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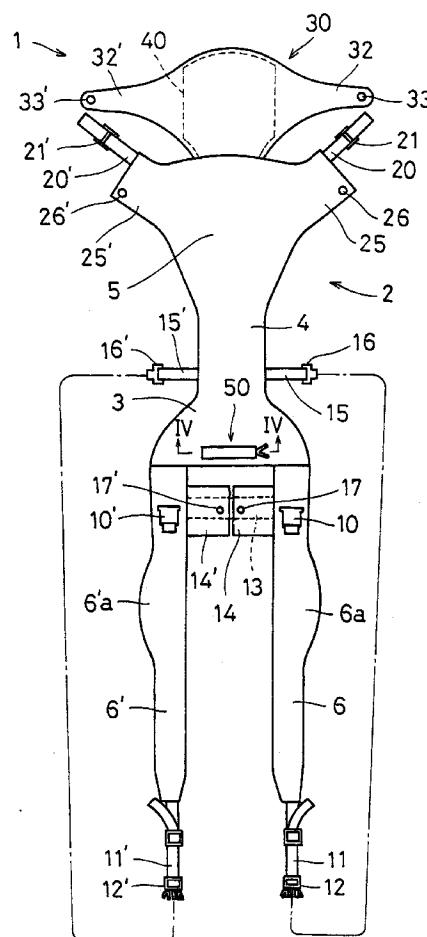
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(54) **Baby carrier**

(57) A baby carrier includes a carrier body (2) having a front cover portion (3), a crotch cover portion (4), and a back cover portion (5) which are integrally formed with one another. The front cover portion is provided at opposite ends of its lower portion with vertically extending shoulder belts (6) each having one-touch buckles (10) fitted thereto at its upper portion and distal end (12) respectively. The crotch cover portion is provided with belt members (15) extending laterally in opposite directions and having at their distal ends one-touch buckles (16) fitted thereto which are engageable with the one-touch buckles (12) at distal ends of the shoulder belts. The back cover portion is provided, at upper opposite extremities thereof, with one-touch buckles (21) engageable with the one-touch buckles (10) at respective upper portions of the shoulder belts. Side supports (25) for supporting opposite sides of the baby's torso project laterally from the back cover portion in opposite directions.

FIG. 2

Description

BACKGROUND OF THE INVENTION

The present invention relates to a baby carrier or baby nursing supporter for use in carrying a baby as supported therein.

Generally, two types of baby carriers (baby nursing supporters) are known, namely, the band type and the bag type.

A band-type baby carrier, as described in, for example, Japanese Utility Model Application Laid-Open No. 2-71359, is comprised of a plurality of bands provided in combination and includes a crotch portion for supporting the crotch of the baby, a back portion for supporting the back of the baby, and shoulder strings for the baby nursing person.

A bag-type baby carrier, as described in, for example, Japanese Utility Model Publication No. 4-17064, includes a bag-like nursing supporter body comprising a crotch cover portion, a back cover portion, and a front cover portion for supporting the baby, and shoulder strings for the baby nursing person.

The baby carrier of the conventional band type permits easy entry and egress of the baby relative to the nursing supporter body, but has a drawback that the baby is not supported at sides so that the baby may become inclined toward one side. This presents the problem of lack of stability in the support of the baby. Especially in the case of a baby who is not well steady in posture, such inclined posturing may often occur.

The conventional bag-type baby carrier provides good support stability not only in forward and rearward directions, but also in lateral directions, thus enabling the baby to be stably supported. However, the baby carrier of this type has a disadvantage that the bag-like configuration of the nursing supporter body is inconvenient for entry and egress of the baby relative to the nursing supporter body.

As such, with a view to overcoming aforesaid drawbacks of the prior art baby carriers, there has been proposed a baby carrier having a carrier body comprising a front cover portion, a crotch cover portion, and a back cover portion for supporting the baby which are integrally formed in continuation (see Japanese Utility Model Publication No. 61-25400).

However, this kind of baby carrier, in use, involves opening and closing of the carrier body by means of a pair of tightening belts, which operation is rather cumbersome. Another problem is that the carrier body may sometimes be irregularly tightened depending upon the manner in which the tightening belts are manipulated in closing the carrier body. This leads to the lack of stability in the support of the baby.

SUMMARY OF THE INVENTION

The present invention has been developed in order

to solve aforementioned problems with the prior art, and accordingly it is an object of the invention to provide a baby carrier which permits easy entry and egress of the baby relative to the baby carrier and which can support the baby in a stable and accurate manner.

It is another object of the invention to provide a baby carrier which can be adjustably used according to the status of growth of the baby or the physical aspect of the baby.

Other objects and features of the invention will become apparent from the following description of embodiments with reference to the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a front elevation of a baby carrier in developed condition which represents one embodiment of the present invention;

Fig. 2 is a rear elevational view of the baby carrier in developed condition;

Fig. 3 is a sectional view of a head support of the baby carrier;

Fig. 4 is a section taken on the line IV-IV in Fig. 2;

Fig. 5 is a fragmentary view of the baby carrier as adjusted in width by means of a width adjuster;

Fig. 6 is a front view of a waist belt for the baby carrier;

Fig. 7 is a front view of the baby carrier in assembled condition;

Fig. 8 is a side view of the baby carrier in assembled condition;

Fig. 9 is an illustration exemplary of one aspect of the baby carrier in use;

Fig. 10 is an illustration exemplary of another aspect of the baby carrier in use;

Fig. 11 is an illustration exemplary of a further aspect of the baby carrier in use;

Fig. 12 is a view showing a modified form of the head support;

Fig. 13 shows another modification of the head support in fragmentary sectional view, Fig. 13A showing a lateral projection in unextended condition, Fig. 13B showing the lateral projection in extended condition;

Fig. 14 is a front elevation of a baby carrier in developed condition which represents another embodiment of the present invention;

Fig. 15 is a rear elevational view of the baby carrier in developed condition (in Fig. 14);

Fig. 16 is a perspective view showing a ring member and a buckle with a protective cover which constitute a fastening unit at the shoulder belt side of the baby carrier (Fig. 14);

Fig. 17 is a side view for explaining the engagement of the shoulder belt side ring member with a back cover portion side hook member in the baby carrier (Fig. 14);

Fig. 18 is a front view of the baby carrier (Fig. 14) in assembled condition;

Fig. 19 is a front elevation of a baby carrier in developed condition which represents a further embodiment of the present invention;

Fig. 20 is a rear elevational view of the baby carrier in developed condition (shown in Fig. 19);

Fig. 21 is a front view of the baby carrier (Fig. 19) in assembled condition;

Fig. 22 is a side view of the baby carrier in assembled condition (Fig. 21);

Fig. 23 is a front view of the baby carrier in assembled condition in the case where the baby carrier is dimensionally reduced in the direction of thickness of the baby's torso;

Fig. 24 is a side view of the baby carrier in assembled condition (in Fig. 23);

Fig. 25 is an illustration exemplary of one aspect of the baby carrier (Fig. 19) in use;

Fig. 26 is an illustration exemplary of another aspect of the baby carrier (Fig. 19) in use;

Fig. 27 is a front elevation of a baby carrier in developed condition which represents another embodiment of the present invention;

Fig. 28 is a rear elevational view of the baby carrier in developed condition (shown in Fig. 27);

Fig. 29 is an enlarged perspective view of a slip-off preventive device and adjacent portion of the shoulder belt of the baby carrier;

Fig. 30 is a front view of the baby carrier (Fig. 27) in assembled condition;

Fig. 31 is a view for explaining the operation of the slip-off preventive device;

Fig. 32 is a view showing a modified form of the slip-off preventive device;

Fig. 33 is a view showing another modification of the slip-off preventive device;

Fig. 34 is a further modification of the slip-off preventive device;

Fig. 35 is a view showing a cover-equipped buckle prior to engagement;

Fig. 36A is a perspective view showing the cover-equipped buckle in a cover-released condition, Fig. 36B being a side view thereof;

Fig. 37 is a view showing the cover-equipped buckle after being brought into engaged condition; and

Fig. 38 is a view showing one example of application of the cover-equipped buckle in which the buckle is applied to a baby carriage.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

As Figs. 1 and 2 show, the baby carrier 1 includes a carrier body 2. The carrier body 2 comprises a front cover portion 3, a narrow crotch cover portion 4, and a back cover portion 5 which are integrally formed in continuation to respectively support the abdomen, crotch and back portions of the baby. For the convenience of description, upper and lower portions in Figs. 1 and 2 are

hereinafter respectively referred to as the upper portion and the lower portion, of the baby carrier.

A pair of downwardly extending shoulder belts 6, 6' are provided below the front cover portion 3. The shoulder belts 6, 6' have respective wider portions 6a, 6'a formed therein whereby the load applied to the nursing person may be reduced. The shoulder belts 6, 6' are provided at respective upper portions thereof with one-touch buckles 10, 10' which constitute a fastening device. The shoulder belts 6, 6' are further provided at respective lower ends with length-adjustable belt members 11, 11' and the belt members 11, 11' have one-touch buckles 12, 12' mounted at their forward ends.

The shoulder belts 6, 6', at their upper ends, are interconnected by a connecting band 13. This connecting band 13 serves to prevent the shoulder belts 6, 6' from slipping off or becoming disengaged from the shoulder of the nursing person.

At respective upper ends of the shoulder belts 6, 6' are provided buckle covers 14, 14' for respectively covering the one-touch buckles 10, 10' after the baby carrier 1 having been assembled. The buckle covers 14, 14' are fitted respectively with locking hooks 17, 17'. The shoulder belts 6, 6' are fitted at upper portions thereof with locking hooks 18, 18', as well as 19, 19', so that the locking hooks 18, 18' are releasably engageable with the locking hooks 17, 17' of the buckle covers 14, 14'.

At a lower portion of the crotch cover portion 4 there are provided belt members 15, 15' extending therefrom in opposite lateral direction. These belt members 15, 15' are fitted at their respective distal ends with one-touch buckles 16, 16' which are removably engageable with one-touch buckles 12, 12' disposed at the lower ends of the shoulder belts 6, 6'.

Projecting obliquely upward from upper opposite ends (shoulder portions) of the back cover portion 5 are side supports 25, 25' for supporting sides of the baby's torso. The side supports 25, 25' are provided at their respective upper ends with obliquely upwardly extending belt members 20, 20' which are longitudinally adjustable. The belt members 20, 20' are respectively fitted with one-touch buckles 21, 21' which constitute a fastening device, the one-touch buckles 21, 21' being releasably engageable with the one-touch buckles 10, 10' of the shoulder belts 6, 6' respectively.

The side supports 25, 25' are provided with locking hooks 26, 26' which are releasably engageable with locking hooks 27, 27' attached to the front cover portion 3 at opposite sides thereof.

A head support 30 for supporting the baby's head from behind is provided on the top of the back cover portion 5. Opposite side portions 32, 32' of the head support 30 are fitted with locking hooks 33, 33' at their respective distal ends. These locking hooks 33, 33' are releasably engageable with the locking hooks 19, 19' affixed to respective upper portions of the shoulder belts 6, 6'.

The head support 30, as Fig. 3 shows, comprises a surface cloth having a pad 40 of three-layer structure

therein. In Fig. 3, the side designated by character A is the back side of the baby's head (rear side of the baby carrier 1), and the side designated by character B is the outer side (front side of the baby carrier 1). The three-layer structure of the pad 40 comprises, sequentially from the A side, perspiration absorbent cotton (first cushioning material) 41 as soft cushioning material, medium cushioning material (third cushioning material) 42, such as urethane material, and hard cushioning material (second cushioning material) 43, such as expanded polyethylene. At the exterior side of the expanded polyethylene material 43 there is fitted a hard plate-like core material 44.

In this way, by placing the three-layer pad 40 in the head support 30, it is possible to obtain an advantage such that the cotton 41 can softly hold the back of the baby's head and can alleviate any external impact of comparatively low level (any load involving a comparatively long time period until a peak is reached). The expanded polyethylene material 43 can lessen any external impact of comparatively high level. Further, the urethane material 42 can lessen any external medium impact. By virtue of such arrangement, it is possible to effectively protect the back of the baby's head against various possible external impacts.

When the baby has grown to the stage that he or she can hold his or her head steady, supporting the baby's head may not necessarily be required. Therefore, it may be arranged that the head support 30 is removably attached to the back cover portion 5 by using adhesive cloth means, locking hooks, or the like. Such removable arrangement of the head support 30 permits the baby carrier 1 to be folded without being bulky.

A width adjuster device 50 for adjusting the width of the carrier body 2 is provided at a lower median portion of the front cover portion 3. As Fig. 4 illustrates, the width adjuster device 50 comprises a pocket cloth 52 and a pair of strings 53, respective ends of the strings 53 being sewn, together with the pocket cloth 52, to face cloth 51 of the front cover portion 3. When the strings 53 are pulled in a flaring direction, the face cloth 51 is contracted widthwise so that the widthwise dimension H of the carrier body 2 can be made smaller (see Fig. 5). Thus, size adjustment can be effected according to the chest measurements of the baby.

Further, by adjusting the belt members 20, 20' of the side supports 25, 25' in length, it is possible to effect size adjustment thicknesswise of the torso of the baby.

Thus, by virtue of the width adjuster device 50 and belt members 20, 20', the baby carrier 1 can be employed in nursing babies of different physical constitutions. Further, the baby carrier 1 may be used for a comparatively long period of time with respect to one baby from babyhood to infancy.

The crotch cover portion 4 is provided with a belt loop 55 which is adapted to be removably fitted with a waist belt 60, as shown in Fig. 6, through openings at opposite ends of the belt loop 55 (see Fig. 1).

The waist belt 60 comprises an elongate belt portion 61, length-adjustable string members 62, 62' affixed to the belt portion 61 at opposite ends thereof, and one-touch buckles 63, 63' fitted to the string members. By using the waist belt 60 it is possible to spread the weight of the baby over a wider area thereby to lighten the load applied on the nursing person. Further, use of the waist belt 60 can prevent possible lateral deflection in position of the baby.

When receiving a baby into the baby carrier 1, necessary procedure is that with the front side of the baby carrier 1 (Fig. 1) directed toward the nursing person, the shoulder belts 6, 6' are first placed on the shoulders of the nursing person so that the one-touch buckles 12, 12' at the distal ends of the shoulder belts are respectively brought into engagement with the one-touch buckles 16, 16' of the belt members 15, 15' (as indicated by chain lines in Figs. 1 and 2). The shoulder belts 6, 6' are suitably adjusted in length by means of the belt members 11, 11'. In this case, the rear side of the baby carrier 1 (Fig. 2) is exposed to the outside.

In this condition, the nursing person will hold the baby in arm and, while raising the back cover portion 5 of the carrier body 2 by one arm, the nursing person will draw the baby, together with the back cover portion 5, closer to him or her. Then, using one hand the nursing person will fit the one-touch buckle 21' of the side support 25' to the one-touch buckle 10' into engagement. Likewise, one-touch buckle 21 is fitted to one-touch buckle 10 into engagement. Thus, the baby is received into the baby carrier 1. In this way, assembling of a baby carrier is performed by means of one-touch buckles. This permits easy assembling, and easy, uniform side tightening of the baby carrier 1, thus making it possible to support the baby in a stable manner.

After fitting of one-touch buckles, buckle covers 14, 14' are wrapped around respective one-touch buckles, being then fastened by locking hooks 17, 18 and 17', 18' (see Fig. 7). By so doing it is possible to prevent one-touch buckles 10, 10' from being exposed on the baby side. In Fig. 7, buckle cover 14 only is shown.

In this case, the baby carrier 1 may be previously adjusted in size by using belt members 20, 20' and/or width adjuster 50 according to the body size of the baby under nursing, in order to ensure more accurate support of the baby within the baby carrier 1.

Subsequently, respective locking hooks 26, 26' of side supports 25, 25' are caused to engage locking hooks 27, 27' of the front cover portion 3. Then, respective locking hooks 33, 33' of side portions 32, 32' of the head support 30 are caused to engage locking hooks 19, 19' at upper portions of the shoulder belts 6, 6'.

Thus, a baby carrier 1 is assembled (see Figs. 7 and 8), and the baby is accommodated in the baby carrier 1 (see Fig. 9). In this case, sides of the baby's body are supported by the pair of side supports 25, 25'. Therefore, the baby can be stably and accurately supported within the baby carrier 1.

Only when respective one-touch buckles 21, 21' of the side supports 25, 25' are caused to engage respective one-touch buckles 10, 10' of the shoulder belts 6, 6', the carrier body 2 can assume a bag-like configuration, and this provides for easy entry and egress of the baby.

It may be arranged that side portions 32, 32' of the head support 30 are received into pockets provided at the head support 30 as illustrated in Fig. 10. This arrangement provides right and left fields of view for the baby. Further, in summer hot climate condition in particular, such arrangement provides good ventilation for the head of the baby.

