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(72) Inventor: **MURAMOTO, Shuhei**  
**Sakai-shi**  
**Osaka 590-8577 (JP)**

(71) Applicant: **SHIMANO INC.**  
**Sakai-shi, Osaka 589-8577 (JP)**

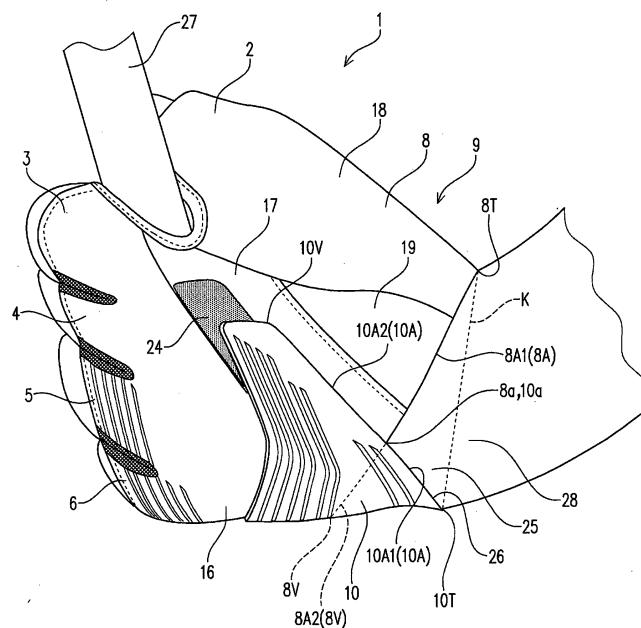
(74) Representative: **Grosse, Felix Christopher**  
**Grosse - Schumacher - Knauer - von**  
**Hirschhausen**  
**Patent- und Rechtsanwälte**  
**Nymphenburger Straße 14**  
**80335 München (DE)**

(54) **GLOVE**

(57) Provided is a glove that does not hinder the motion of the wrist. The glove includes: a glove body 9 having five finger parts 2, 3, 4, 5, and 6, a palm part 7, and a back part 8; a band 10 configured to be wound in the width direction of a hand and placed on the back part 8 to be fixed. In the state where the hand is inserted into the glove body 9 and the band is fixed, the center portion

8a of the end edge 8A of the back part 8 on the wrist side is located more on the finger side than a boundary K between the wrist and the back of the hand, and the center portion 10a of the end edge 10A of the band 10 on the wrist side is located more on the finger side than the boundary K between the wrist and the back of the hand.

Fig. 4



## Description

### FIELD

**[0001]** The present invention relates to a glove that is useful particularly in cycling, motorboating, motorcycling, fishing, or the like.

### BACKGROUND

**[0002]** The above-described glove includes a glove body into which a hand can be inserted from the fingertips to the wrist, and a wristband configured to tighten the wrist portion of the glove body so that the glove body does not easily come off the hand (for example, see Patent Literature 1).

### CITATION LIST

#### Patent Literature

**[0003]** Patent Literature 1: Japanese Utility Model Registration No. 3086188

### SUMMARY

#### Technical Problem

**[0004]** According to the configuration of Patent Literature 1 described above, the motion of the wrist is hindered in the state where the wrist is tightened by the wristband, particularly, when the wrist is bent toward the palm side or toward the back side of the hand. Therefore, it has been difficult, for example, to take an optimal position by bending the wrist according to the shape of a handlebar of a bicycle, or to wind up a reel in fishing by rotating a handle while twisting the wrist. Thus, there has been room for improvement.

**[0005]** As a solution in view of the above-described situation, it is an object of the present invention to provide a glove that does not hinder the motion of the wrist.

#### Solution to Problem

**[0006]** In order to solve the above-described problem, a glove of the present invention that is configured to be worn on a hand includes: a glove body having five finger parts, a palm part, and a back part; and a band configured to be wound in the width direction of the hand and placed on the back part to be fixed thereto, wherein in the state where the hand is inserted into the glove body and the band is fixed, a center portion of an end edge of the back part on a wrist side is located more on the finger side than a boundary between the wrist and the back of the hand, and a center portion of an end edge of the band on the wrist side is located more on the finger side than the boundary between the wrist and the back of the hand.

**[0007]** According to the configuration of the present

invention, the hand is inserted into the glove body, the band is wound in the width direction of the hand and is stacked on the back part to be fixed, thereby making the glove less likely to come off the hand. In the state where the glove is worn, the center portion of the end edge of the back part on the wrist side is located more on the finger side than the boundary between the wrist and the back of the hand, and the center portion of the end edge of the band in the wrist side is located more on the finger side than the boundary between the wrist and the back of the hand. Therefore, the end edge of the back part on the wrist side and the end edge of the band on the wrist side form an opening that is open in a portion of the back of the hand of the glove on the wrist side. This opening allows the end of the back of the hand on the wrist side to be exposed, and the motion of the wrist is not hindered. Accordingly, it is possible, for example, to take an optimal position by bending the wrist according to the shape of a handlebar of a bicycle, or to wind up a reel in fishing by rotating a handle while twisting the wrist, favorably.

**[0008]** Further, in the glove of the present invention, the band may extend from an end of the palm part in the width direction on a little finger side or thumb side.

**[0009]** Further, the glove of the present invention may be configured so that an end edge of the back part extending from one end in the width direction of the hand to the center portion of the back part is inclined to be located more on the finger side toward the center portion, an end edge of the band extending from the other end in the width direction of the hand to the center portion of the band is inclined to be located more on the finger side toward the center portion, and in the state where the hand is inserted into the glove body and the band is fixed, the end edge of the back part and the end edge of the band form an opening tapered toward the center portion.

**[0010]** By forming such an opening tapered from both ends in the width direction of the hand toward the finger part side, as described above, the wearing comfort of the hand can be sufficiently exerted by covering the hand, as much as possible, the opening that is open more widely toward the center portion can reliably prevent the hindrance of the motion of the wrist.

#### Advantageous Effects of Invention

**[0011]** As described above, the present invention allows the end of the back of the hand on the wrist side to be exposed, and thus can provide a glove that does not hinder the motion of the wrist.

### BRIEF DESCRIPTION OF DRAWINGS

#### [0012]

Fig. 1 is a front view of a glove of the present invention as seen from the back side of a hand in a state where a band is not fixed to the back of the hand.

Fig. 2 is a front view of the glove of the present in-

vention as seen from the back side of the hand.

