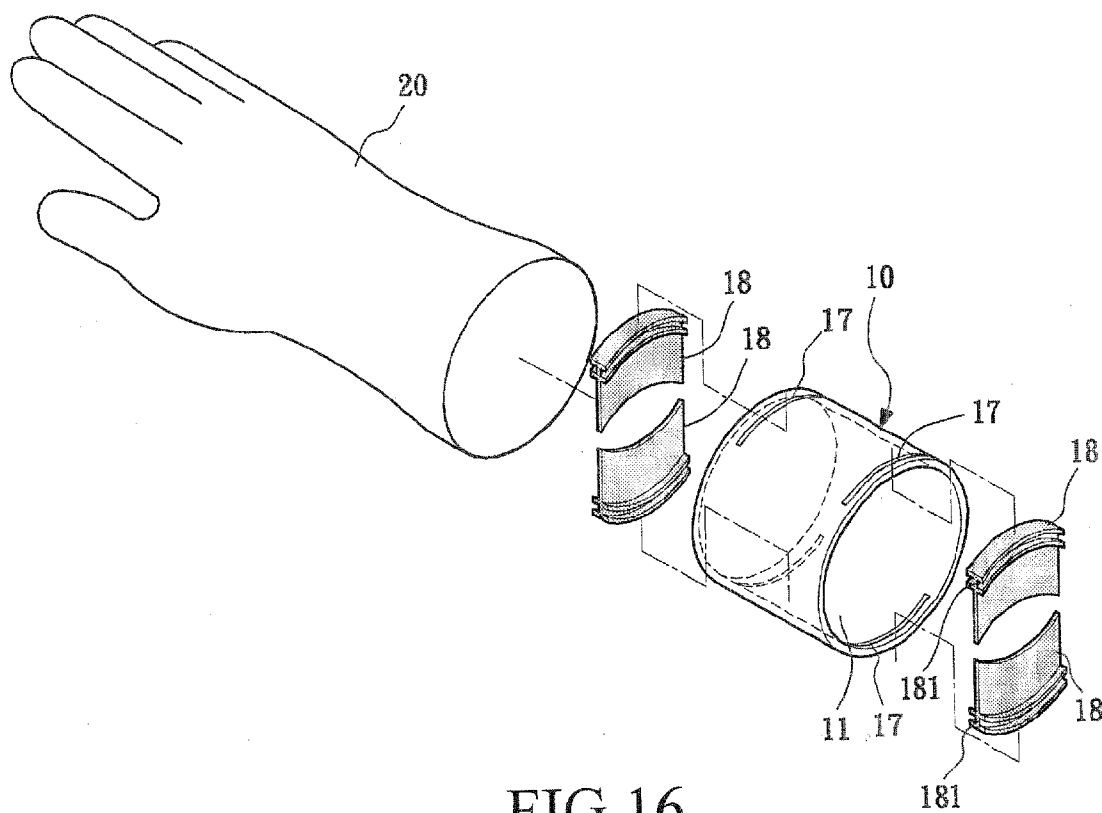


FIG. 16

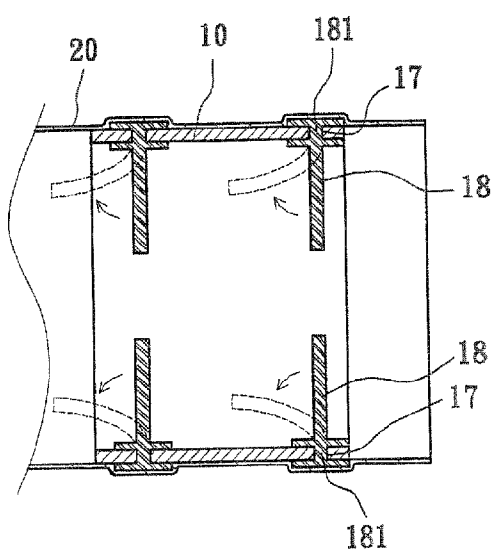


FIG. 17

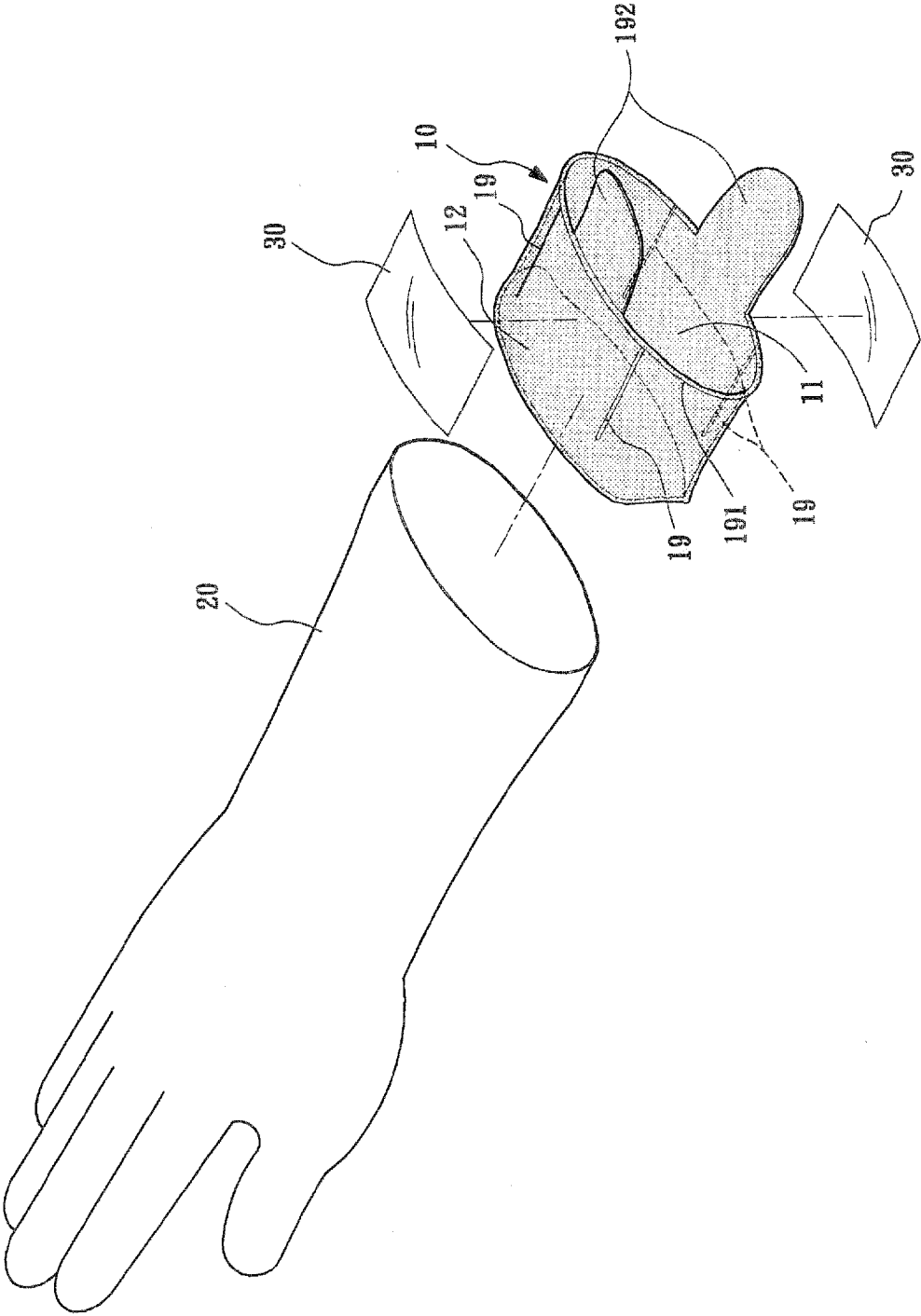


FIG.18

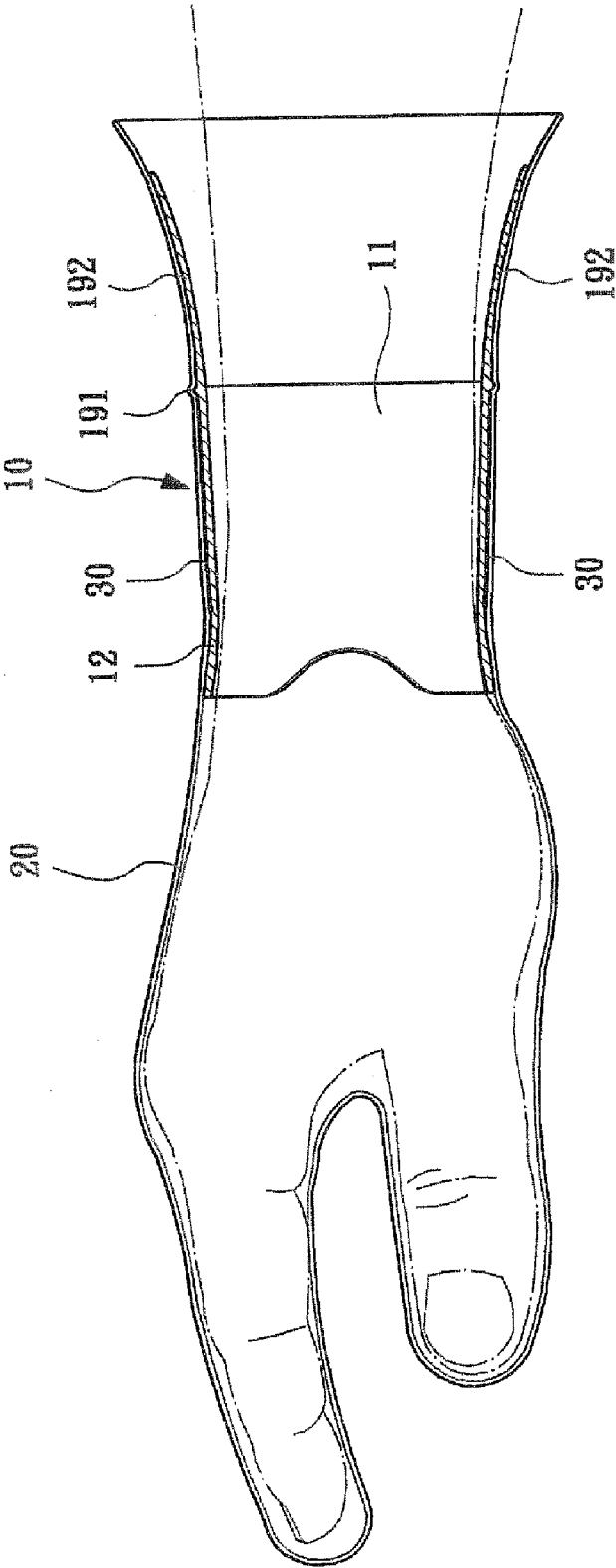


FIG.19

AUXILIARY STRUCTURE FOR EASE OF REMOVING COVERINGS

(a) TECHNICAL FIELD OF THE INVENTION

[0001] The present invention relates to an auxiliary structure for ease of removing coverings, and more particularly to an auxiliary structure that can be easily mounted in a covering that can be inserted with a body part of human, whereby the covering can be removed from the body part easily and rapidly.

(b) DESCRIPTION OF THE PRIOR ART

[0002] As commonly known, conventional latex gloves have the following drawbacks:

[0003] 1. Since the conventional gloves each has a smooth inner surface, they are easily sucked to a user's hand. This phenomenon may cause a difficulty in removing the conventional gloves. Also, a user wearing this type of glove is easy to sweat from the hand, and this further increases the difficulty of removing the conventional gloves.

[0004] 2. The conventional gloves are usually manufactured in one size. Thus, it is more difficult for a user having a large hand to remove the conventional gloves.