When the baby has grown so that he or she can hold his or her head steady, head support 30 is no longer required. In that case, the head support 30 may be removed, as shown in Fig. 11.

For the head support 30 in the above described embodiment, one of the type shown in Figs. 12 and 13 may be employed.

The head support 30 shown in Fig. 12 differs from the one used in the previous embodiment in that projections 32, 32' which project from the head support body 31 in opposite lateral directions are larger in length than those in the previous embodiment, and in that locking hooks 33, 33' are provided in pluralities (three each in the present embodiment).

Locking hooks to be engaged by the locking hooks 19, 19' of the baby carrier 1 are suitably selected from these sets of locking hooks 33, 33', whereby the size of the space for housing the baby's head can be varied. Thus, it is possible to arrange for size adjustment according to the difference between individual babies in head size (physical difference) or the degree of growth of one particular baby in respect of head size.

The head support body 31 is fitted at a lower portion thereof with locking hooks 34 for fastening the head support body 31 to the carrier body 2 of the baby carrier 1. For this purpose, the back cover portion 5 of the carrier body 2 is provided with locking hooks for engagement by the locking hooks 34.

By using such locking hooks 34 it is possible to mount the head support 30 to a baby carrier other than the baby carrier of the present embodiment. Through this arrangement, therefore, a baby carrier having no head support can provide accurate support of a baby's head by using a separate head support.

As is the case with the head support 30 in the previous embodiment, the one shown in Fig. 12 has a head support body 31 incorporating a three-layer pad 40. By virtue of this pad 40, therefore, it is possible to effectively protect the head of the baby from various external shocks.

The head support 30 shown in Fig. 13 is identical with that of the previous embodiment in that projections 32, 32' (projection 32 only shown in Fig. 13) are each provided with one locking hook 33, 33'. However, it is different from the head support of the previous embodiment in that the projections 32, 32' are each partially

comprised of an elastic bag-like rubber cloth 36. The rubber cloth 36 has a core material 37 incorporated therein.

In this case, respective projections 32, 32' vary in length through expansion and contraction of the rubber cloth 36 (see Fig. 13A, 13B) and accordingly the space for accommodating a baby's head can be varied in size. Thus, it is possible to effect size adjustment according to the difference between individual babies in head size or the degree of growth of a baby in respect of head size. The elastic coefficient of the rubber cloth 36 is preferably of such a small order that the rubber cloth easily expands under the weight of the baby's head leaning against the head support 30.

Figs. 14 to 18 illustrate a baby carrier representing another embodiment of the invention. In these figures, reference numerals or characters identical with those in the previous embodiment designate like or corresponding parts.

As Figs. 14 and 15 show, baby carrier 70, as in the previous embodiment, includes a front cover portion 3, a crotch cover portion 4, and a back cover portion 5 which are integrally formed in continuation.

Respective shoulder belts 6, 6', provided at a lower site of the front cover portion 3, are fitted at their upper portions with generally D-shaped ring members 80, 80' operative as fastening means. These ring members 80, 80' are respectively fitted at their base portions with belt members 91, 91' extending in the direction in which the shoulder belts 6, 6' extend. The belt members 91, 91' are fitted at their distal ends with protective cover-equipped buckles 90, 90' operative as fastening means for respective shoulder belts 6, 6'.

Protective cover-equipped buckle 90, as Fig. 16 shows, comprises a one-touch buckle 92 to which a distal end portion of the belt member 91 is affixed, and a protective cover 93 for covering a manipulator portion 92a of the one-touch buckle 92. The protective cover 93 is pivotally supported on a pin 94 which is inserted into the one-touch buckle 92, and is adapted to assume a closed position (position shown by solid line) for covering the manipulator portion 92a and an open position (position shown by chain line) such that the cover is pivotally moved away from the manipulator portion 92a. The protective cover 93 has an opening 93a which is adapted to receive one-touch buckle 21.

It is noted that Fig. 16 illustrates only protective cover-equipped buckle 90 at the belt member 91 side. The protective cover-equipped buckle 90' at the belt member 91' side is of similar construction, of which description is therefore omitted.

One-touch buckles 12, 12' fitted to the distal ends of belt members 11, 11' at lower ends of respective shoulder belts 6, 6' are releasably engageable with respective one-touch buckles 16, 16' at lower ends of obliquely downwardly extending belt members 15, 15' provided at lower sites of the crotch cover portion 4. The belt members 15, 15' extend obliquely upward from the crotch cover portion 4 to the back cover portion 5 and affixed to the

crotch cover portion 4 and back cover portion 5. The belt members 15, 15' are fitted at their upper ends with one-touch buckles 21, 21' which are releasably engageable by one-touch buckles 92, 92' of protective cover-equipped buckles 90, 90'. These one-touch buckles 21, 21' are disposed slightly inward from the upper end of the back cover portion 5.

At upper opposite ends (shoulders) of the back cover portion 5 are provided hook members 81, 81' which are releasably engageable by ring members 80, 80'. As Fig. 17 shows, hook portion 81a of hook member 81 has an engagement clearance s which is slightly smaller than diameter d of the corresponding ring member 80. Thus, for engagement of the hook member 81 with the ring member 80, the hook portion 81a is subjected to slight elastic deformation to enable the hook member 81 to engage the ring member 80. After engagement, the ring member 80 is not easily disengageable from the hook member 81.

Further, the hook portion 81a is disposed on the nursing person's side (righthand side in Fig. 17) so that lift of the lower end of the ring member 80 is unlikely to occur which may otherwise be a cause of disengagement of the ring member 80.

Side supports 25, 25', projecting laterally from upper opposite ends of the back cover portion 5, respectively have locking hooks 26, 26' which are releasably engageable with locking hooks 27, 27' affixed to opposite sides of the front cover portion 3.

A head support 30 provided on the top of the back cover portion 5 incorporates a three-layer pad 40 of the same construction as that of the previous embodiment so that the head of the baby can be effectively protected from various external shocks. The head support 30 is removably attached to the back cover portion 5 by means of locking hooks, adhesive cloth or the like.

When a baby carrier 70 of such arrangement is to be assembled, in the same way as described with respect to the previous embodiment, the shoulder belts 6, 6' are first placed on the shoulders of the nursing person so that the one-touch buckles 12, 12' at the distal ends of the shoulder belts 6, 6' are respectively brought into engagement with the one-touch buckles 16, 16' of the belt members 15, 15'.

Then, the nursing person will hold the baby in arm and, while raising the back cover portion 5 of the carrier body 2 by one arm, the nursing person will draw the baby, together with the back cover portion 5, closer to him or her. Then, the hook members 81, 81' of the back cover portion 5 are brought into engagement with the ring members 80, 80' of the shoulder belts 6, 6' (see Fig. 17). As a result, the carrier body 2 assumes a bag-like configuration so that the baby is accommodated in the carrier body 2.

In this case, the carrier body 2 is assembled into a bag-like configuration by causing the hook members 81, 81' to engage (or hook) ring members 80, 80'. Therefore, the baby carrier 70 is easy to assemble.

Then, respective one-touch buckles 92, 92' of protective cover-equipped buckles 90, 90' are caused to engage respective one-touch buckles 21, 21' of the back cover portion 5 (see Fig. 18). In this case, with protective covers 93, 93' held in opened position (as depicted by chain line in Fig. 16), one-touch buckle to one-touch buckle engagement is effected and upon completion of all engagement operation the protective cover is returned to closed position (as depicted by solid line in Fig. 16). In Fig. 18, only protective cover-equipped buckle 90 only is shown as being engaged.

In this way, when the carrier body 2 is assembled into a bag-like configuration, manipulator elements 92a, 92'a of the one-touch buckles 92, 92' are respectively covered with protective covers 93, 93', and this prevents the nursing person or the baby from accidentally manipulating the manipulator elements 92a, 92'a.

By causing one-touch buckles 92, 92' to engage one-touch buckles 21, 21', it is possible to have the baby drawn closer to the nursing person so that the baby is stably and accurately supported in the carrier body 2. Further, by arranging for such double lock condition, that is, engagement between hook members 81, 81' and ring members 80, 80' and engagement by protective cover-equipped buckles 90, 90', it is possible to ensure that the back cover portion 5 will not easily disengage from the shoulder belts 6, 6' when the baby carrier 70 is assembled.

When the protective cover-equipped buckles 90, 90' are in engaged condition, the hook members 81, 81' and ring members 80, 80' are covered by the belt members 91, 91' from above (see Fig. 18). Through this arrangement it is possible to prevent the hook members 81, 81' and ring members 80, 80' from being exposed to outside for possible direct contact with the skin of the baby.

Next, respective locking hooks 26, 26' of the side supports 25, 25' are caused to engage respective locking hooks 27, 27' of the front cover portion 3 to thereby complete assembling of baby carrier 70. By virtue of these side supports 25, 25' it is possible to ensure that the baby is stably and accurately supported in the baby carrier 70.

For egress of the baby from the baby carrier 70, the foregoing procedure may be reversed. That is, the side supports 25, 25' are first disengaged from the locking hooks 27, 27'; then, while holding the baby in one arm placed on the back cover portion 5, the nursing person will, by using the other hand of his or her own, remove the engagement through protective cover-equipped buckles 90, 90' between the shoulder belts 6, 6' and the back cover portion 5, and the engagement between the hook members 81, 81' and the ring members 80, 80'. In this way, the baby may be allowed to have easy exit from the carrier body 2.

In the above described embodiment, the ring members 80, 80' are provided on the shoulder belt 6, 6' side, and the hook members 81, 81' are provided on the back cover portion 5 side. Conversely, it may be arranged that the hook members 81, 81' are provided on the shoulder

belt 6, 6' side, and the ring members 80, 80' are provided on the back cover portion 5 side.

Further, in that embodiment, protective cover-equipped buckles 90, 90' and ring members 80, 80' are both provided as fastening components of the shoulder belts 6, 6'. However, it is possible to omit one of these two types of components, that is, buckles 90, 90' or members 80, 80'. In case that either one is omitted, one of the two kinds of fastening components of the back cover portion 5, that is, one-touch buckles 21, 21' or hook members 81, 81', is to be omitted accordingly.

Figs. 19 to 26 illustrate a baby carrier representing still another embodiment of the invention.

As Figs. 19 and 20 show, the baby carrier 1a includes a carrier body 2 having a front cover portion 3, a narrow crotch cover portion 4, and a back cover portion 5 which are integrally formed in continuation.

A pair of downwardly extending shoulder belts 6, 6' having larger-width portions 6a, 6'a are provided at opposite sides of a lower portion of the front cover portion 3. Each of the shoulder belts 6, 6' is fitted at an upper portion thereof with a one-touch buckle 10, 10' and, at the lower end thereof, with a one-touch buckle 12, 12' through a length-adjustable belt member 11, 11'. The top portions of the respective shoulder belts 6, 6' are interconnected by a connector band 13.

At respective upper portions of the shoulder belts 6, 6' there are provided buckle covers 14, 14' which are respectively fitted with locking hooks 17, 17'. Further, the shoulder belts 6, 6' are fitted at their respective top portions with locking hooks 18, 18', as well as 19, 19', such that the locking hooks 18, 18' are releasably engageable with the locking hooks 17, 17' of the buckle covers 14, 14'.

At a lower portion of the crotch cover portion 4 there are provided belt members 15, 15' extending in opposite lateral directions which are fitted with one-touch buckles 16, 16' releasably engageable with the one-touch buckles 12, 12'.

At a top portion of the back cover portion 5 are disposed length-adjustable locking belts 20, 20' which extend in opposite lateral directions. The locking belts 20, 20', at respective one end thereof, intersect each other at an upper median spot of the back cover portion 5, and at this intersecting point a fixing pin 28 is affixed to the back cover portion 5 and extends through the locking belts. Accordingly, the locking belts 20, 20' are pivotable about the fixing pin 28. Respective locking belts 20, 20' are fitted with one-touch buckles 21, 21' which are releasably engageable with one-touch buckles 10, 10' of the shoulder belts 6, 6'.

A plurality of belt loops 38, 38' and 39, 39' (two pairs, right and left, in the present embodiment) for passage of locking belts 20, 20' therethrough are provided at opposite sides, right and left, of the back cover portion 5 in vertically spaced relation. By selectively using these belt loops in any suitable way it is possible to change the size of space for accommodating a baby for nursing within

the baby carrier 1a according to the size of the baby, as will be described hereinafter.

A head support 30 for supporting the head of the baby from behind is removably mounted on the top of the back cover portion 5. The head support 30 incorporates a core material 40. The head support 30 is fitted at lateral extremities of its opposite side portions with locking hooks 33, 33'. The locking hooks 33, 33' are releasably engageable with respective locking hooks 19, 19' provided at upper portions of the shoulder belts 6, 6'.

Next, the manner of use of the baby carrier 1a will be explained.

When receiving a baby into the baby carrier 1a, necessary procedure is that with the front side of the baby carrier 1a (Fig. 19) directed toward the nursing person, the shoulder belts 6, 6' are first placed on the shoulders of the nursing person so that the one-touch buckles 12, 12' at the distal ends of the shoulder belts 6, 6' are respectively brought into engagement with the one-touch buckles 16, 16' of the belt members 15, 15' (as indicated by chain lines in Figs. 19 and 20). The shoulder belts 6, 6' are suitably adjusted in length by means of the belt members 11, 11'. In this case, the rear side of the baby carrier 1a (Fig. 2) is exposed to the outside.

In this condition, the nursing person will hold the baby in arm and, while raising the back cover portion 5 of the carrier body 2 by one arm, the nursing person will draw the baby, together with the back cover portion 5, closer to him or her. Then, the one touch buckle 21 of the locking belt 20 is fitted to the one-touch buckle 10, and the one-touch buckle 21' of the locking belt 20' to the one-touch buckle 10'. Thus, the baby is received into a bag-shaped baby carrier 1a. In this way, assembling of a baby carrier 1a is performed by means of one-touch buckles. This affords ease of assembling.

After fitting of one-touch buckles, buckle covers 14, 14' are wrapped around respective one-touch buckles, being then fastened by locking hooks 17, 18 and 17', 18' (see Fig. 21). By so doing it is possible to prevent one-touch buckles 10, 10' from being exposed on the baby side. In Fig. 21, buckle cover 14 only is shown.

Subsequently, respective locking hooks 33, 33' of head support sides 32, 32' are caused to engage locking hooks 19, 19' at upper portions of the shoulder belts.

In this way, a baby carrier 1a is assembled (see Figs. 21 and 22), and the baby is accommodated in the baby carrier 1a (see Fig. 25).

When the baby has grown so that he or she can hold his or her head steady, head support 30 is not always needed. In that case, the head support 30 may be removed, as shown in Fig. 26. By removing the head support 30 in this way the baby carrier 1a can be made foldable without being bulky.

Next, the procedure for changing the size of space for accommodating a baby in the baby carrier 1a will be explained.

When it is necessary to reduce the space for the baby, the lower belt loops 39, 39' of the back cover portion

5 should be utilized, with locking belts 20, 20' being passed through these belt loops. In this case, belt loops for the locking belts 20, 20' can be easily changed because the locking belts 20, 20' are pivotable about the fixing pin 28. Then, respective one-touch buckles 21, 21' of the locking belts 20, 20' are fastened to respective one-touch buckles 10, 10' of the shoulder belts 6, 6'.

Thus, as Figs. 23 and 24 illustrate, the carrier body 2 is formed into a bag-like configuration while being lifted upward. In Fig. 24, the chain line indicates the contour line of the baby carrier 1a in the case where upper belt loops 38, 38' are utilized. In this way, it is possible to reduce the size of space for accommodating a baby while reducing the size of the space thicknesswise of the baby's torso (as viewed in lateral directions in Fig. 24). By so arranging it is possible to support a smaller baby in a stable condition.

Conversely, when the space for accommodating a baby is to be increased, as Figs. 21 and 22 illustrate, the locking belts 20, 20' are passed through upper belt loops 38, 38' of the back cover portion 5, and respective one-touch buckles 21, 21' of the locking belts 20, 20' are fastened to the one-touch buckles 10, 10' of the shoulder belts.

In this case, it is possible to increase the size of space for accommodating a baby while increasing the size of the space thicknesswise of the baby's torso (see the chain line in Fig. 24). By so arranging it is possible to support a larger baby in a stable condition.

In this way, by selectively using belt loops in any suitable way according to the difference in physique between individual babies under nursing or the state of growth of a particular baby, it is possible to change the size of space for accommodating the baby or babies.

Furthermore, in the present embodiment the locking belts 20, 20' are adjustable in length. Therefore, by suitably adjusting the length of the locking belts, in combination with selective use of belt loops, the size of space for accommodating the baby can be effectively adjusted.