Fig. 3 is a rear view of the glove of the present invention as seen from the palm side.

Fig. 4 is a perspective view showing a state of the hand wearing the glove of the present invention and holding a handlebar of a bicycle.

Fig. 5 is a front view of a glove according to another embodiment as seen from the back side of the hand.

Fig. 6 is a front view of a glove according to another embodiment as seen from the back side of the hand.

Fig. 7 is a front view of a glove according to another embodiment as seen from the back side of the hand.

## DESCRIPTION OF EMBODIMENTS

**[0013]** Fig. 1 to Fig. 3 show a glove 1 of the present invention. The glove 1 is a glove intended for the left hand (for the left-handed), while a glove for the right hand (for the right-handed) is the same, and drawings and description thereof are omitted. Specifically, the glove 1 shown in the figures includes a glove body 9 having five finger parts 2, 3, 4, 5, and 6, a palm part 7, and a back part 8, and a band 10 provided in the palm part 7. The glove 1 is used, particularly, for cycling, motorboating, motorcycling, fishing, or the like.

**[0014]** The five finger parts 2, 3, 4, 5, and 6 are composed of a thumb part 2, an index finger part 3, a middle finger part 4, a ring finger part 5, and a little finger part 6, and are constituted by a first sheet 11 constituting the palm part 7 and a fourth sheet 16 constituting the back part 8, which will be described below. Each finger part 2, 3, 4, 5, or 6 is configured to have a length to cover the finger from the root to the second joint. Further, two side parts of the index finger part 3 and the middle finger part 4 opposed to each other are connected at the roots of the fingers and are constituted by one piece of mesh knit M1. Further, two side parts of the middle finger part 4 and the ring finger part 5 opposed to each other are connected at the roots of the fingers and are constituted by one piece of mesh knit M2. Further, two side parts of the ring finger part 5 and the little finger part 6 opposed to each other are connected at the roots of the fingers and are constituted by one piece of mesh knit M3.

**[0015]** The palm part 7 includes the first sheet 11 in which palm portions of the four finger parts 3, 4, 5, and 6 are integrated, a second sheet 12 that covers the most part of the palm, and a third sheet 13 that covers the palm portion of the lower part of the thumb. The sheets 11, 12, and 13 are made of artificial leather. Further, the first sheet 11 and the second sheet 12, and the second sheet 12 and the third sheet 13, which are adjacent to each other, are sewn together at their adjacent ends. The second sheet 12 includes a cushion member 14 projecting from the surface of the second sheet 12. Further, the third sheet 13 also includes a cushion member 15 projecting from the surface of the third sheet 13. Each cushion member 14 or 15 is constituted by covering the front and back sides of the cushion member, which are not

shown, with artificial leather. The surface of the artificial leather on the front side is subjected to non-slip treatment.

**[0016]** The back part 8 includes the fourth sheet 16 in which the back side portions of the hand of the four finger parts 3, 4, 5, and 6 are integrated, an auxiliary sheet H covering a webbed portion (referred to also as hegu) between the thumb and the index finger, a fifth sheet 17 obliquely extending from the index finger portion of the auxiliary sheet H to the wrist side while covering the back portion of the hand, a sixth sheet 18 obliquely extending from the thumb portion of the auxiliary sheet H to the wrist side while covering the back portion of the hand, and a seventh sheet 19 coupling the fifth sheet 17 and the sixth sheet 18 together. When the glove 1 is worn on the hand, the fourth sheet 16 and the seventh sheet 19 stretch because the fourth sheet 16 and the seventh sheet 19 are made of stretch knit that is a stretching material, so that the glove 1 can be fitted to the hand, favorably. The auxiliary sheet H and the fifth sheet 17 are made of artificial leather. The sixth sheet 18 is made of towel cloth.

**[0017]** The band 10 is constituted by one piece of eighth sheet 20 made of artificial leather, and a hook-and-loop fastener 23 provided on the inner surface of the eighth sheet 20, which will be described below. The eighth sheet 20 includes a proximal end 21 sewn on an end of the palm part 7 on the little finger side, and a distal end 22 extending from the proximal end 21. The proximal end 21 is configured to be tapered toward the distal end side, and the distal end 22 is configured to have a smaller width than the proximal end 21 and to be tapered toward the distal end side. Further, the distal end 22 extends obliquely upward (inclined direction) toward the outside of the palm part 7 in the width direction so that the distal end side is located more in the finger parts (upward in the figures). Further, the hook-and-loop fastener 23 of male type is sewn on the inner surface of the distal end 22, and a hook-and-loop fastener 24 of female type that is disengageable with the hook-and-loop fastener 23 of male type is sewn on the outer surface (surface) of the fifth sheet 17 of the back part 8.

**[0018]** The hook-and-loop fastener 24 of female type is configured to have a dimension longer than the hook-and-loop fastener 23 of male type, which is about twice the length of the hook-and-loop fastener 23 of male type in the figures. This configuration allows the position of the hook-and-loop fastener 23 of male type engaged with the hook-and-loop fastener 24 of female type to be changed in the length direction of the hook-and-loop fastener 24 of female type, according to the difference in size of the hand. The band 10 configured as above is allowed to wrap around the back part 8 side passing through the palm portion on the little finger side in the width direction so as to be placed on the back part 8, thereby allowing the hook-and-loop fasteners 23 and 24 to be engaged with each other. This engagement allows the band 10 to be fixed onto the back part 8, so that the

glove 1 can be firmly tightened to the hand. Here, the length of the band 10 is set to a dimension shorter than the width dimension of the glove 1, but may be set to a length such that the band 10 can wrap the glove 1 one or more rounds.

**[0019]** The fifth sheet 17 extends obliquely upward (inclined direction) so as to be located more in the finger parts toward the finger part side. Accordingly, the hook-and-loop fastener 24 of female type is also sewn in an inclined posture extending obliquely upward (inclined direction) so as to be located more on the finger part side toward the finger part side. By providing the hook-and-loop fastener 24 of female type in an inclined posture to the back part 8, the band length can be increased, as compared with a band configured to extend in the width direction of the back of the hand. Therefore, the range in which the band 10 can be fixed according to the size of the hand can be increased.