[0005] To facilitate removal of conventional gloves, based on the long-term experiences of developing the related products and after constant efforts on the innovations for gloves, the applicant has contrived an auxiliary structure that can cooperate with conventional gloves so that the gloves can be removed easily and rapidly.

SUMMARY OF THE INVENTION

[0006] The primary object of the present invention is to provide an auxiliary structure for a covering that can be inserted with a body part of human, whereby the covering can be removed from the body part easily and rapidly.

[0007] To achieve the object of the present invention, the auxiliary structure is provided with a wearing portion that can be inserted with a body part of human, and an engaging portion that can be engaged with an inner surface of a covering; whereby, in operation, one portion of the covering will not contact with the body part of human, the covering can be easily removed from the body part of human by holding the covering and the auxiliary structure simultaneously and applying a removing force.

[0008] Other objects, advantages, and novel features of the present invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] FIG. 1 is a 3-dimensional view of the present invention.

[0010] FIG. 2 shows a 3-dimensional view of the present invention, which combines with a glove.

[0011] FIGS. 3 and 3A show a state of the present invention, in which the user's hand is prepared to insert into the glove.

[0012] FIGS. 4 and 4A show a state of the present invention, in which the user's hand has been inserted into the glove.

[0013] FIGS. 5 and 5A show a state of the present invention, in which the user's hand is prepared to pull out of the glove.

[0014] FIG. 6 shows a state of the present invention, in which the user's hand has been pulled out of the glove.

[0015] FIG. 7 shows a state of the present invention, in which some portion of the glove is entangled in the present invention.

[0016] FIG. 8 shows a state of the present invention, in which the glove is pulled out of the user's hand.

[0017] FIG. 9 is a 3-dimensional view of a second embodiment of the present invention.

[0018] FIG. 10 shows a cross sectional view of the second embodiment of the present invention.

[0019] FIG. 11 is a 3-dimensional view of a third embodiment of the present invention.

[0020] FIG. 12 shows a cross sectional view of the third embodiment of the present invention.

[0021] FIG. 13 is a 3-dimensional view of a fourth embodiment of the present invention.

[0022] FIG. 14 is a 3-dimensional view of a fifth embodiment of the present invention.

[0023] FIG. 15 shows a cross sectional view of the fifth embodiment of the present invention, which combines with a glove.

[0024] FIG. 16 is a 3-dimensional view of a sixth embodiment of the present invention.

[0025] FIG. 17 shows a cross sectional view of the sixth embodiment of the present invention, which contains flexible members and combines with a glove.

[0026] FIG. 18 is a 3-dimensional view of a seventh embodiment of the present invention.

[0027] FIG. 19 shows a cross sectional view of the seventh embodiment of the present invention, which combines with a glove.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0028] FIG. 1 shows an embodiment of an auxiliary structure for ease of removing coverings, being indicated at reference numeral 10, in which a conventional glove 20 is employed as a covering for illustration. However, the present invention is not only limited to be applied for gloves. The present invention can also be applied for socks, a condoms, or the like, which may be within the scope of the present invention.

[0029] As shown, the auxiliary structure 10 of the present invention can be inserted into the glove 20 so that it can assist a user to remove the glove 10 out of the user's hand. In this embodiment, the auxiliary structure 10 is constructed of elastic material, so that it has a predetermined capability of elastic deformation. In this embodiment, the auxiliary structure 10 is formed into a hollow elliptic cylinder, which has an approximately oval cross section. The auxiliary structure 10 is provided with a wearing portion 11, which is a passage defined by an enclosed wall, and an engaging portion 12, which is an outer surface of the enclosed wall. As can be seen in FIG. 4, a user's hand can insert through the wearing portion 11 to wear the glove 20, and the engaging portion 12 can be engaged with an inner surface of the glove 20.