For example, in the condition shown by solid line in Fig. 22, by increasing the length of the locking belts 20, 20' the size of available space for accommodating the baby can be further increased thicknesswise of the baby's torso. In the Fig. 24 condition shown by solid line, if the locking belts 20, 20' are made shorter in length, the size of available space may be further reduced.

In the case where a change is effected in the size of space for accommodating a baby through selective use of the belt loops, the size of available space is subject to a heightwise change (in vertical direction in Figs. 21 to 24) in corresponding relation to the dimensional change in the thicknesswise direction of the baby's torso (see the solid line and chain line in Fig. 24). In this case, the head support 30 may be suitably used. Especially where the available heightwise space is made reduced, the use of the head support 30 ensures positive support of the baby with respect to shoulders and head in particular.

Figs. 27 to 31 illustrate another embodiment of the

invention.

As Figs. 27 and 28 show, the baby carrier 1b includes a carrier body 2 having a front cover portion 3, a narrow crotch cover portion 4, and a back cover portion 5 which are integrally formed in continuation.

At lower opposite sides of the front cover portion 3 there are provided a pair of vertically extending shoulder belts 6, 6' which have relatively wide portions 6a, 6'a. The shoulder belts 6, 6' are fitted at their distal ends with one-touch buckles 12, 12' through length-adjustable belt members 11, 11'. One-touch buckles 10, 10' are provided at the front cover portion side of the shoulder belts 6, 6'. The shoulder belts 6, 6' are interconnected by a connecting band 13.

At locations adjacent the connecting band 13 the shoulder belts 6, 6' are provided with buckle covers 14, 14' which are intended to cover the one-touch buckles 10, 10' after the baby carrier 1b is assembled. The buckle covers 14, 14' are respectively fitted with locking hooks 17, 17'. The shoulder belts 6, 6' are also fitted with locking hooks 18, 18', as well as 19, 19', such that the locking hooks 18, 18' are releasably engageable with the locking hooks 17, 17' of the buckle covers 14, 14'.

At opposite sides of the crotch cover portion 4 there are provided belt members 15, 15' extending laterally therefrom in opposite directions, the belt members 15, 15' being fitted at their distal ends with one-touch buckles 16, 16' which are releasably engageable with the one-touch buckles 12, 12'.

At opposite ends (shoulder portions) of the back cover portion 5 there are provided side supports 25, 25' for supporting sides of the baby's torso, the side supports 25, 25' projecting obliquely upward from the shoulder portions. Length-adjustable belt members 20, 20' extend from respective ends of the side supports 25, 25'. The belt members 20, 20' are fitted with one-touch buckles 21, 21' which are releasably engageable with the one-touch buckles 10, 10' of the shoulder belts 6, 6'.

The side supports 25, 25' are provided with locking hooks 26, 26' which are releasably engageable with locking hooks 27, 27' attached to opposite sides of the front cover portion 3.

A head support 30 for supporting the head of the baby from behind is provided on the top of the back cover portion 5. Side portions 32, 32' of the head support 30 are fitted at their respective distal ends with locking hooks 33, 33'. These locking hooks 33, 33' are releasably engageable with locking hooks 19, 19' attached to the shoulder belts 6, 6'.

When the baby has grown so that he or she can hold his or her head steady, it is not always necessary to support the head of the baby. In that case, therefore, the head support 30 may be arranged to be removably attached to the back cover portion 5. Such removable arrangement of the head support 30 permits the baby carrier 1b to be folded without being bulky.

A width adjuster device 50 for adjusting the widthwise dimension of the carrier body 2 is provided at a me-

dian portion of the front cover portion 3. The width adjuster device 50 comprises a pocket cloth 51 and a pair of strings 52, respective ends of the strings 52 being sewn, together with the pocket cloth 51, to face cloth of the front cover portion 3. When the strings 52 are pulled in a flaring direction, the pocket cloth 51 and the face cloth are contracted widthwise so that the widthwise dimension of the carrier body 2 can be made smaller. Thus, size adjustment can be effected according to the chest measurements of the baby.

Further, by adjusting the belt members 20, 20' of the side supports 25, 25' in length, it is possible to effect size adjustment thicknesswise of the torso of the baby.

Thus, by virtue of the width adjuster device 50 and belt members 20, 20', the baby carrier 1b can be employed in nursing babies of different physical constitutions. Further, the baby carrier 1b may be used for a comparatively long period of time with respect to one baby from babyhood to infancy.

The crotch cover portion 4 is provided with a belt loop 55 which is adapted to be removably fitted with a waist belt through openings at opposite ends of the belt loop 55.

The shoulder belts 6, 6' are provided with slip-off preventive devices 7, 7' for preventing the one-touch buckles 21, 21' of the side supports 25, 25' from slipping off the one-touch buckles 10, 10' of the shoulder belts 6, 6'.

The slip-off preventive devices 7, 7', as shown in Fig. 29, are annular members having a generally D-shaped contour and have annular holes 7a, 7'a engageable by the one-touch buckles 21, 21'. The slip-off preventive devices 7, 7' are supported by belt pieces 8, 8' attached to the shoulder belts 6, 6'. The one-touch buckles 10, 10' are supported by belt pieces 9, 9' attached to the shoulder belts 6, 6'. Shown by 45, 45' are manipulators for the one-touch buckles 10, 10'.

Next, the function and advantages of the present embodiment will be explained.

When assembling the baby carrier 1b, necessary procedure is that with the front side of the baby carrier 1b (Fig. 27) directed toward the nursing person, the shoulder belts 6, 6' are first placed on the shoulders of the nursing person so that the one-touch buckles 12, 12' at the distal ends of the shoulder belts are respectively brought into engagement with the one-touch buckles 16, 16' of the belt members 15, 15' (as indicated by chain lines in Figs. 27 and 28). The shoulder belts 6, 6' are suitably adjusted in length by means of the belt members 11, 11'. In this case, the rear side of the baby carrier 1b (Fig. 28) is exposed to the outside.

In this condition, the nursing person will hold the baby in arm and, while raising the back cover portion 5 of the carrier body 2 by one arm, the nursing person will draw the baby, together with the back cover portion 5, closer to him or her. Then, using one hand the nursing person will place the one touch buckle 21' of the side support 25' into annular hole 7'a of the slip-off preventive device 7' affixed to the shoulder belt 6' (see Fig. 31), then

fit the same to the one touch-buckle 10' into engagement. Likewise, one-touch buckle 21 is passed through the slip-off preventive device 7 before it is fitted to one-touch buckle 10 into engagement. Thus, the carrier body 2 is assembled into a bag-like shape (see Fig. 30), and the baby is accommodated in the carrier body 2.

Now, assume that in this condition the one touch buckles 21, 21' become disengaged from the one-touch buckles 10, 10'. At this point of time, as Fig. 31 shows, the one-touch buckles 21, 21' interfere with the slip-off preventive devices 7, 7', whereby the one-touch buckles 21, 21' are prevented from slipping off the one-touch buckles 10, 10' to fall. In this way, preventive measures are provided such that the back cover portion 5 will not easily become disengaged from the shoulder belts 6, 6'.

Next, after the fitting of the one-touch buckles, the buckle covers 14, 14' are wrapped around the one-touch buckles, respectively, and held by the locking hooks 17, 18 and 17', 18', as shown in Fig. 30. Thus, the one-touch buckles 10, 10' can be prevented from being exposed to the baby side. It is noted that Fig. 30 depicts only one buckle cover 14.

Further, in this process, if the baby carrier 1b is previously adjusted in size by using the belt members 20, 20' and/or the width adjuster 50 according to the size of the body of the baby to be accommodated, the baby can be held in the baby carrier 1b with more reliability.

Next, the locking hooks 26, 26' of the right and left side supports 25, 25' are fitted to the locking hooks 27, 27' of the front cover portion, in which state the sides of the baby's body are supported by the side supports 25, 25'. Further, the locking hooks 33, 33' of the head support side portions 32, 32' are fitted to the locking hooks 19, 19' of the upper portion of the shoulder belt, whereby the head of the baby is supported by the head support 30. In this way, the baby can be supported stably in the baby carrier 1b with high reliability.

In the above-described embodiment, the slip-off preventing devices 7, 7' are supported by belt pieces 8, 8' attached to the shoulder belts 6, 6' as an example. However, the present invention is not limited to the slip-off preventing devices as shown above, but may also be applied similarly to such slip-off preventing devices as shown in Figs. 32 and 33.

Referring to Figs. 32 and 33, the same numerals as in Fig. 29 denote the same or corresponding parts.

These slip-off preventing devices each have a configuration that a generally U-shaped support 29 is attached integrally to the annular portions 7, 7' corresponding to the slip-off preventing devices of the foregoing embodiment. Further, the support 29 is attached directly to the one-touch buckles 10, 10' in the case of Fig. 32, whereas the support 29 is held by the belt pieces 9, 9', respectively, together with the one-touch buckles 10, 10' in the case of Fig. 33.

Also in these cases, like the foregoing embodiment, the one-touch buckles 21, 21' can be prevented from slipping off, by the annular portions 7, 7' so that the back

cover portion 5 can be inhibited from being easily removed from the shoulder belts 6, 6'.

Such a slip-off preventing device as shown in Fig. 34 may also be adopted. This slip-off preventing device 65 is generally a box-shaped member having an opening on its bottom surface side (a side of contact with the shoulder belts 6, 6'). The slip-off preventing device 65 has side plates 71, 71 arranged on the right and left sides of the one-touch buckles 10, 10', respectively, and a cover 72 connecting the side plates 71, 71 to each other and covering from above the one-touch buckles 10, 10'.

A cutout 73 is formed at a lower portion of the cover 72, and the side plates 71, 71 are connected at their lower portions to each other by a connecting plate 74. Also, at inner surfaces of the side plates 71, 71, a pivot 75 inserted through the one-touch buckles 10, 10' is fixed by its both ends, whereby the slip-off preventing device 65 is pivotable about the center axis of the pivot 75.

In this case, for the fitting of the one-touch buckles 21, 21' to the one-touch buckles 10, 10', the one-touch buckles 21, 21' are fitted with the slip-off preventing device 65 pivoted upward, and thereafter the slip-off preventing device 65 is pivoted downward so as to be restored to the original position.

Through this process, since manipulators 45, 45' of the one-touch buckles 10, 10' are covered with the cover 72 and side plates 71, 71 of the slip-off preventing device 65, the baby-sitter or the baby can be prevented from misoperating the manipulators 45, 45' during the use of the baby carrier 1b. Also, even if the one-touch buckles 21, 21' are disengaged from the one-touch buckles 10, 10', the connecting plate 74 and the side plates 71 function in the same way as the slip-off preventing devices 7, 7' of the foregoing embodiment, so that the one-touch buckles 21, 21' can be prevented from slipping off.

In Fig. 34, the pivot 75 has been attached directly to the one-touch buckles 10, 10'. However, the pivot 75 may alternatively be held by the belt pieces 9, 9' in the same way as the slip-off preventing device shown in Fig. 33 is attached.

Figs. 35 to 37 show a cover-equipped buckle which is a modification of Fig. 34. This cover-equipped buckle 100 comprises a one-touch buckle 83 attached at an end of a belt 82, a one-touch buckle 96 attached at an end of a belt 95 and removably fittable to the one-touch buckle 83, and a cover 85 which is openable and closable and which covers a manipulator 84 of the one-touch buckle 83.

The cover 85, as shown in Fig. 36, has a pivot 86 on its base end side. On the other hand, the one-touch buckle 83 has on its base end side a fitting recess 87 to which the pivot 86 can be removably fitted. By the pivot 86 being fitted into the fitting recess 87, the cover 85 is pivoted about the center line of the pivot 86, so that it can be positioned into either a closed position to cover the manipulator 84 of the one-touch buckle 83 (a position shown by solid line in Fig. 35) or an open position to which the cover 85 comes through an upward pivoting (a position

shown by one-dot chain line in Fig. 35).

Further, the pivot 86 is fitted into the fitting recess 87 by a base-end-side end portion 88 of the one-touch buckle 83 being elastically deformed. Thus, the cover 85 is prevented from being easily removed from the one-touch buckle 83 after having been attached thereto.

The cover 85 has an oval-shaped opening 85a formed therein. When the one-touch buckle 83 and 96 are fitted thereto, a circular base portion 97 of the one-touch buckle 96 will be fitted into the opening 85a as shown in Fig. 37.

The cover 85 also has a rectangular opening 85b formed on its base end side. This opening 85b will be located above a slit 89 (Fig. 36) provided in the one-touch buckle 83 for the insertion of the belt 82, when the cover 85 is brought into the closed position. Thus, with the one-touch buckle 83 attached to the belt 82, the cover 85 can be moved to the closed position smoothly.

Such a cover-equipped buckle 100 may also be applied to not only the above-described slip-off preventing device of the baby carrier but also, for example, the safety belt of a baby carriage as shown in Fig. 38.

Referring to Fig. 38, this baby carriage 110 has the cover-equipped buckle 100 incorporated as a safety belt at a place where a back pad 111 and a seat pad 112 of the seat interconnect each other. With the use of the cover-equipped buckle 100 as such a safety belt for baby carriages, the baby can be prevented from mis-removing the safety belt, with a simple mechanism.

The cover-equipped buckle 100 may be applied also to belt-equipped products such as bags, similarly.

It is to be understood by those skilled in the art that many different embodiments of this invention may be made in the light of the above teachings and without departing from the spirit and essential characteristics of the invention. It is further understood that the foregoing embodiments, in all respects, be regarded to be illustrative and not restrictive. Consequently, while the invention has been described with reference to particular embodiments, it will be obvious to those skilled in the art that changes and modifications in construction and other details may be made within the spirit and the scope of the invention.

Claims

1. A baby carrier (1), (1b), (70) for use in carrying a baby as supported therein, comprising:

a carrier body (2) having a front cover portion (3), a crotch cover portion (4), and a back cover portion (5) which are integrally formed in continuation;

shoulder belts (6), (6') extending downward from lower opposite ends of the front cover portion (3), the shoulder belts (6), (6') having at their

respective upper portions one-touch buckles (10), (10') or (92), (92') fitted thereto and, at their respective lower ends, one-touch buckles (12), (12') fitted thereto, the one-touch buckles (10), (10') or (92), (92') serving as fastening means;

belt members (15), (15') extending from the crotch cover portion (4) in opposite lateral directions and having one-touch buckles (16), (16') fitted thereto at their distal ends, the one-touch buckles (16), (16') being releasably engageable with the one-touch buckles (12), (12');

one-touch buckles (21), (21'), operative as fastening means, disposed at sites above or at upper opposite sides of the back cover portion (5) and releasably engageable with the one-touch buckles (10), (10') or (92), (92') of the shoulder belts (6), (6'); and

side supports (25), (25') projecting laterally from upper opposite sides of the back cover portion (5) for supporting sides of the baby's torso, the side supports (25), (25') being removably engageable with locking hooks (27), (27') affixed to opposite sides of the front cover portion (3).

2. A baby carrier as set forth in claim 1, further comprising a head support (30) removably provided on the back cover portion (5) for supporting the head of the baby, the sides (32), (32') of the head support (30) being releasably engageable with locking hooks (19), (19') affixed to the shoulder belts (6), (6').
3. A baby carrier as set forth in claim 1, wherein the one-touch buckles (21), (21') at the back cover portion (5) are fitted to length-adjustable belt members (20), (20').
4. A baby carrier as set forth in claim 1, wherein the crotch cover portion (4) includes a waist belt (60) removably attached thereto for attachment around the nursing person's waist.
5. A baby carrier as set forth in claim 1, wherein the one-touch buckles (92), (92') which constitute the fastening means at respective upper portions of the shoulder belts (6), (6') are fitted in position through belt members (91), (91') extending in the direction in which the shoulder belts (6), (6') extend.
6. A baby carrier as set forth in claim 1, wherein the fastening means of the shoulder belts (6), (6') comprise one-touch buckles (92), (92') fitted in position through belt members (91), (91') extending in the direction in which the shoulder belts (6), (6') extend, and engaging members provided at base sites of the

belt members (91), (91');

the fastening means of the back cover portion (5) comprise one-touch buckles (21), (21') adapted to be removably engaged by the one-touch buckles (92), (92') of the shoulder belts (6), (6'), and engagement members adapted to be releasably engaged by the engaging members of the shoulder belts (6), (6');

One of the engaging member pair and the engagement member pair is hook members (81), (81'), the other being annular members (80), (80'), whereby the belt members (91), (91') overlie the hook members (81), (81') and annular members (80), (80') during engagement of said pairs of one-touch buckles.