**[0020]** In the state where the hand is inserted into the glove body 9 configured as above and the band 10 is fixed, a center portion 8a of an end edge 8A of the back part 8 on the wrist side is located more on the finger side than a boundary K between the wrist and the back of the hand, and a center portion 10a of an end edge 10A of the band 10 on the wrist side is located more on the finger side than the boundary K between the wrist and the back of the hand, as shown in Fig. 4. Further, an end edge 8A1 of the back part 8 extending from one end 8T in the width direction of the hand to the center portion 8a of the back part 8 is inclined to be located more on the finger side toward the center portion 8a, and an end edge 10A1 of the band 10 extending from the other end 10T in the width direction of the hand to the center portion 10a of the band 10 is inclined to be located more on the finger side toward the center portion 10a. Accordingly, in the state where the hand is inserted into the glove body 9 configured as above and the band 10 is fixed, the end edge 8A1 of the back part 8 and the end edge 10A1 of the band 10 form an opening 26 tapered toward the center portions 8a and 10a (toward the finger part side). The opening 26 is formed to have a nearly triangular shape with its apex located on the finger side. Further, an end edge 8A2 extending from the center portion 8a of the back part 8 to an end 8V on the little finger side is inclined to be located more on the finger side toward the end 8V on the little finger side. Further, an end edge 10A2 extending from the center portion 10a of the band 10 to an end 10V on the index finger side is inclined to be located more on the finger side toward the end 10V on the index finger side. The center portion 8a of the end edge 8A of the back part 8 on the wrist side and the center portion 10a of the end edge 10A of the band 10 on the wrist side correspond to the width dimension of the hand from the index finger to the ring finger in the width direction. The center portions 8a and 10a shown in the figures are portions corresponding to the center of the hand in the width direction, and indicate the center in the center portions in the figures.

**[0021]** Accordingly, the hand is inserted into the glove body 9, and the band 10 is fixed to the back part 8 by winding so as to be placed on the back side of the hand, thereby making the glove 1 less likely to come off the hand. In the state where the glove 1 is worn, the center portions 8a and 10a in which the end edge 8A of the back part 8 on the wrist side and the end edge 10A of the band 10 on the wrist side intersect each other are located more on the finger side than the boundary K between the wrist and the back of the hand. Therefore, the end edge 8A1 extending from the one end 8T of the end edge 8A of the back part 8 on the wrist side to the center portion 8a and the end edge 10A1 extending from the other end 10T of the end edge 10A of the band 10 on the wrist side to the center portion 10a form the opening 26. The opening 26 allows an end 25 of the back of the hand on the wrist side to be exposed, so that the motion of the wrist is not hindered. Accordingly, it is possible, for example, to take an optimal position by bending the wrist according to the shape of a handlebar 27 of a bicycle (see Fig. 4), or to wind up a reel in fishing by rotating a handle while twisting the wrist, favorably.

**[0022]** Fig. 4 shows the state of the hand wearing the glove 1 thereon and gripping the handlebar 27 of a bicycle. In this state, a wrist 28 is bent to the palm side (inside), and the end 25 of the back of the hand on the wrist side is stretched. When the wrist is bent, the end 25 of the back of the hand on the wrist side is exposed from the glove 1, and therefore the motion of the wrist 28 is not hindered. Accordingly, it is possible to take an optimal position by bending the wrist 28 according to the shape of the handlebar 27, favorably, as shown in Fig. 4.

**[0023]** The present invention is not limited to the aforementioned embodiment, and various modifications can be made without departing from the gist of the present invention.

**[0024]** For example, materials of the first sheet 11 to the eighth sheet 20, the auxiliary sheet H, the band 10, which constitute the glove 1, are not limited to the materials described in the embodiment, and various materials can be used therefor.

**[0025]** In the aforementioned embodiment, all the five finger parts 2, 3, 4, 5, and 6 are configured to have lengths covering the fingers from the roots to the second joints, but may be configured to have lengths covering the fingers from the roots to the first joints. The lengths to cover the finger parts can be freely changed. Further, the finger parts may be configured to partially cover the fingers, or may be configured to cover the full lengths of the fingers. In such a case, an embodiment can be such that finger parts configured to have lengths covering the full lengths of the fingers and finger parts partially covering the fingers are provided in a mixed state.

**[0026]** Further, in the aforementioned embodiment, the band 10 is configured to have an inclined posture so as to be located more on the finger side from the little finger toward the thumb on the surface of the back of the hand, that is, an inclined posture intersecting the width

direction of the hand, but may be configured to be in a horizontal posture extending along the width direction of the hand, as shown in Fig. 5. The band 10 includes a proximal end 29 having one end sewn on the end of the palm part 7 on the little finger side and tapered toward the other end side, and a distal end 30 extending from the proximal end 29 with a constant width. In Fig. 5, the case where the back side portions of the hand of the five finger parts 2, 3, 4, 5, and 6 and the back part 8 are constituted by one piece of sheet 31 is shown, but they may be constituted by two or more pieces of sheets. Further, a large rectangular dashed line portion 32 is a female type (or male type) hook-and-loop fastener sewn on the outer surface (surface) of the sheet 31, and a small rectangular dashed line portion 33 is a male type (or female type) hook-and-loop fastener sewn on the inner surface of the distal end 30 of the band 10. Further, the end edge 8A of the back part 8 on the wrist side is constituted by the first inclined end edge 8A1 extending from an end 8T on the thumb side to the center portion 8a and the second inclined end edge 8A2 extending from the center portion 8a to an end 8V on the little finger side. The first inclined end edge 8A1 and the second inclined end edge 8A2 are inclined at different angles, and the first inclined end edge 8A1 is inclined at a larger angle than the second inclined end edge 8A2 in Fig. 5. Further, the end edge 10A of the band 10 on the wrist side is constituted by the inclined end edge 10A1 extending from the end 10T on the little finger side to the center portion 10a and the horizontal end edge 10A2 extending from the center portion 10a to the end 10V on the thumb side. The first inclined end edge 8A1 of the back part 8 and the inclined end edge 10A1 of the band 10 form the opening 26 having a nearly triangular shape. The other parts in Fig. 5 that have not been described are denoted by the same reference numerals as in Fig. 2 and Fig. 4, and the description thereof is omitted.