[0030] As shown in FIG. 2, the auxiliary structure 10 is inserted into the glove 20 for a use. In this embodiment, the glove 20 is a latex glove, which has elasticity to allow an opening thereof to be contracted. The auxiliary structure 10 has a dimension slightly greater than that of the opening of the glove 20. Since the elastic interaction between the auxiliary structure 10 and the glove 20, the auxiliary structure 10 can be

inserted into the glove 20 via the opening of the glove 20, to allow the engaging portion 12 to be snugly engaged with an inner surface of the glove 20. Alternatively, the engaging portion 12 can be securely attached to the glove 20 by spreading glue therebetween or by heat press or by the other bonding techniques

[0031] Referring to FIGS. 3 and 3A, the user can hold and press two opposing sides of the portion that joins the glove 20 with the auxiliary structure 10 to enable the wearing portion 11 to elastically deform into a hollow cylinder, which has a dimension greater than a human's fist, so that the user can clench his or her fist so as to pass through the wearing portion 11 and then into the glove 20, so that the glove 20 can be easily worn on the hand of the user.

[0032] As shown in FIGS. 4 and 4A, when the user stops pressing the portion that joins the glove 20 with the auxiliary structure 10, the auxiliary structure 10 can restore to its original hollow elliptic cylinder due to the elasticity thereof, so that the auxiliary structure 10 can clamp the wrist of the user so as to fix the auxiliary structure 10 to the wrist of the user so that the auxiliary structure 10 will not slip onto the palm of the user's hand, so that the glove 20 will not interfere with an operation.

[0033] As shown in FIGS. 5, 5A, and 6, when the glove 20 is not needed, the user can press two opposing sides of the portion that joins the glove 20 with the auxiliary structure 10 again to allow the wearing portion 11 to elastically deform to a cylindrical hole, so that one portion of the glove 20 will space from the user's hand. Thereafter, the user can hold the glove 20 and the auxiliary structure 10 and apply a removing force on them so that the glove can be easily and rapidly removed from the user's hand.

[0034] FIG. 5A show a clenched fist of the user when the hand passed through the wearing portion 11 of the auxiliary structure 10.

[0035] Referring to FIGS. 7 and 8, in the process of removing the glove 20, although some portion of the glove 20 may be entangled in the auxiliary structure 10, the user can directly pull the glove 20 out of the hand that is in the glove 20, or the user can hold the portion that joins the glove 20 with the auxiliary structure 10 and then rapidly throw the hand, which is in the glove 20, out of the glove 20.

[0036] Referring to FIGS. 9 and 10, a second embodiment of the auxiliary structure 10 is shown, which is reinforced at two opposing sides thereof, indicated at reference numeral 13, so that they each have a thickness greater than other sides of the structure, so as to increase the restoring capability of the structure, whereby the auxiliary structure 10 can rapidly restore to its original shape after a pressing force is released.

[0037] Referring to FIGS. 11 and 12, a third embodiment of the auxiliary structure 10 is shown, which defines an opening 14 at one side thereof, so that when pressing two opposing sides of the structure, the auxiliary structure 10 can be deformed; when stops pressing the two sides, the auxiliary structure 10 can restore to its original shape by its elasticity.

[0038] Referring to FIG. 13, a fourth embodiment of the auxiliary structure 10 is shown, which can be made of non-elastic material and can be formed into a hollow cylinder, the wearing portion 11 of which has a dimension to allow a clenched fist of a user to pass through, so that the user need not to press the auxiliary structure 10 to have it deformed.

[0039] Referring to FIGS. 14 and 15, a fifth embodiment of the auxiliary structure 10 is shown, which can be made of non-elastic material. This embodiment is provided with an

annular rib 15 along a circumferential edge at one end thereof. The engaging portion 12 has a predetermined taper so that the auxiliary structure 10 can be inserted into the glove 20 more easily and can be snugly fitted at a predetermined tightness. A ring 16 can be tightly fitted around an outer surface of the glove 20 and engaged with the annular rib 15 so as to grasp one portion of the glove 20, so that the auxiliary structure 10 can be securely attached to the glove 20.