7. A baby carrier as set forth in claim 2, wherein the head support (30) comprises a first cushioning material (41) disposed so as to be positioned adjacent the head of the baby for absorbing comparatively small impact force, a second cushioning material (43) disposed externally of the first cushioning material (41) for absorbing comparatively large impact force, and a third cushioning material (42) disposed intermediate the first and second cushioning materials for absorbing impact force of medium order.
8. A baby carrier as set forth in claim 6, wherein the one-touch buckles (92), (92') are fitted with an open/close switchable cover (93) for covering manipulator portions (92a), (92'a) of the one-touch buckles (92), (92').
9. In a baby carrier for use in carrying a baby as supported therein, a head support (30) for the baby carrier adapted to be removably provided for supporting the head of the baby, comprising:
 - a head support body (31) for contact with the baby's head from behind,
 - jutting portions (32), (32') projecting from the head support body (31) in opposite lateral directions and having locking hooks (33), (33') releasably engageable with the baby carrier.
10. A head support for a baby carrier as set forth in claim 9, wherein the jutting portions (32), (32') are each provided with a plurality of locking hooks (33), (33') in spaced relation in respective directions in which the jutting portions project.
11. A head support for a baby carrier as set forth in claim 9, wherein the jutting portions (32), (32') are each provided with a resilient member (36) which is

extendable and contractible in the direction in which respective jutting portion projects.

- 12.** A head support for a baby carrier as set forth in claim 9, wherein the head support body (31) comprises a first cushioning material (41) disposed so as to be positioned adjacent the head of the baby for absorbing comparatively small impact force, a second cushioning material (43) disposed externally of the first cushioning material (41) for absorbing comparatively large impact force, and a third cushioning material (42) disposed intermediate the first and second cushioning materials for absorbing impact force of medium order.

- 13.** A baby carrier (1a) for use in carrying a baby as supported therein, comprising:

a carrier body (2) having a front cover portion (3), a crotch cover portion (4), and a back cover portion (5) which are integrally formed in continuation;

a pair of shoulder belts (6), (6'), right and left, extending downward from opposite ends of a lower portion of the front cover portion (3), the shoulder belts (6), (6') having at their respective upper portions one-touch buckles (10), (10') fitted thereto and, at their respective lower ends, one-touch buckles (12), (12') fitted thereto;

a pair of belt members (15), (15'), right and left, extending from a lower portion of the crotch cover portion (4) in opposite lateral directions and having one-touch buckles (16), (16') fitted thereto which are removably engageable with the one-touch buckles (12), (12');

a pair of locking belts (20), (20'), right and left, pivotably mounted at one end on a stationary pin (28) fixed centrally in an upper portion of the back cover portion (5), the locking belts (20), (20') extending in lateral opposite directions and having one-touch buckles (21), (21') capable of being disengageably brought in lock engagement with the one-touch buckles (10), (10') of the shoulder belts (6), (6'); and

belt loops (38), (38') and (39), (39') for passing respective locking belts (20), (20') therethrough arranged in plurality along opposite side edges of the back cover portion (5) and in vertically spaced relation.

- 14.** A baby carrier as set forth in claim 13, wherein the locking belts (20), (20') are adjustable in length.

- 15.** A baby carrier as set forth in claim 13, wherein a head support (30) for supporting the head of the baby is removably provided on the back cover portion (5).

- 16.** A baby carrier (1b) for use in carrying a baby as supported therein which includes a carrier body (2) having a front cover portion (3), a crotch cover portion (4), and a back cover portion (5) which are integrally formed in continuation, the baby carrier comprising:

shoulder belts (6), (6') provided at opposite lateral extremities of the front cover portion (3), the shoulder belts (6), (6') having at their distal end side one-touch buckles (12), (12') fitted thereto and, at their proximal end side, one-touch buckles (10), (10') or (83) fitted thereto;

belt members (15), (15') provided at opposite sides of the crotch cover portion (4) and having at distal ends thereof one-touch buckles (16), (16') fitted thereto which are removably engageable with the one-touch buckles (12), (12');

one-touch buckles (21), (21') or (96) provided at opposite lateral extremities of the back cover portion (5) which are releasably engageable with the one-touch buckles (10), (10') or (83) of the shoulder belts (6), (6'); and

the shoulder belts (6), (6') including slip-off preventive members (7), (7'), (65) or (100) for preventing one-touch buckles (21), (21') or (96) of the back cover portion (5) from slipping off the one-touch buckles (10), (10') or (83) during non-engagement of the one-touch buckles (10), (10') or (83) and (21), (21') or (96).

- 17.** A baby carrier as set forth in claim 16, wherein the slip-off preventive members (7), (7') have annular portions (7a), (7'a) for preventing slip-off of one-touch buckles (21), (21') of the back cover portion (5) and are supported by belt pieces (8), (8') attached to the shoulder belts (6), (6').

- 18.** A baby carrier as set forth in claim 16, wherein the slip-off preventive members (7), (7') have annular portions (7a), (7'a) for preventing slip-off of one-touch buckles (21), (21') of the back cover portion (5) and are fitted to the one-touch buckles (10), (10') of the shoulder belts (6), (6').

- 19.** A baby carrier as set forth in claim 16, wherein the slip-off preventive members (7), (7') have annular portions (7a), (7'a) for preventing slip-off of one-touch buckles (21), (21') of the back cover portion (5) and are supported by mounting belt pieces (9), (9') for the one-touch buckles (10), (10') of the shoulder belts (6), (6').

- 20.** A baby carrier as set forth in claim 16, wherein the slip-off preventive members (65) or (100) are provided with covers (71), (72) or (85) for covering manipulator elements (45), (45') or (84) for the one-touch buckles (10), (10') or (83).

21. A cover-equipped buckle (100) comprising a first buckle (83) fitted to a distal end of a first belt (82) and provided with a manipulator element (84), a second buckle (96) fitted to a distal end of a second belt (95) and releasably engageable with the first buckle (83), and an open/close switchable cover (85) for covering the manipulator element (84). 5
22. A baby carrier (1,1a,1b,70) comprising a carrier body (2) having respective portions (3,4,5) which in use cover the abdomen, crotch and back of the baby being carried; shoulder straps (6,6') extending from the abdomen cover portion and having fastening means (12,12') at end portions thereof remote from the abdomen cover portion (3) which are releasably engageable with cooperable fastening means (16,16') attached to said body at, or adjacent to, said crotch portion; and further fastening means (21,21') attached to said back cover portion (5) at locations remote from said crotch portion (4) and on opposite sides of said back cover portion (5), which further fastening means (21,21') are releasably engageable with cooperable fastening means (10,10'; 90,90') attached to or adjacent to end portions of said shoulder straps (6,6') adjacent said abdomen cover portion (3). 10 15 20 25