**[0027]** Further, in the aforementioned embodiment, the opening 26 is formed to have a nearly triangular shape, but it may be formed into various shapes. For example, in Fig. 6, the opening 26 is formed to have a nearly trapezoidal shape. That is, the end edge 8A of the back part 8 on the wrist side is configured to have a rectangular shape, and the little finger side of the end edge 8A of the back part 8 on the wrist side having a rectangular shape is covered by the proximal end 29 of the band 10, thereby forming the opening 26 having a nearly trapezoidal shape. The end edge 8A of the back part 8 on the wrist side is constituted by the first end edge 8A1 that is constituted by a vertical end edge raised upward (toward the finger side) from the end 8T on the thumb side to a specific distance and a horizontal end edge extending from an end (upper end) of the vertical end edge on the finger side to the center portion 8a in the width direction of the hand, and the second end edge 8A2 that is constituted by a horizontal end edge formed along the width direction of the hand from the center portion 8a to the end on the little finger side and a vertical end edge ex-

tending from the end of the horizontal end edge on the little finger side toward the wrist side (downward).

**[0028]** Further, in Fig. 7, the opening 26 is formed to have a nearly arcuate shape. That is, the end edge 8A of the back part 8 on the wrist side is configured to have an arcuate shape, and the little finger side of the end edge 8A of the back part 8 on the wrist side having a rectangular shape is covered by the proximal end 29 of the band 10, thereby forming the opening 26 having a nearly arcuate shape. Further, in Fig. 7, the distal end 30 of the band part 10 in Fig. 5 is configured to have an inclined posture (the same inclined posture as in Fig. 1 to Fig. 4) in which the index finger side is located more on the finger side. The end edge 8A of the back part 8 on the wrist side is constituted by the first arcuate end edge 8A1 extending from the end 8T on the thumb side to the center portion 8a and the second arcuate end edge 8A2 extending from the center portion 8a to the end 8V on the little finger side.

**[0029]** Further, in the aforementioned embodiment, the configuration is such that the end edge 8A of the back part 8 on the wrist side is entirely located more on the finger side than the boundary K between the wrist and the back of the hand, and the end edge 10A of the band 10 on the wrist side is entirely located more on the finger side than the boundary K between the wrist and the back of the hand. However, the configuration may be such that only the center portion 8a of the end edge 8A of the back part 8 on the wrist side is located more on the finger side than the boundary K between the wrist and the back of the hand, and only the center portion 10a of the end edge 10A of the band 10 on the wrist side is located more on the finger side than the boundary K between the wrist and the back of the hand.

**[0030]** Further, in the aforementioned embodiment, means for fixing the band 10 to the back part 8 is constituted by the hook-and-loop fastener 23 provided on the inner surface of the band 10 and the hook-and-loop fastener 24 provided on the outer surface (surface) of the back part 8, but may be constituted by an engaged part provided in the back part 8 and an engaging part provided in the band 10 and capable of engaging and disengaging the engaged part.

**[0031]** Further, in the aforementioned embodiment, the band 10 is sewn on the end of the palm part 7 on the little finger side, but the band 10 sewn on the end of the palm part 7 on the thumb side may be wound toward the back part 8 side passing through a portion of the hand on the thumb side in the width direction. Further, the band 10 may be integrally formed with the sheet member constituting the palm part without sewing it on the palm part 7.

#### REFERENCE SIGNS LIST

**[0032]**

- 1: Glove
- 2: Thumb part

3:	Index finger part		in the width direction of the hand to the center portion
4:	Middle finger part		of the back part is inclined to be located more on the
5:	Ring finger part		finger side toward the center portion,
6:	Little finger part		an end edge of the band extending from the other
7:	Palm part	5	end in the width direction of the hand to the center
8:	Back part		portion of the band is inclined to be located more on
8A:	End edge on wrist side		the finger side toward the center portion, and
9:	Glove body		in the state where the hand is inserted into the glove
10:	Band		body and the band is fixed, the end edge of the back
10A:	End edge on wrist side	10	part and the end edge of the band form an opening
11:	First sheet		tapered toward the center portion.
12:	Second sheet		
13:	Third sheet		
14, 15:	Cushion member		
16:	Fourth sheet	15	
17:	Fifth sheet		
18:	Sixth sheet		
19:	Seventh sheet		
20:	Eighth sheet		
21:	Proximal end	20	
22:	Distal end		
23:	Male type hook-and-loop fastener		
24:	Female type hook-and-loop fastener		
25:	End on the wrist side		
26:	Opening	25	
27:	Handlebar		
28:	Wrist		
29:	Proximal end		
30:	Distal end		
31:	Sheet	30	
32, 33:	Hook-and-loop fastener		
H:	Auxiliary sheet		

## Claims 35

1. A glove configured to be worn on the hand, comprising  
a glove body having five finger parts, a palm part,  
and a back part; and  
a band configured to be wound in the width direction  
of the hand and placed on the back part to be fixed  
thereto, wherein  
in the state where the hand is inserted into the glove  
body and the band is fixed, a center portion of an  
end edge of the back part on a wrist side is located  
more on the finger side than a boundary between  
the wrist and the back of the hand, and a center  
portion of an end edge of the band on the wrist side is  
located more on the finger side than the boundary  
between the wrist and the back of the hand. 40 45 50
2. The glove according to claim 1, wherein  
the band extends from an end of the palm part in the  
width direction on a little finger side or thumb side. 55
3. The glove according to claim 1 or 2, wherein  
an end edge of the back part extending from one end