[0040] Referring to FIGS. 16 and 17, a sixth embodiment of the auxiliary structure 10 is shown, which is modified from the fourth embodiment as shown in FIG. 13. This embodiment defines a plurality of slots 17 along two circumferential edges respectively at two opposing ends thereof. The flexible members 18, each being provided with an H-shaped fitting portion 181 at one side thereof, by which the flexible member 18 can be fastened to one of the slots 17 and thus mounted in the wearing portion 11. Thus, due to the deformation capability of the flexible members 18, the hand of the user can freely access through the wearing portion 11. Furthermore, the gap between the wearing portion 11 and the user's hand can be eliminated with the flexible members 18.

[0041] Referring to FIGS. 18 and 19, a seventh embodiment of the auxiliary structure 10 is shown, the engaging portion 12 of which is provided with two ribs 19 respectively at two opposing sides thereof and two sticking members 30, such as double sticky tapes, respectively at two sides thereof. Each sticking member 30, being located between two ribs 19, has one surface being adhered to the engaging portion 12 and the other surface being adhered to an inner surface of the glove 20, so that the engaging portion 12 will have additional glue attachment with the inner surface of the glove 20 in addition to the original fit engagement so that the auxiliary structure 10 can be attached to the glove 20 more firmly. Furthermore, the auxiliary structure 10 is provided with an annular rib 191 along a circumferential edge at one end thereof to increase friction force between the auxiliary structure 10 and the glove 20 so as to enhance the combination of the auxiliary structure 10 and the glove 20. Furthermore, the auxiliary structure 10 is provided with two opposing flaps 192 at the circumferential edge, which extends outward and away from each other to look like a funnel, so that the hand of the user can pass through the wearing portion 11 more easily to insert into the glove 20. Also, the funnel-shaped flaps 192 can prevent the edge defining the opening of the glove 20 from being entangled in the wearing portion 11 of the auxiliary structure 10.

[0042] Although the present invention has been described with a certain degree of particularity, it is understood that the present disclosure is made by way of example only and the combination and arrangement of parts may be resorted to without departing from the spirit and scope of the invention hereinafter claimed.

I claim:

1. An auxiliary structure for ease of removing coverings, being provided with a wearing portion that can be inserted with a body part of human, and an engaging portion that can be engaged with an inner surface of a covering; whereby, in operation, one portion of said covering will not contact with said body part of human, said covering can be easily removed from said body part of human by holding said covering and the auxiliary structure simultaneously and applying a removing force.

2. The auxiliary structure of claim 1, which is made of elastic material.

3. The auxiliary structure of claim 1, which is formed into a hollow elliptic cylinder.

4. The auxiliary structure of claim 1, wherein said engaging portion is bounded to an inner surface of said covering by glue or heat press.

5. The auxiliary structure of claim 1, one side of which is reinforced to have a thickness greater than other sides thereof.

6. The auxiliary structure of claim 1, one side of which defines an opening.

7. The auxiliary structure of claim 1, which is formed into a hollow cylinder.

8. The auxiliary structure of claim 1, which is provided with an annular rib along a circumferential edge at one end thereof, said engaging portion being formed with a predetermined taper, a ring is fitted around an outer surface of said covering so as to fasten to the outer surface of said covering by the predetermined taper, said ring being engaged with said annular rib to grasp one portion of said covering.

9. The auxiliary structure of claim 1, wherein said wearing portion is provided with at least one flexible member.

10. The auxiliary structure of claim 9, which defines at least one slot, said flexible member being provided with a fitting portion at one side thereof, said flexible body being mounted in said wearing portion by fastening said fitting portion to said slot.

11. The auxiliary structure of claim 1, wherein said engaging portion is provided with a plurality of ribs.

12. The auxiliary structure of claim 1, wherein said engaging portion is bonded to an inner surface of said covering by a sticking member.

13. The auxiliary structure of claim 1, which is provided with an annular rib along a circumferential edge at one end thereof.

14. The auxiliary structure of claim 1, which is provided with flaps at one edge thereof, said flaps extending outward and away from each other to look like a funnel.

* * * * *