30

35

40

45

50

55

FIG. 1

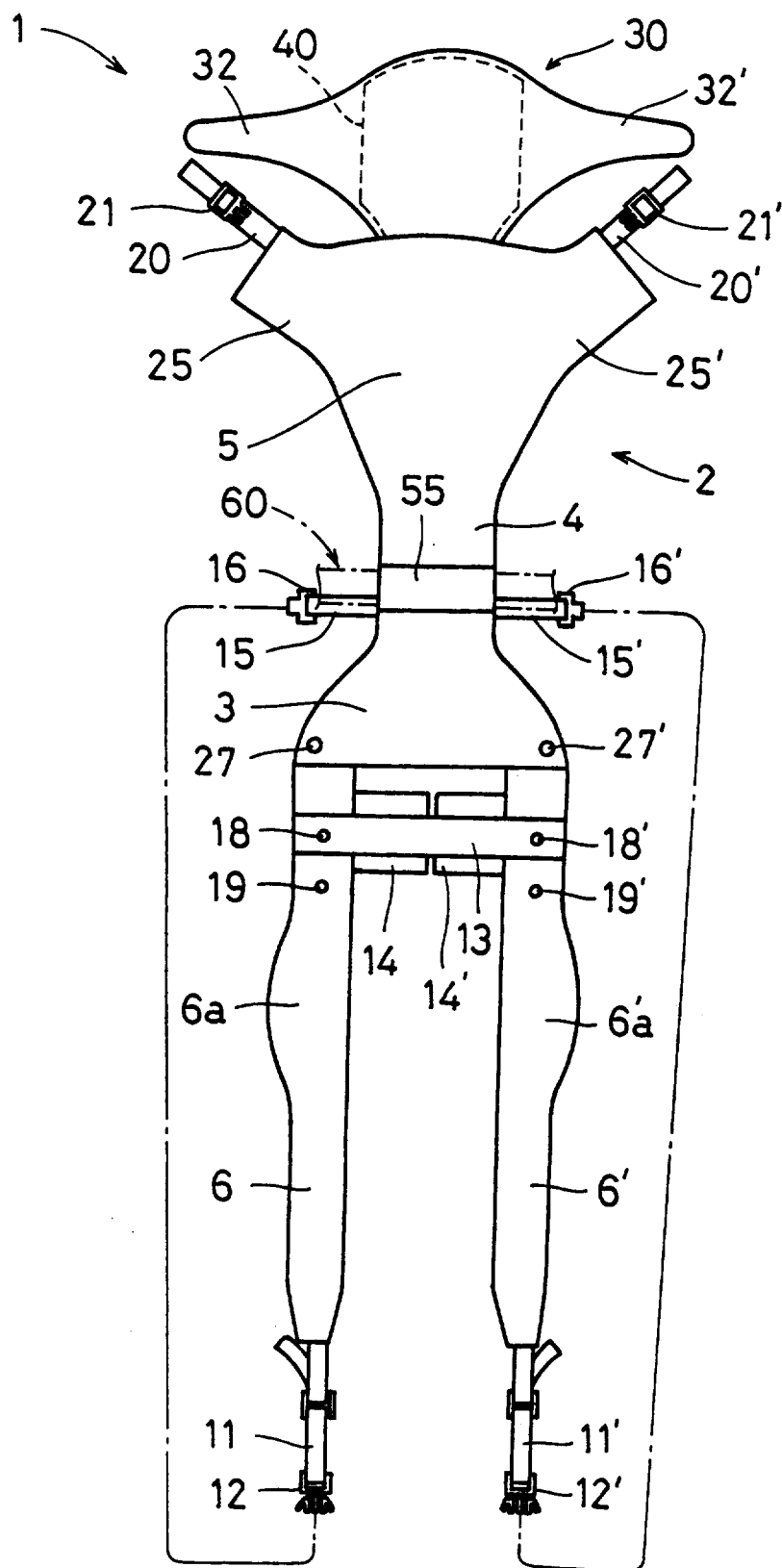


FIG. 2

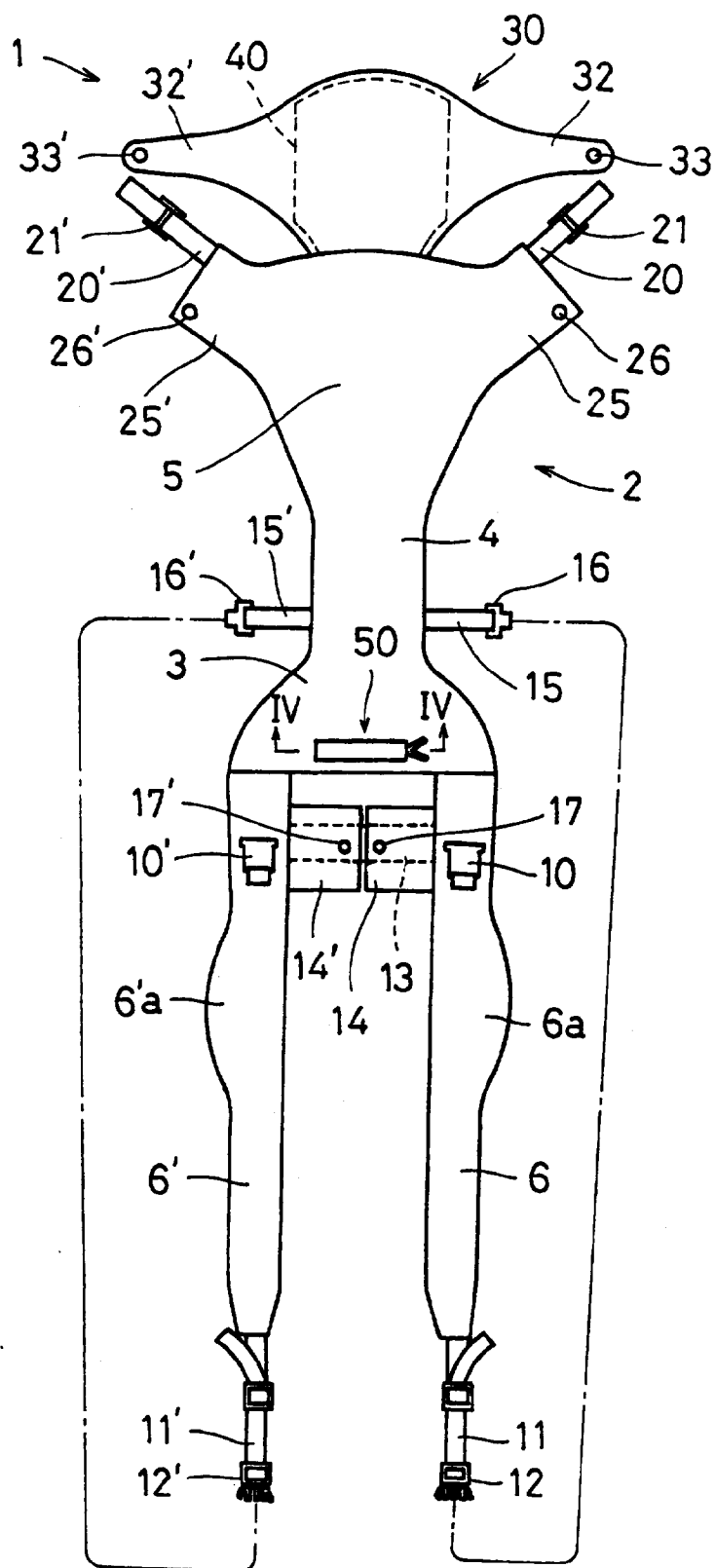


FIG. 3

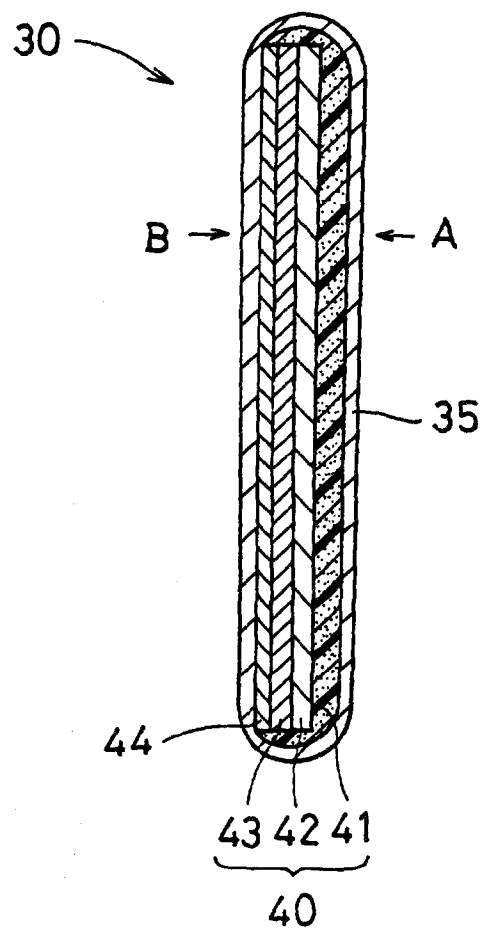


FIG. 4

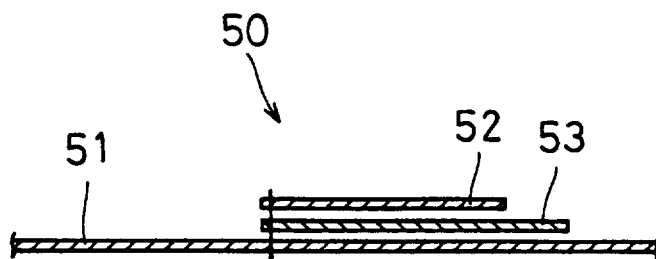


FIG. 5

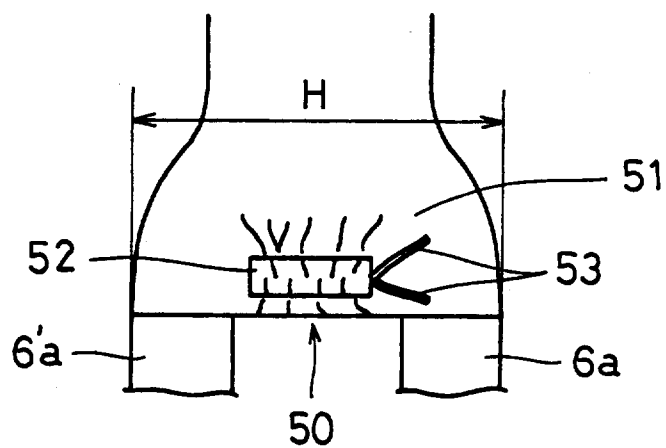


FIG. 6

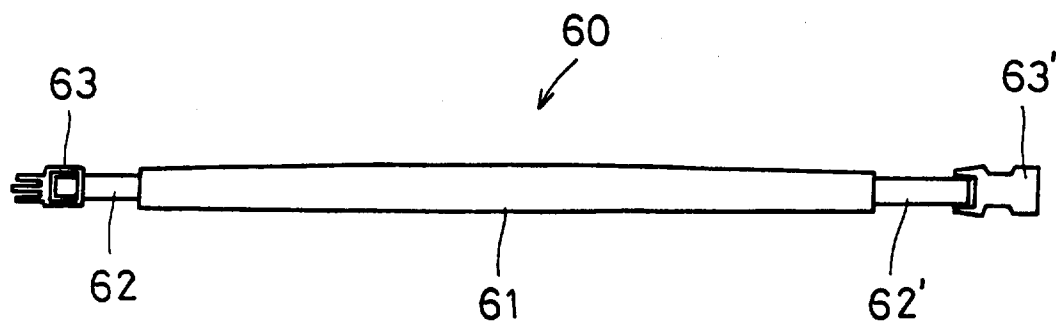


FIG. 7

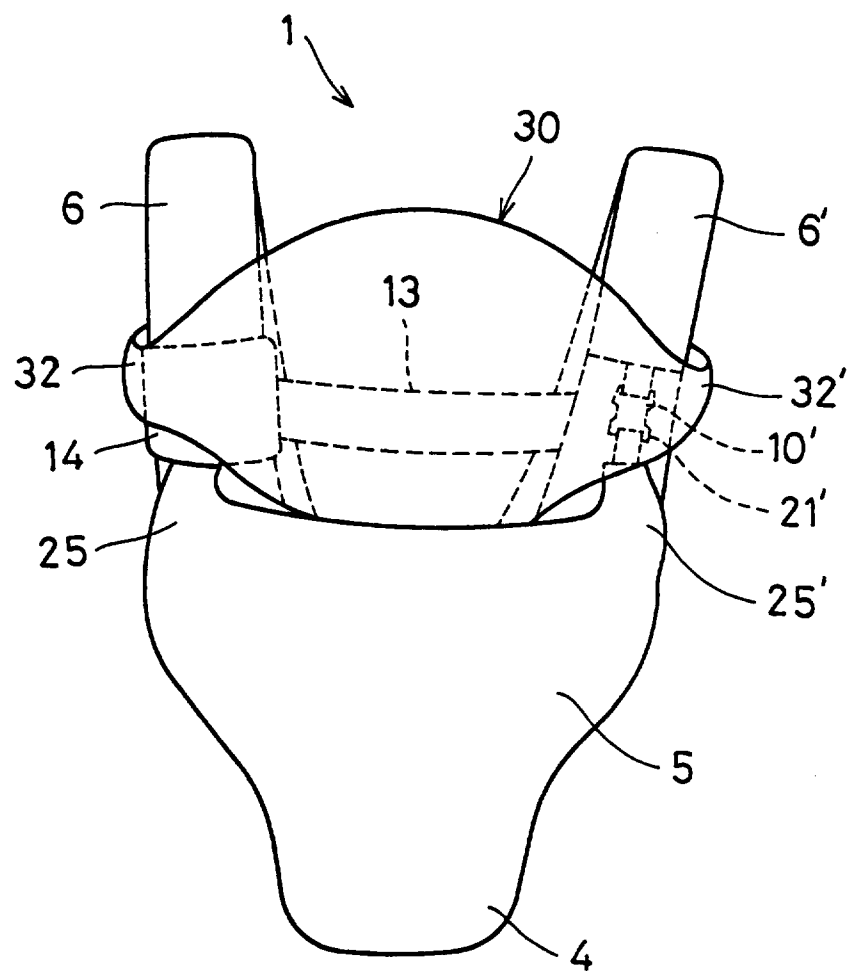


FIG. 8