Fig. 1

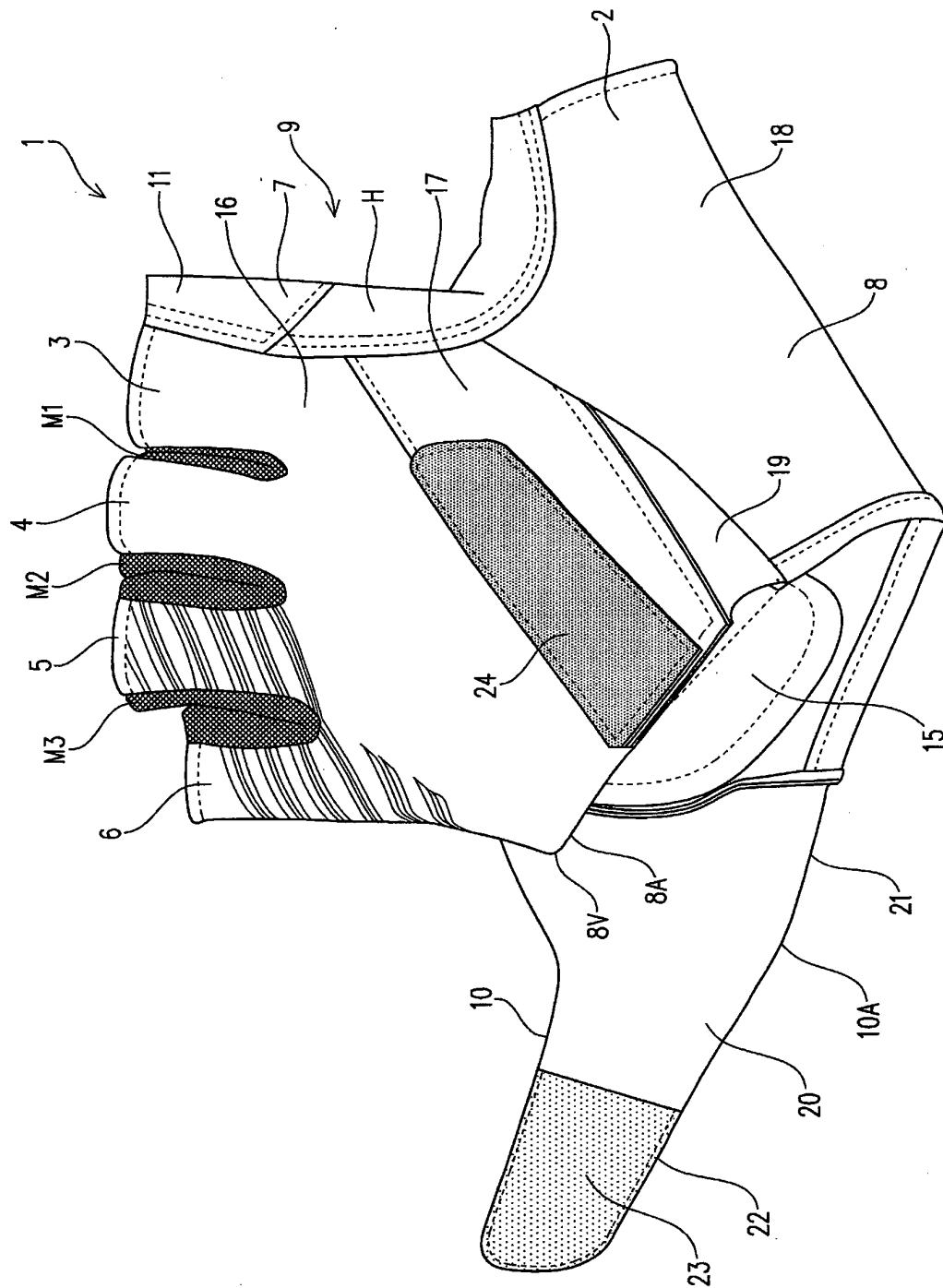


Fig. 2

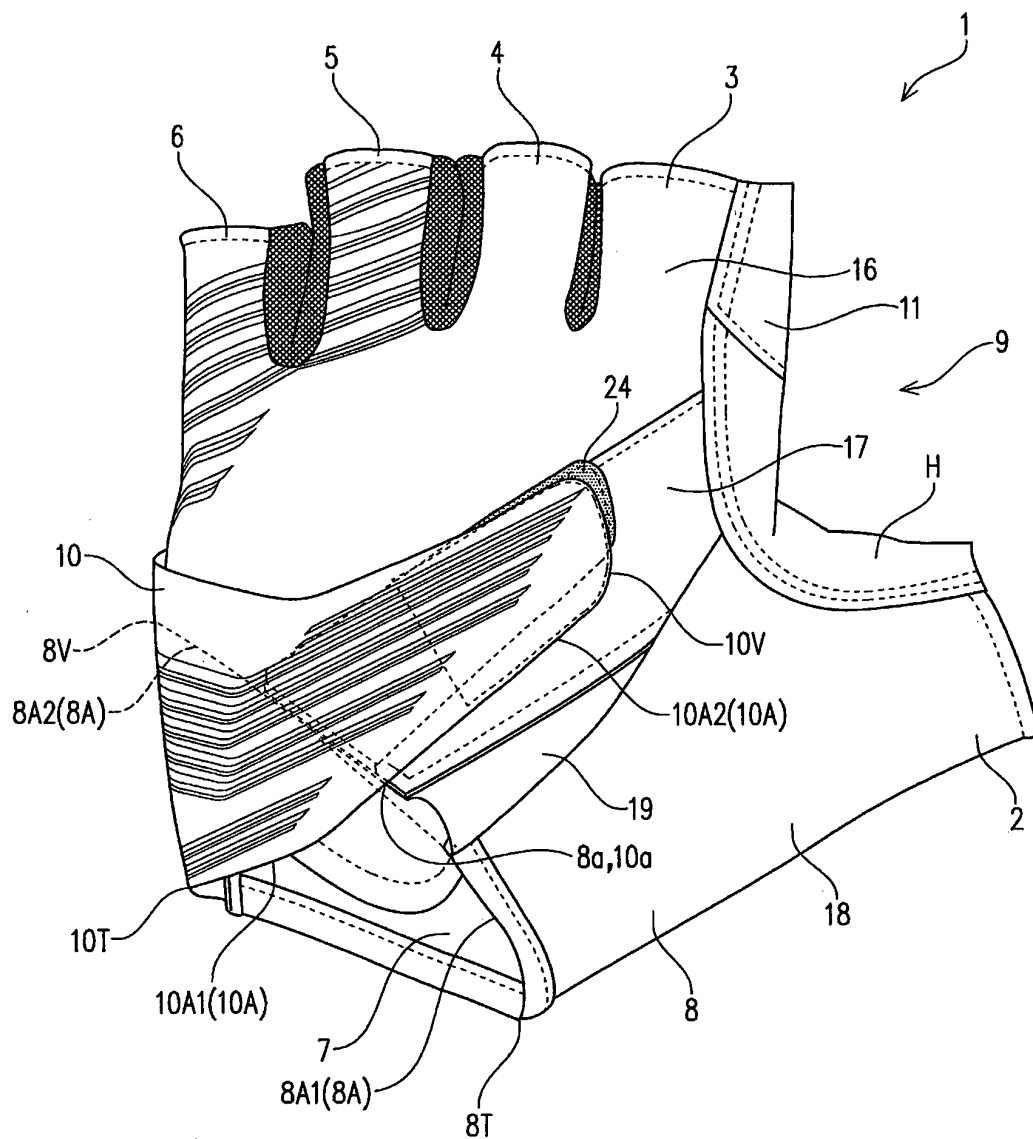




Fig. 3

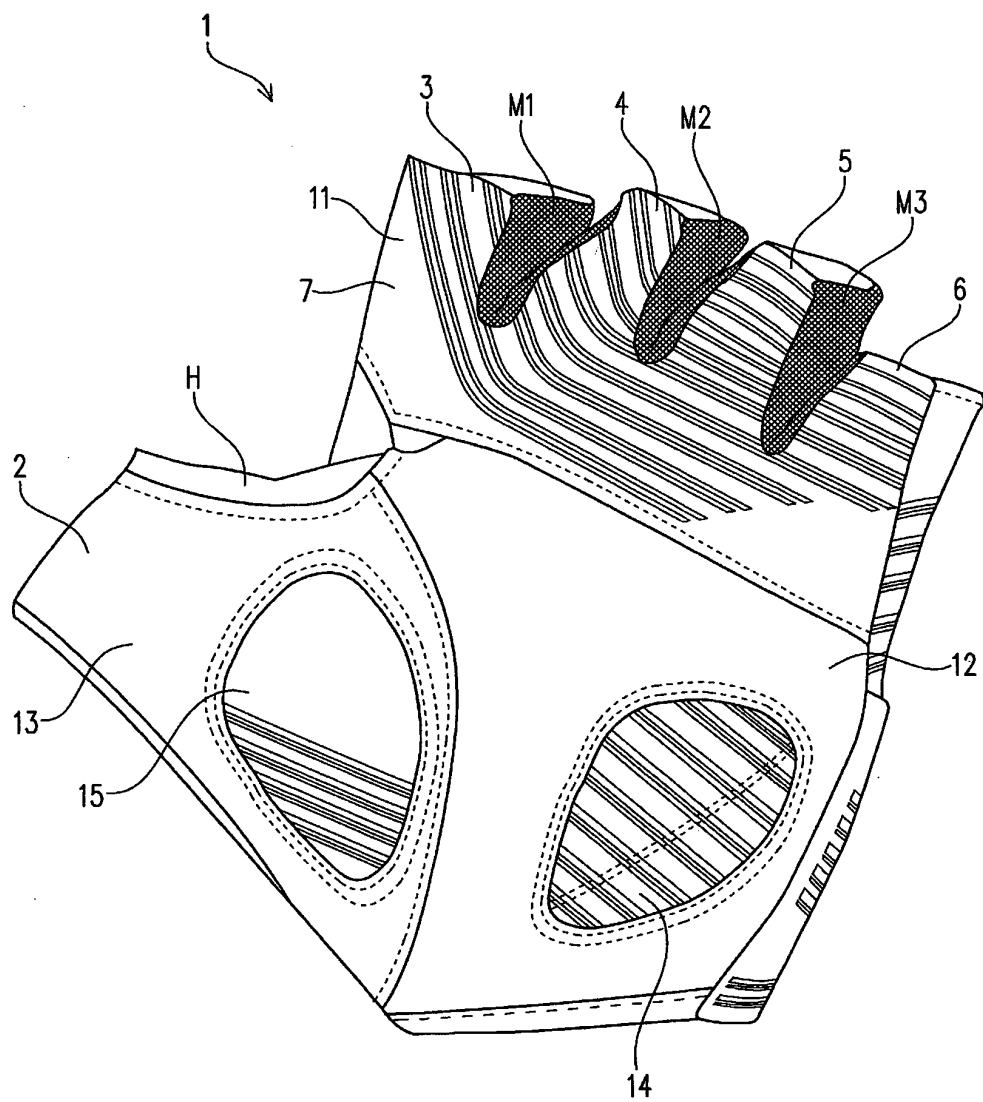


Fig. 4

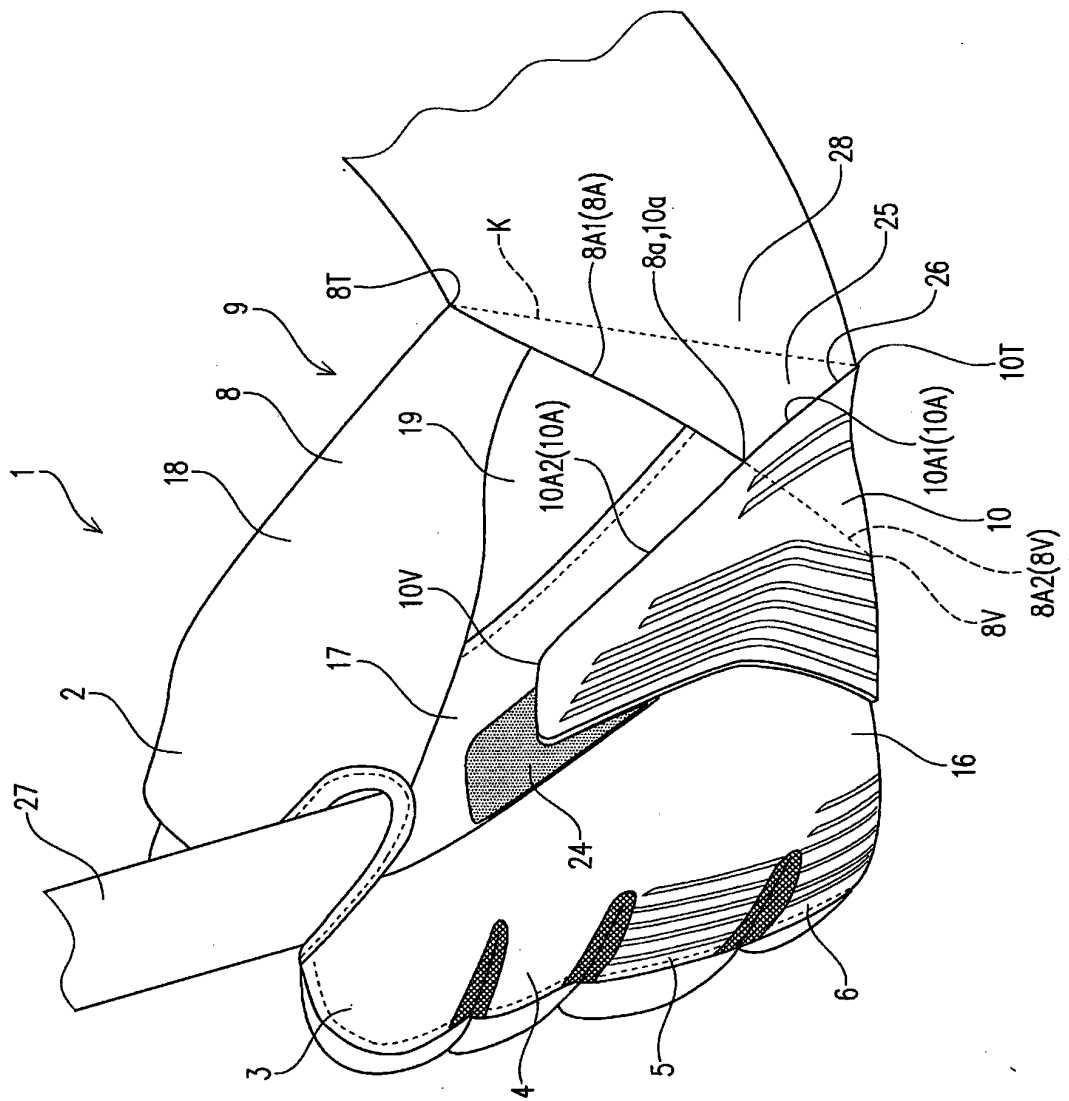


Fig. 5

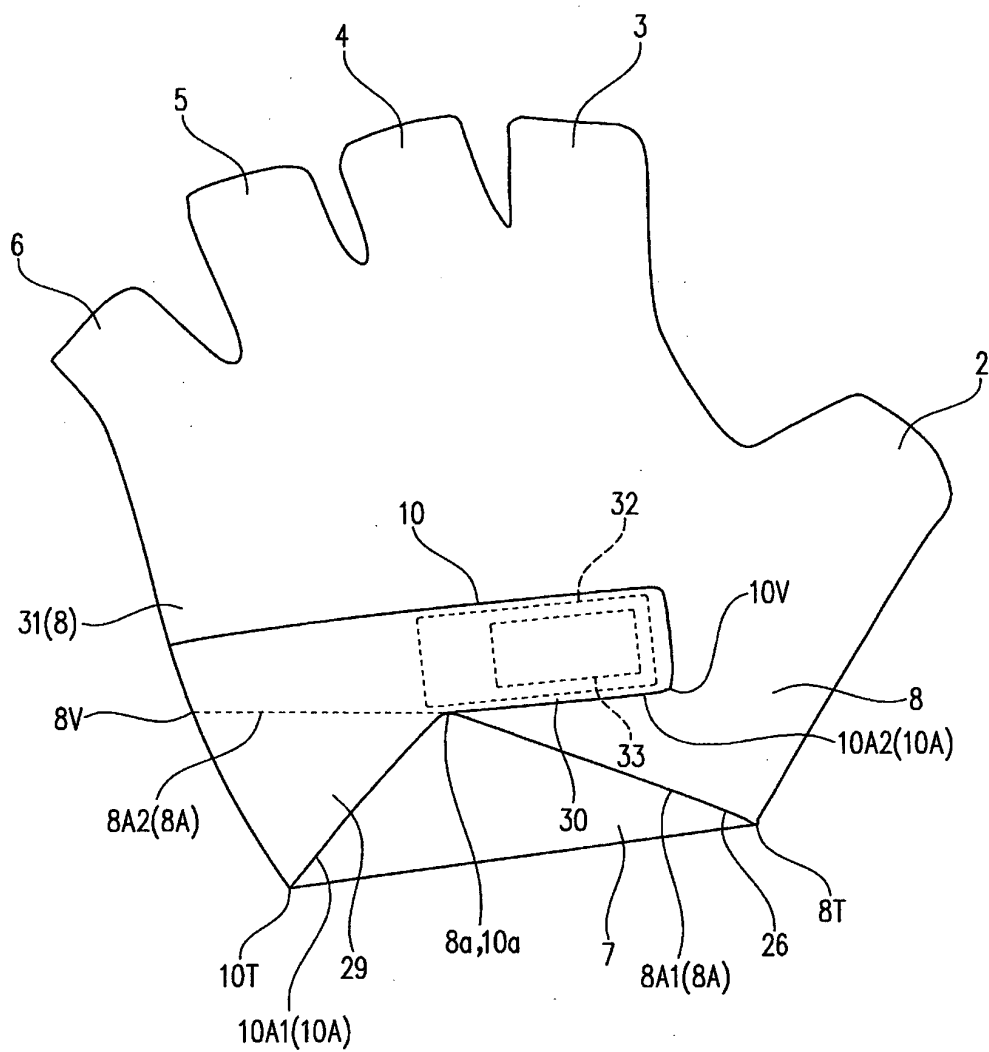


Fig. 6

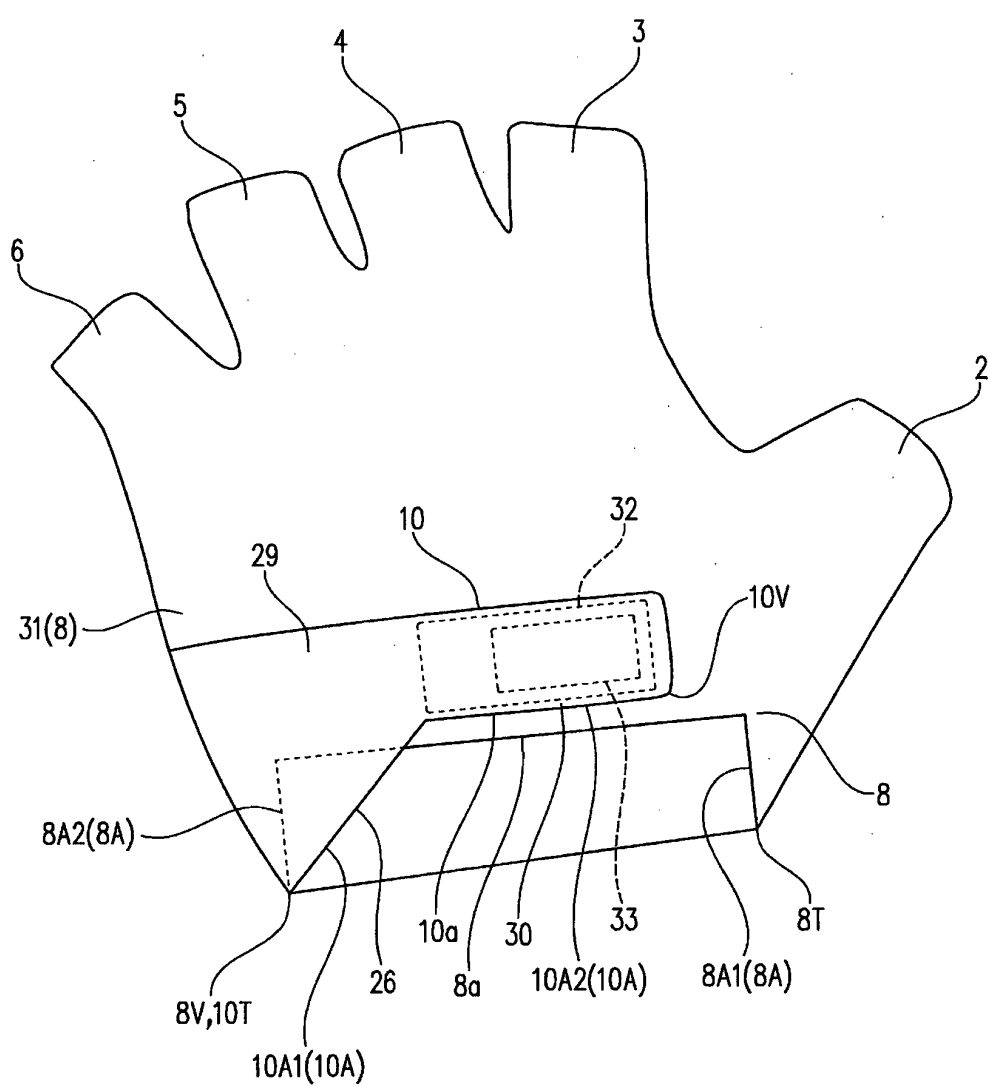
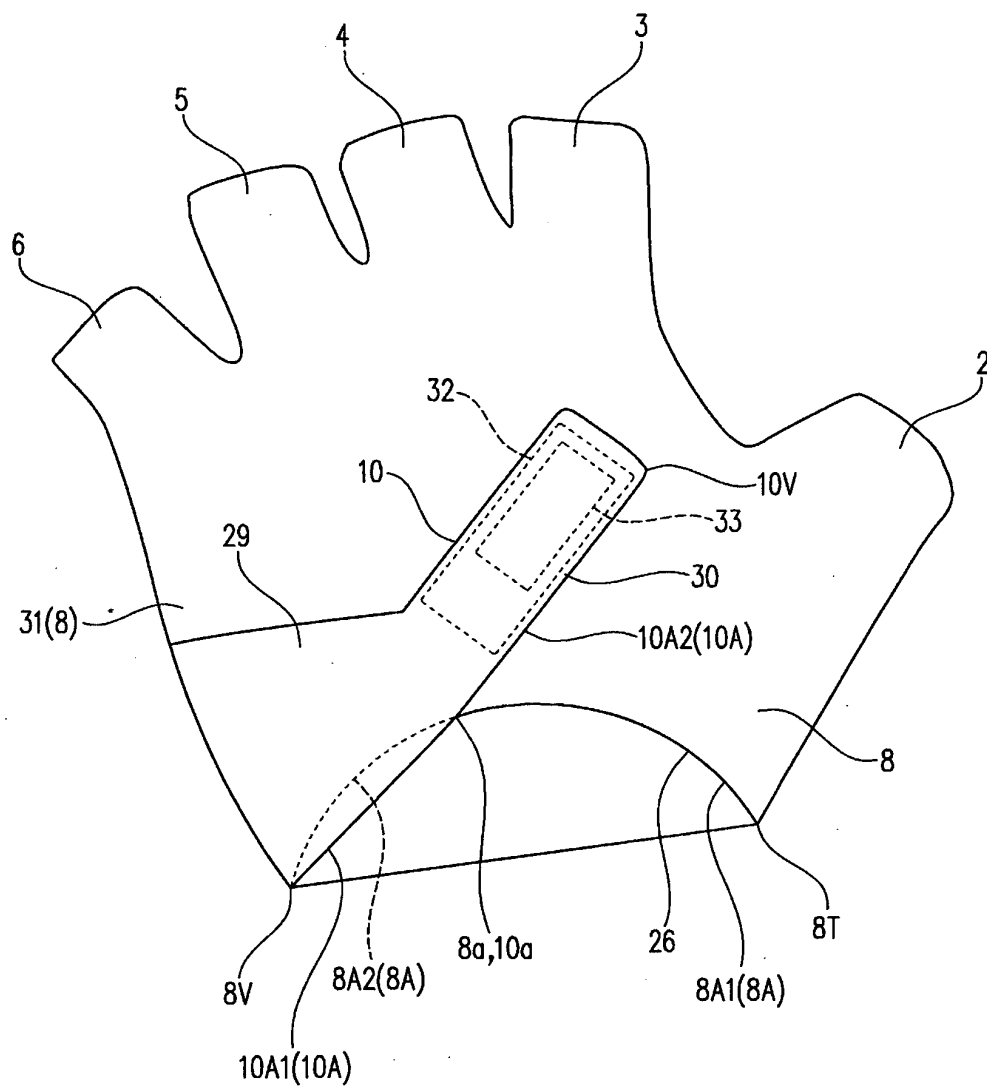


Fig. 7



## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2013/083881

## A. CLASSIFICATION OF SUBJECT MATTER

A41D19/00(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)