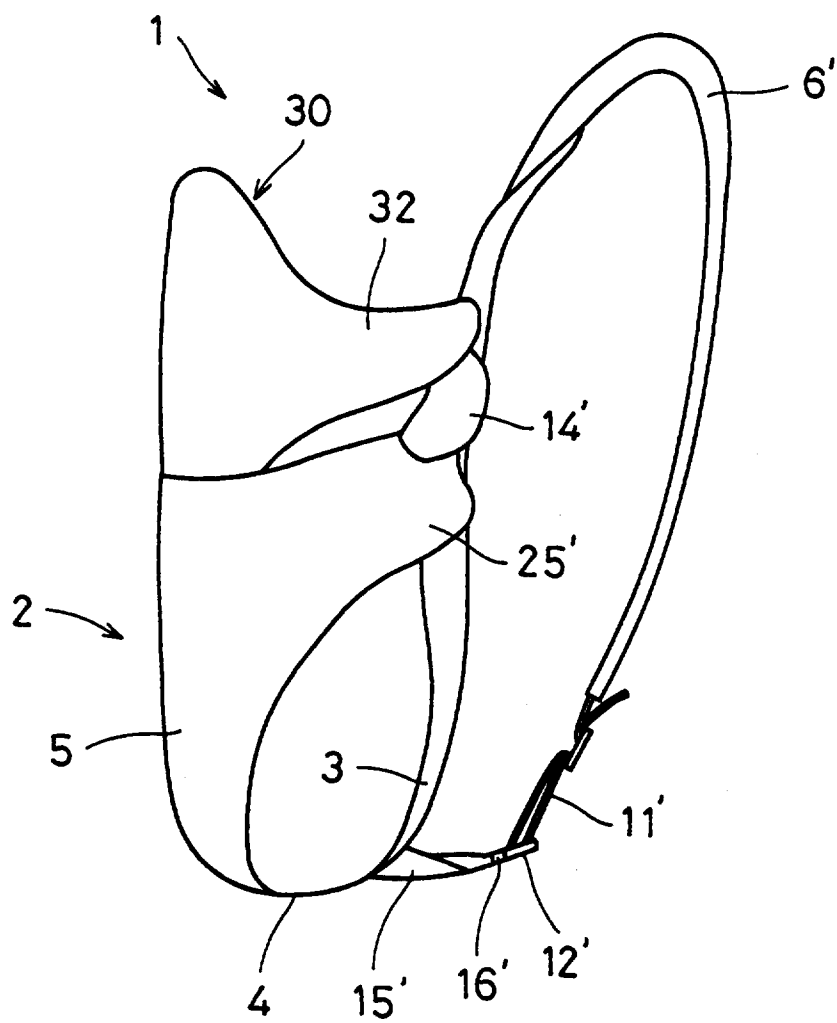


FIG. 9

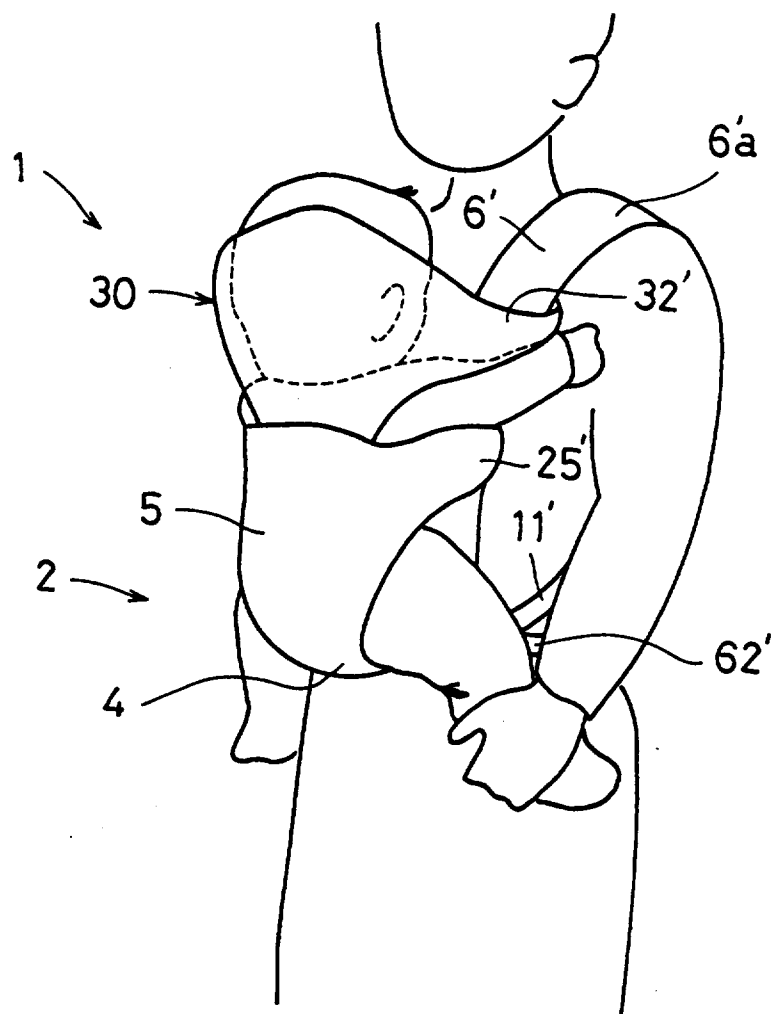


FIG.10

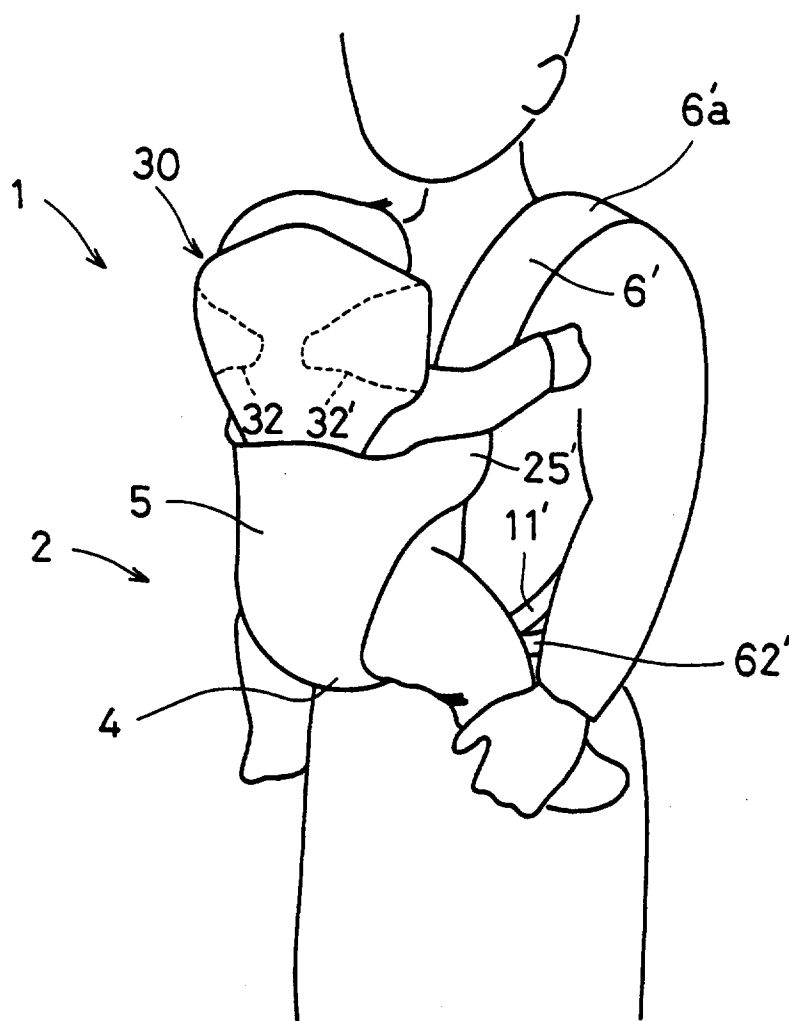


FIG.11

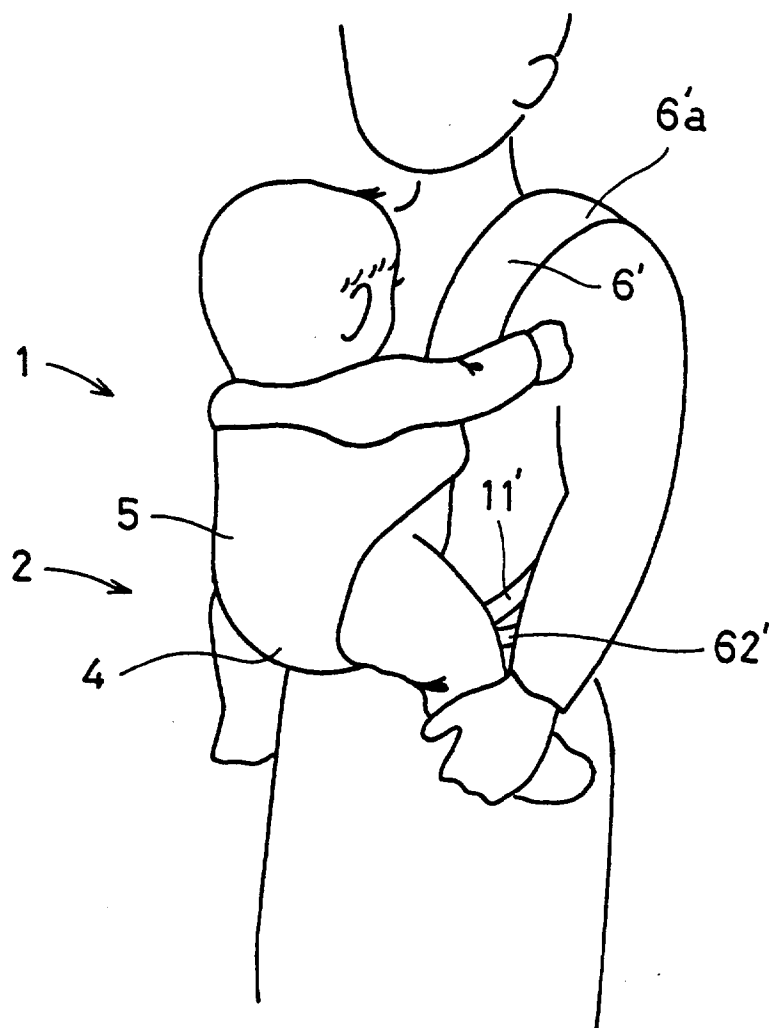


FIG.12

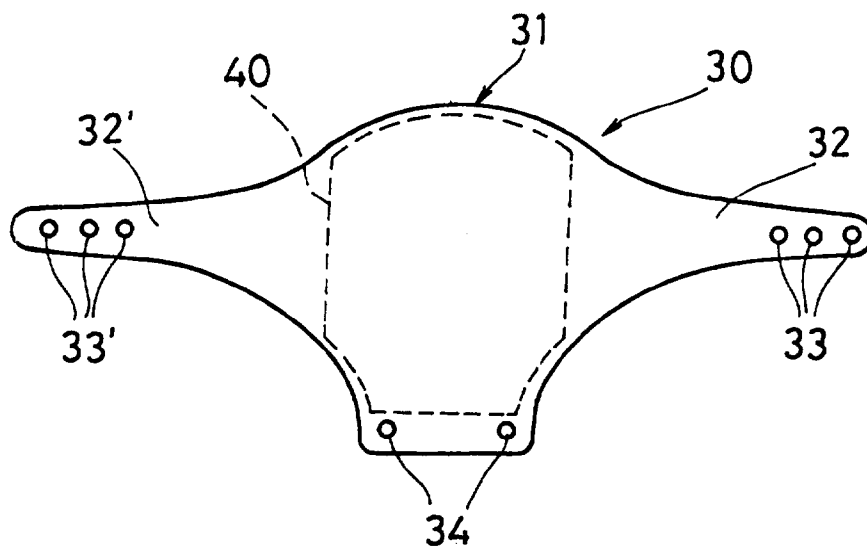


FIG.13 A

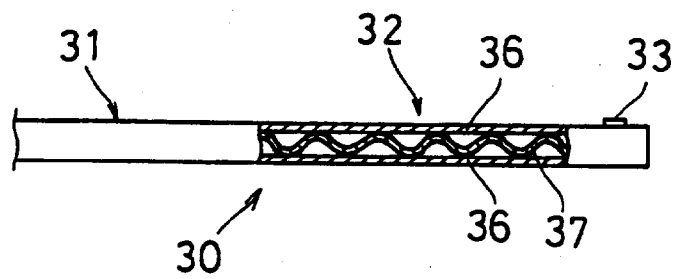


FIG.13 B

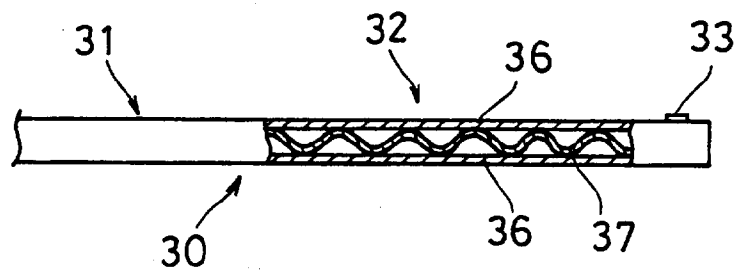


FIG.14

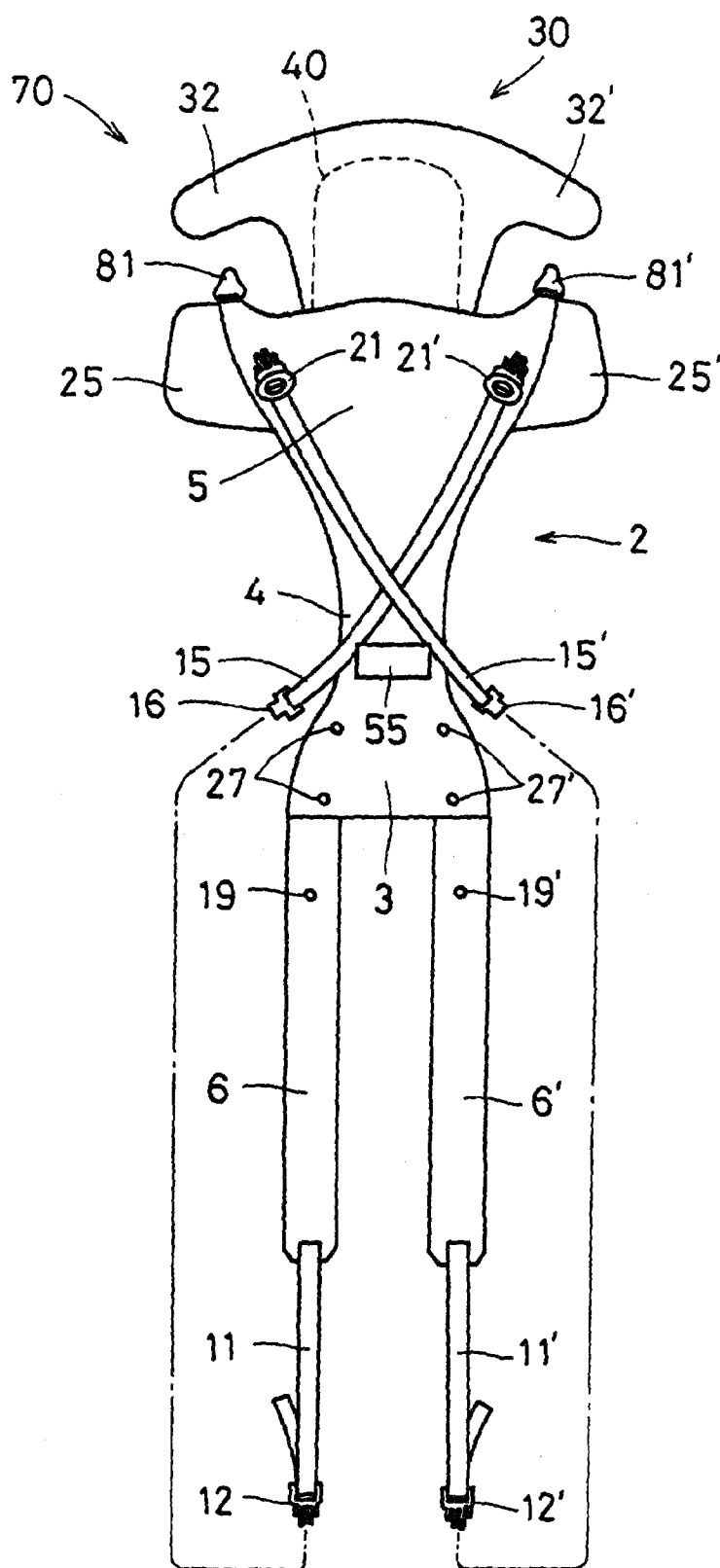


FIG.15

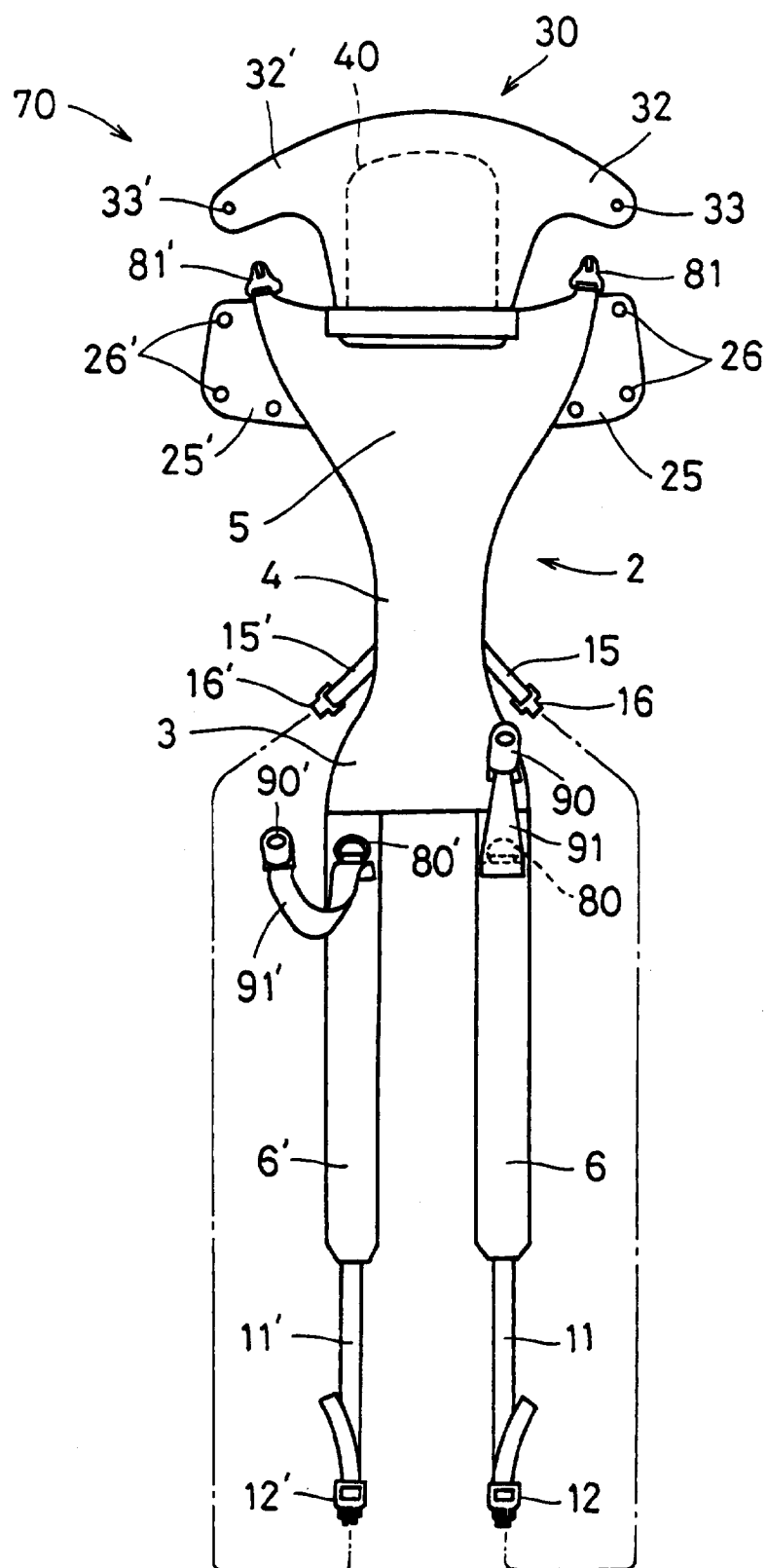


FIG.16

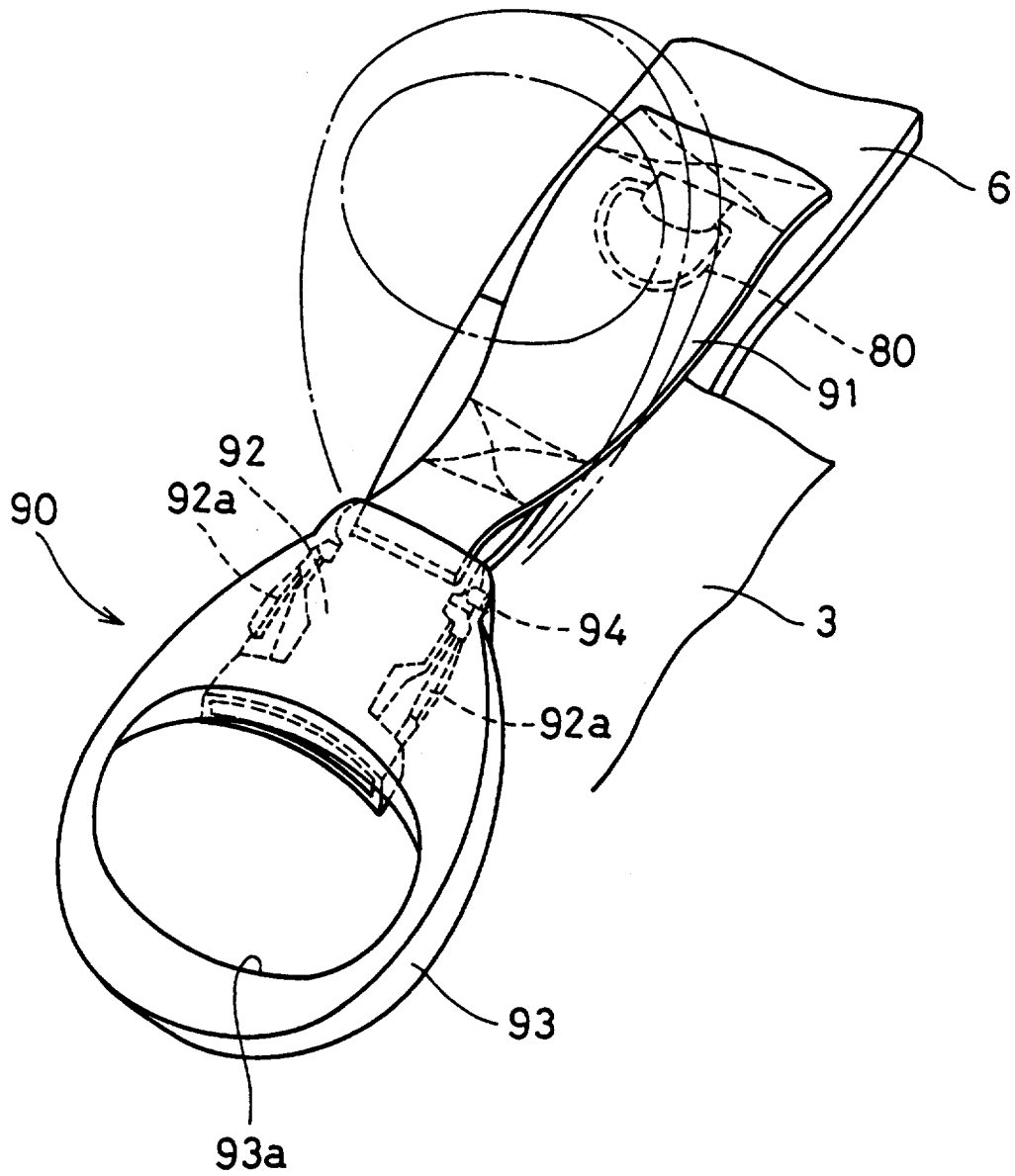


FIG.17

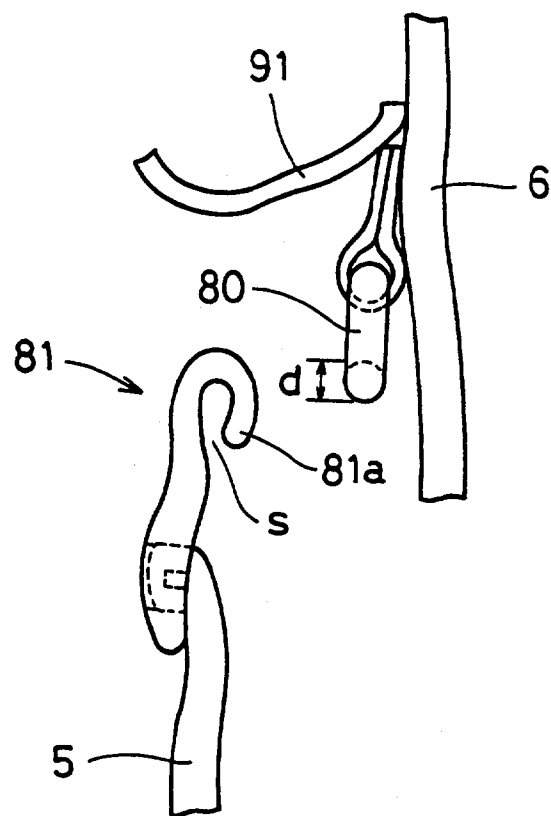


FIG.18

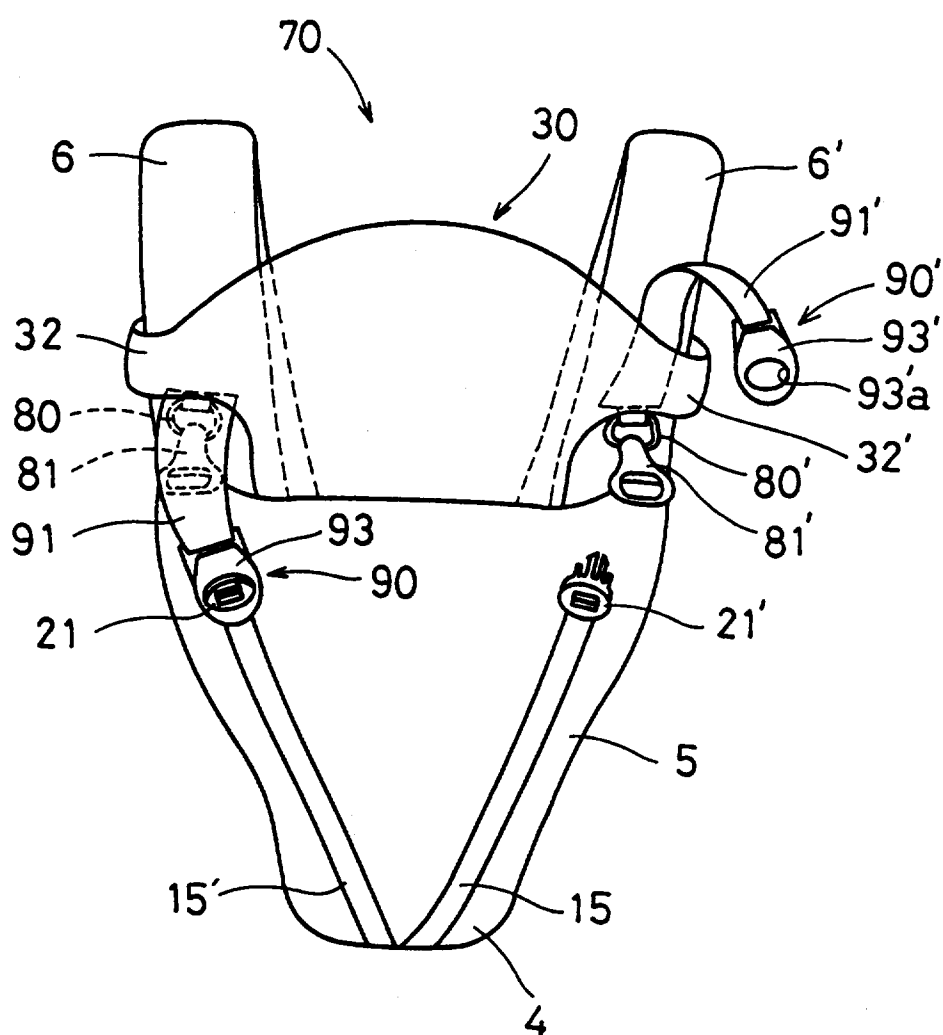


FIG.19

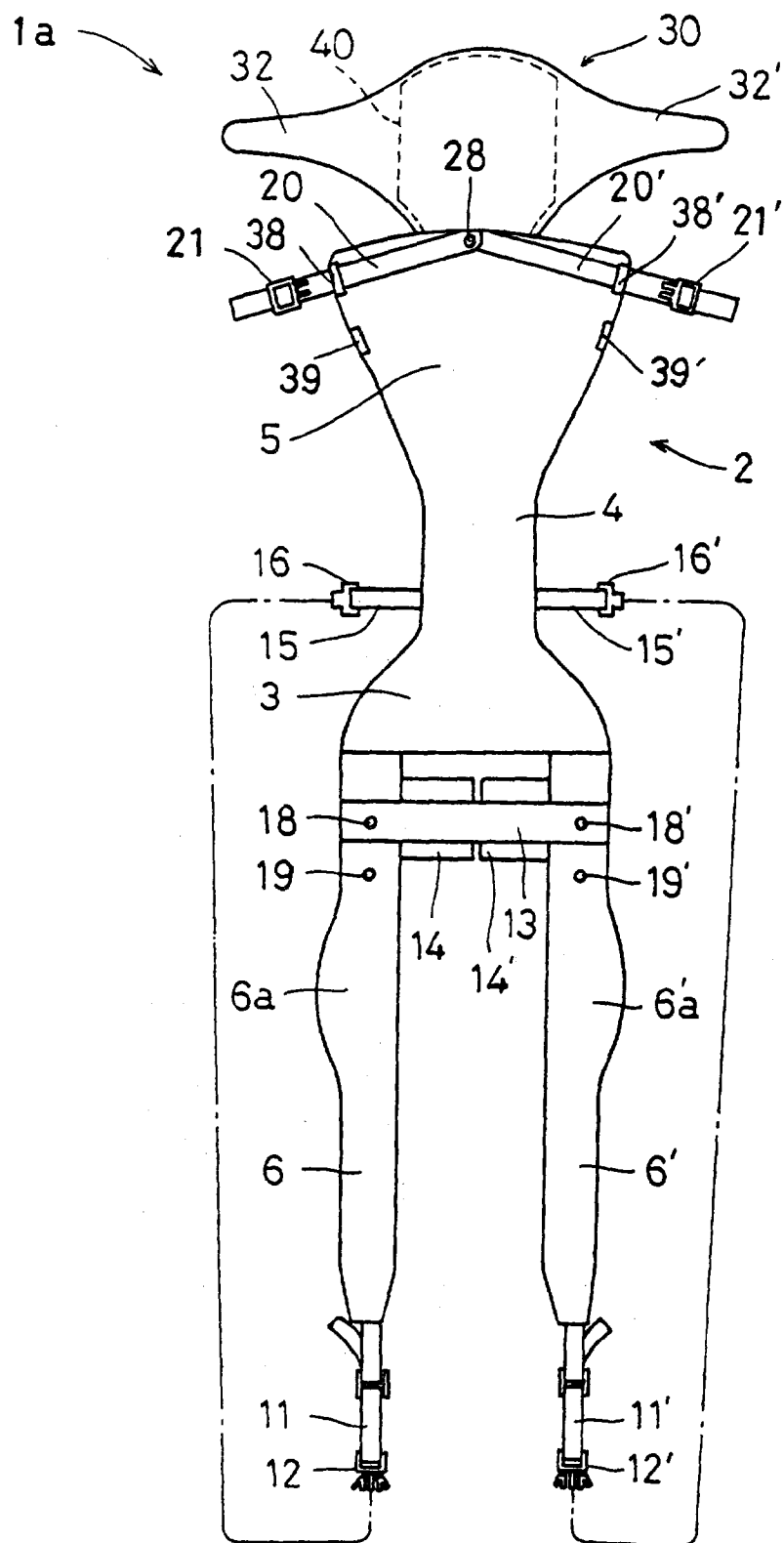


FIG. 20

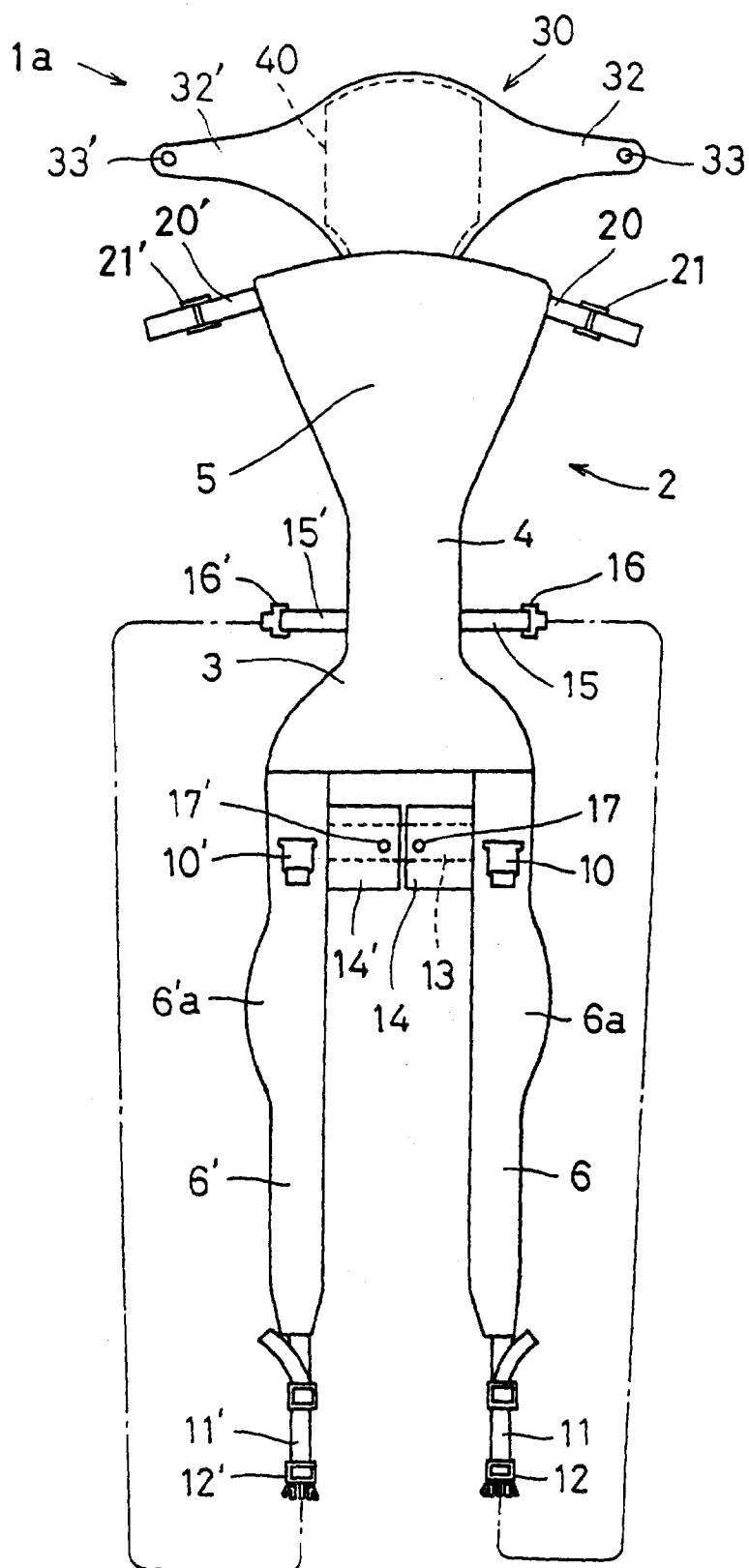


FIG. 21

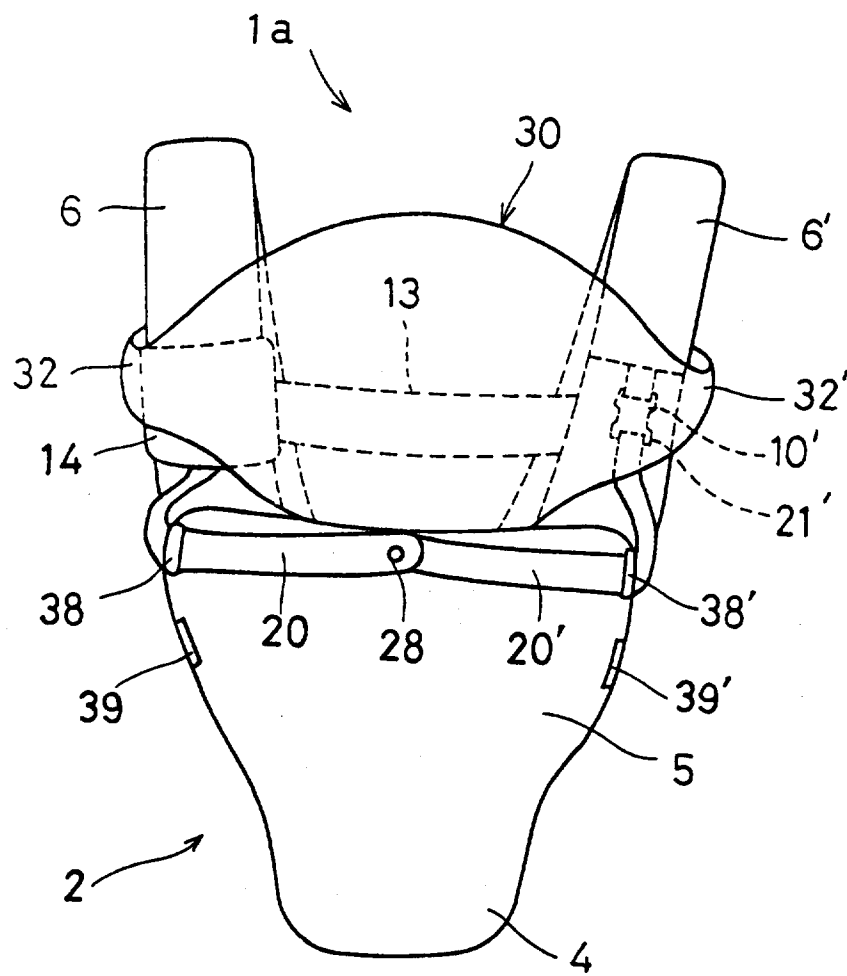


FIG. 22

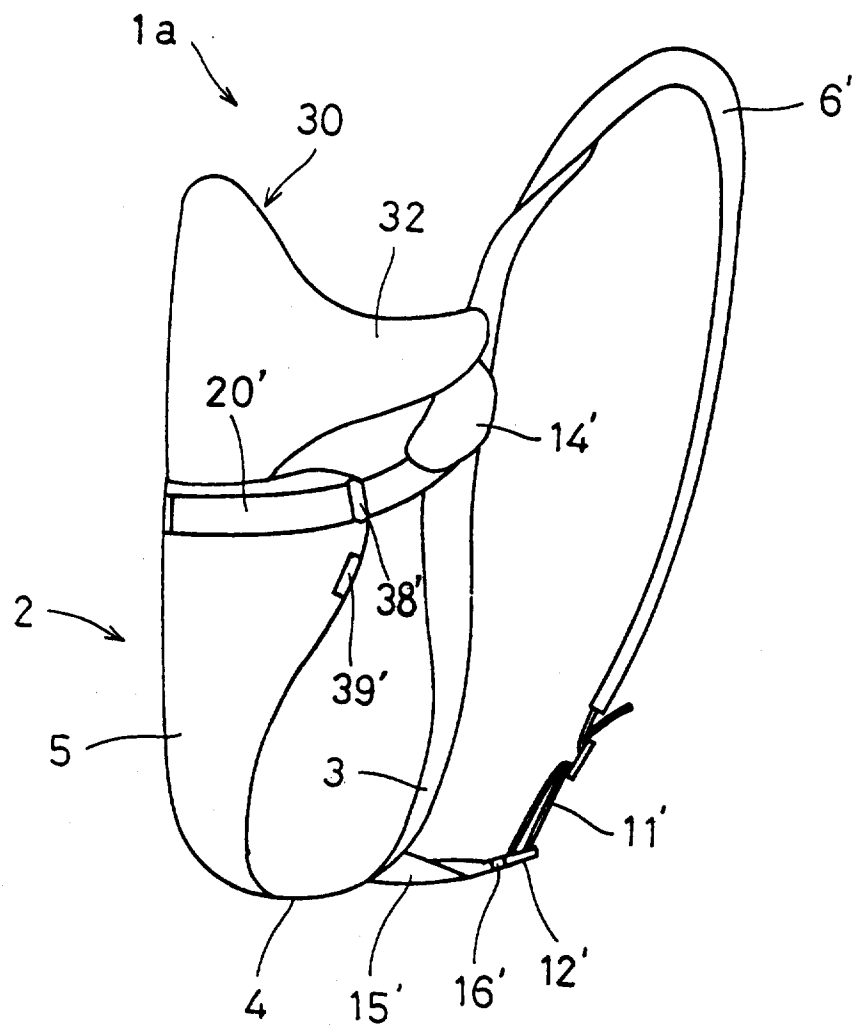