A41D19/00

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 1996-2014

Kokai Jitsuyo Shinan Koho 1971-2014 Toroku Jitsuyo Shinan Koho 1994-2014

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.
X	JP 3127054 U (Toshihiro YUKIMOTO, Yoshiaki KINJO), 16 November 2006 (16.11.2006), paragraphs [0022] to [0025], [0034], [0035], [0038]; fig. 2 (Family: none)	1-3
X	JP 2006-334061 A (Bridgestone Sports Co., Ltd.), 14 December 2006 (14.12.2006), paragraphs [0020], [0022]; fig. 4 (Family: none)	1-3

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

\* Special categories of cited documents:

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"Y"

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

"&amp;"

document member of the same patent family

Date of the actual completion of the international search

17 March, 2014 (17.03.14)

Date of mailing of the international search report

25 March, 2014 (25.03.14)

Name and mailing address of the ISA/  
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## INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2013/083881

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 142670/1974 (Laid-open No. 68668/1976) (Isamu FUJITA), 31 May 1976 (31.05.1976), page 2, lines 12 to 18; fig. 2 & US 3952333 A	1-3

Form PCT/ISA/210 (continuation of second sheet) (July 2009)

**REFERENCES CITED IN THE DESCRIPTION**

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**Patent documents cited in the description**

- JP 3086188 B [0003]