FIG. 23

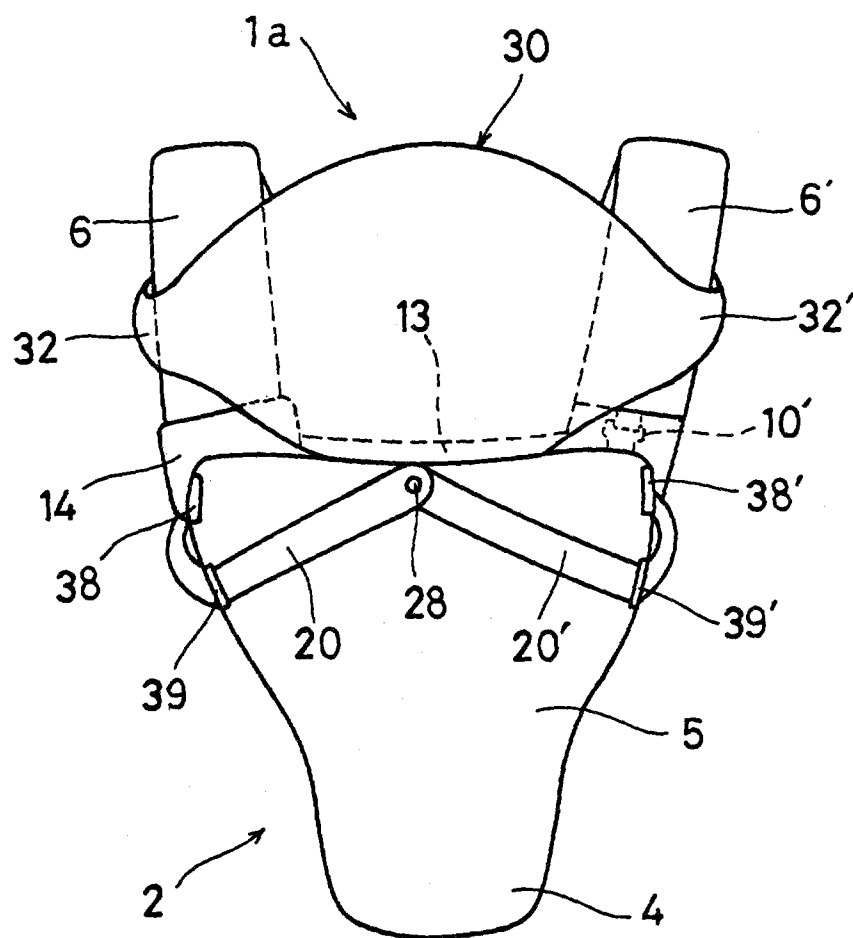


FIG. 24

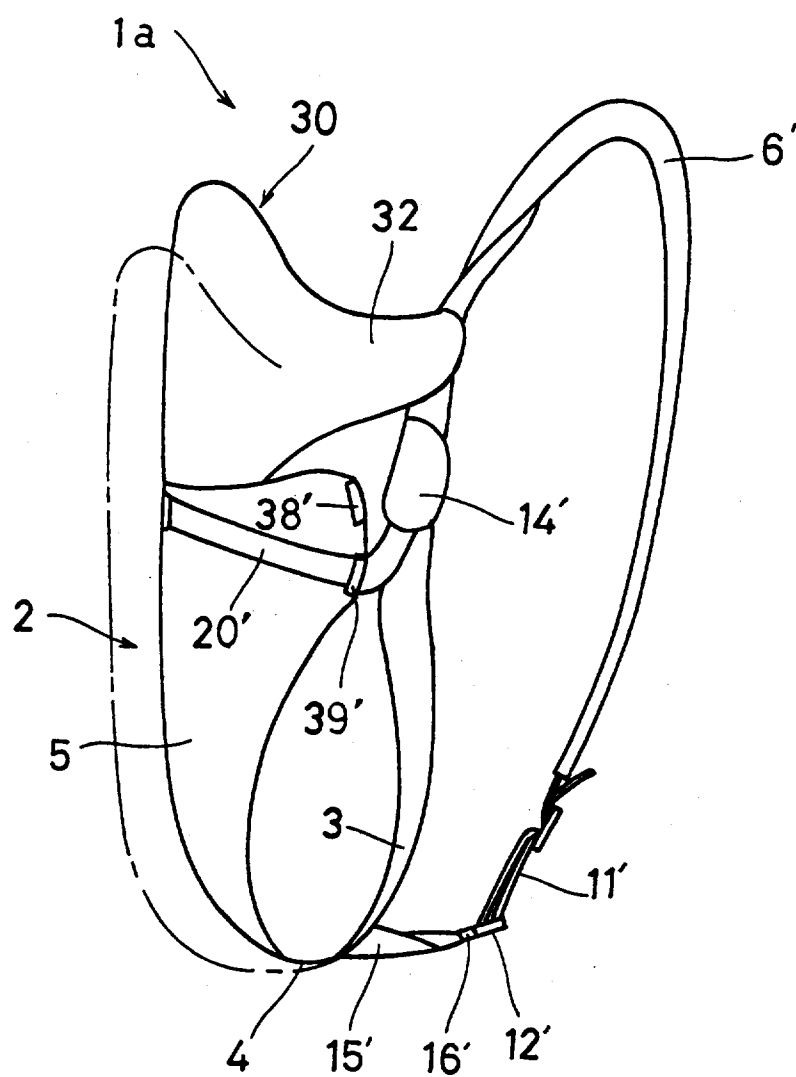


FIG. 25

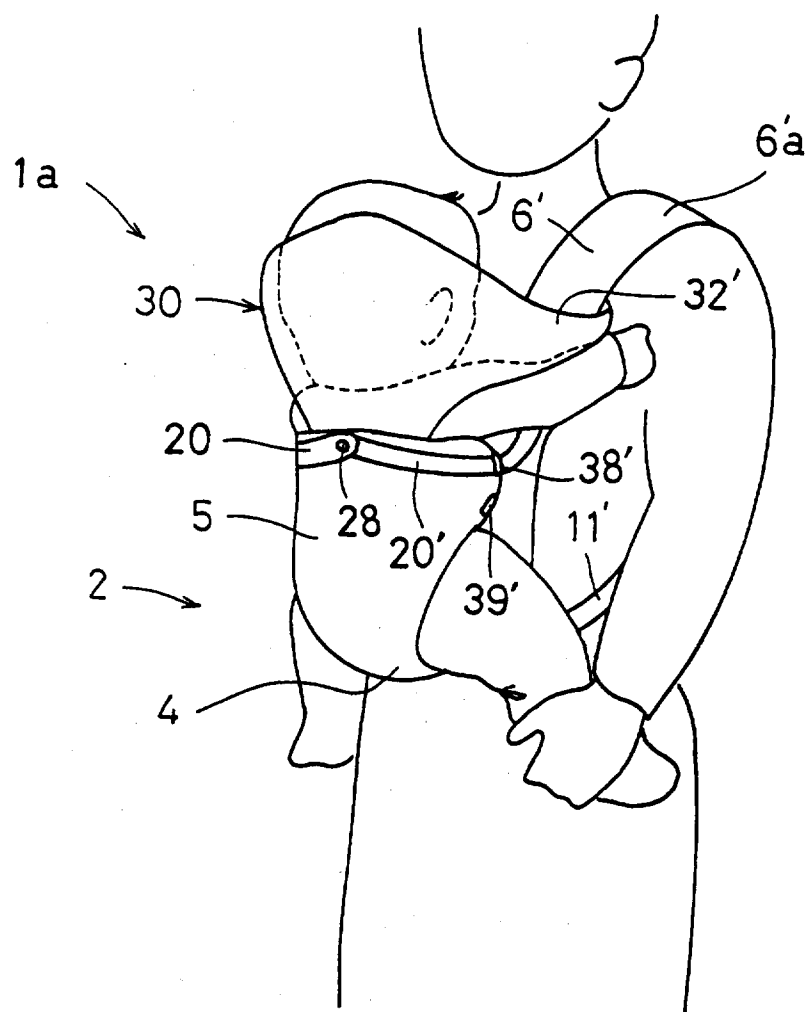


FIG. 26

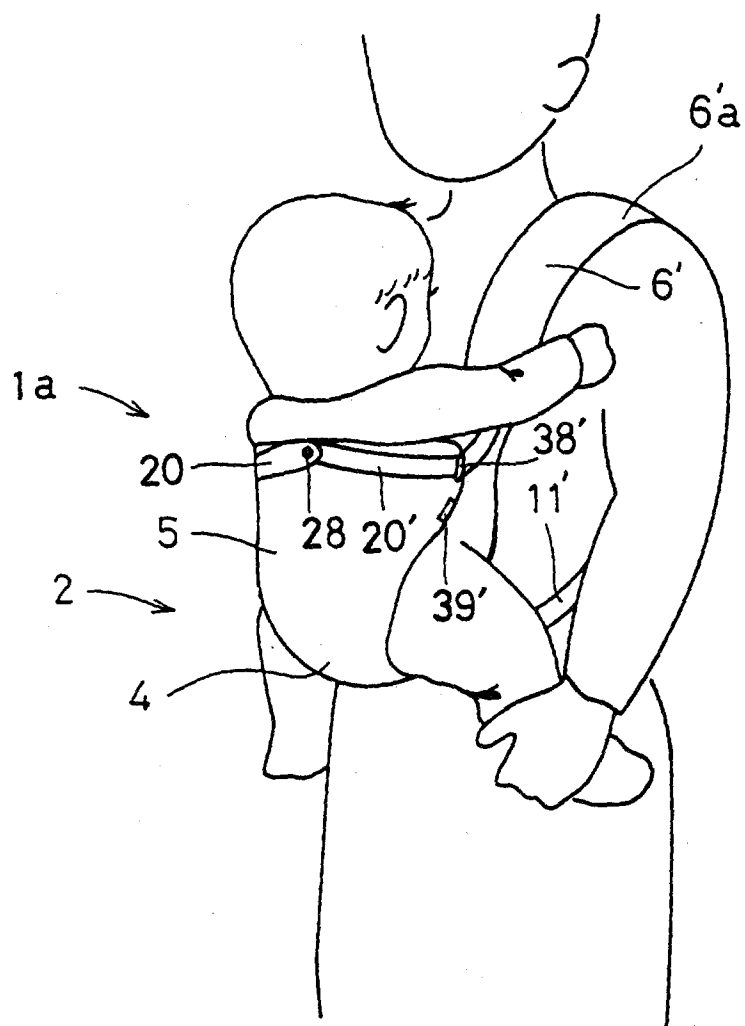


FIG. 27

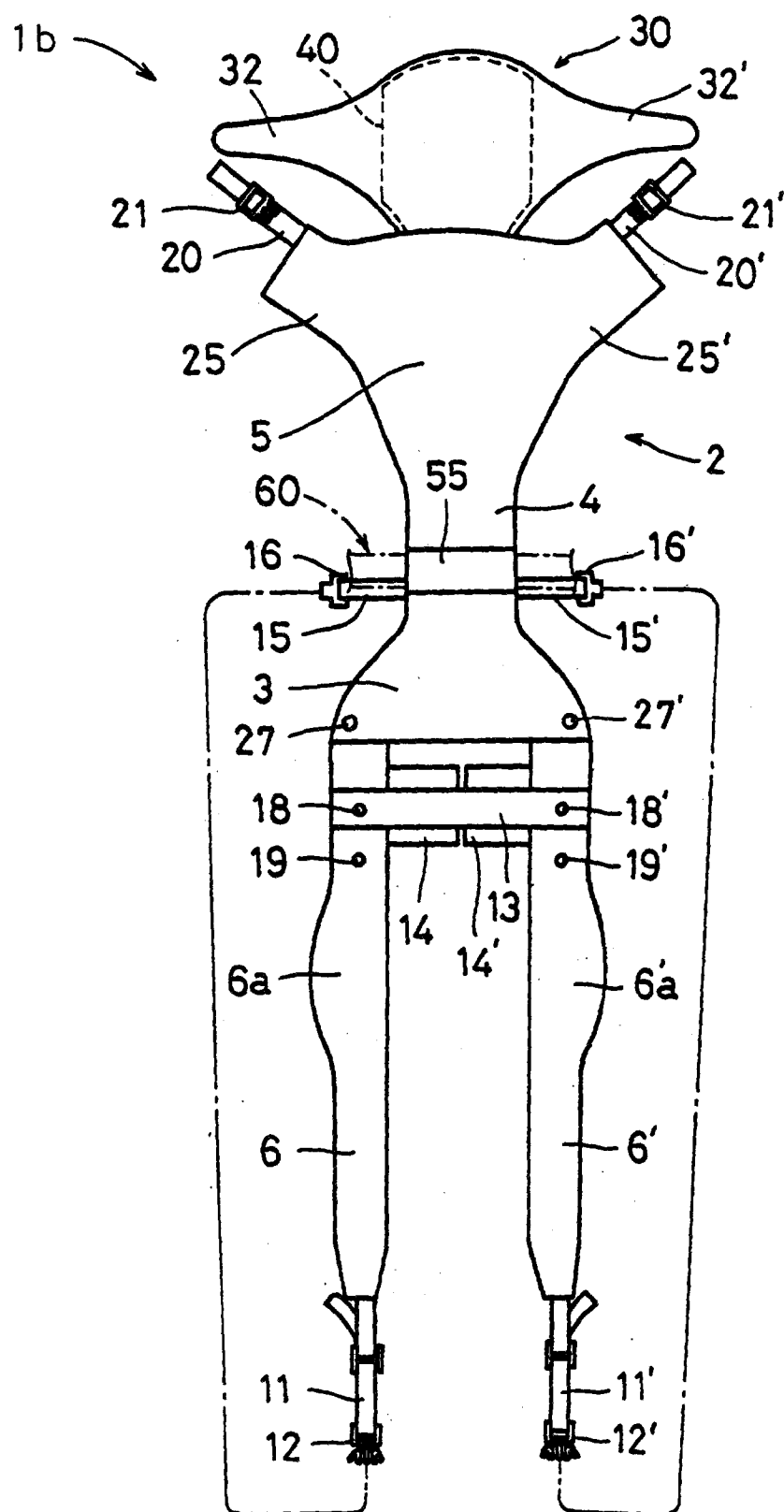


FIG. 28

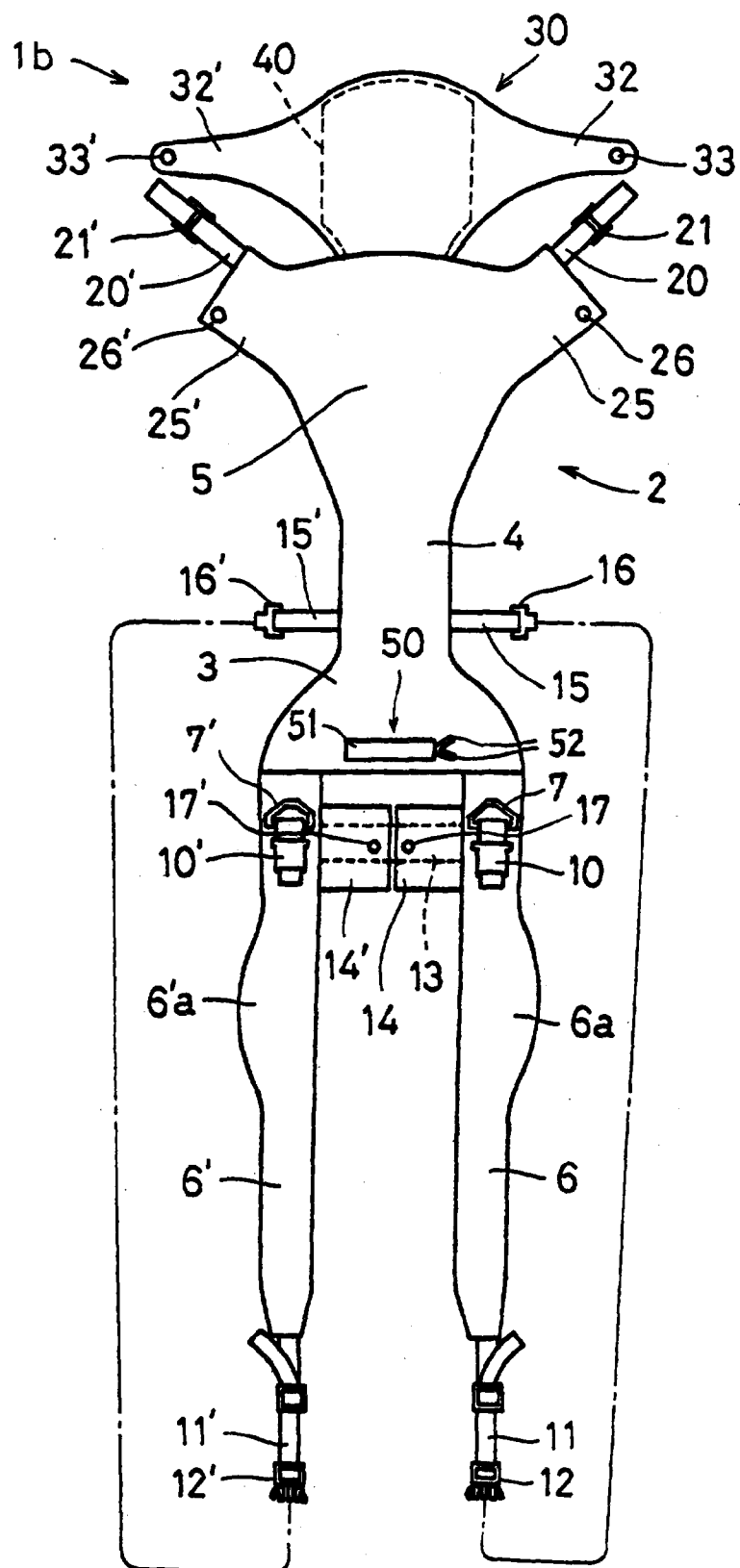


FIG. 29

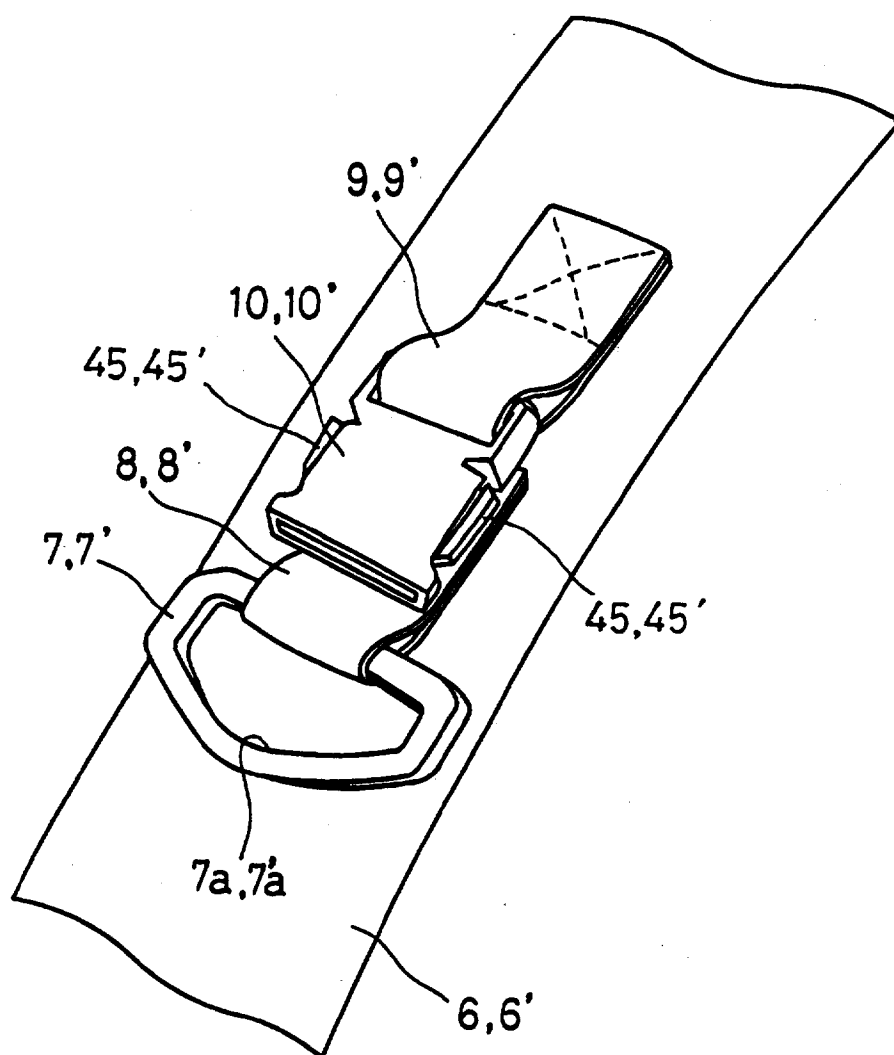


FIG. 30

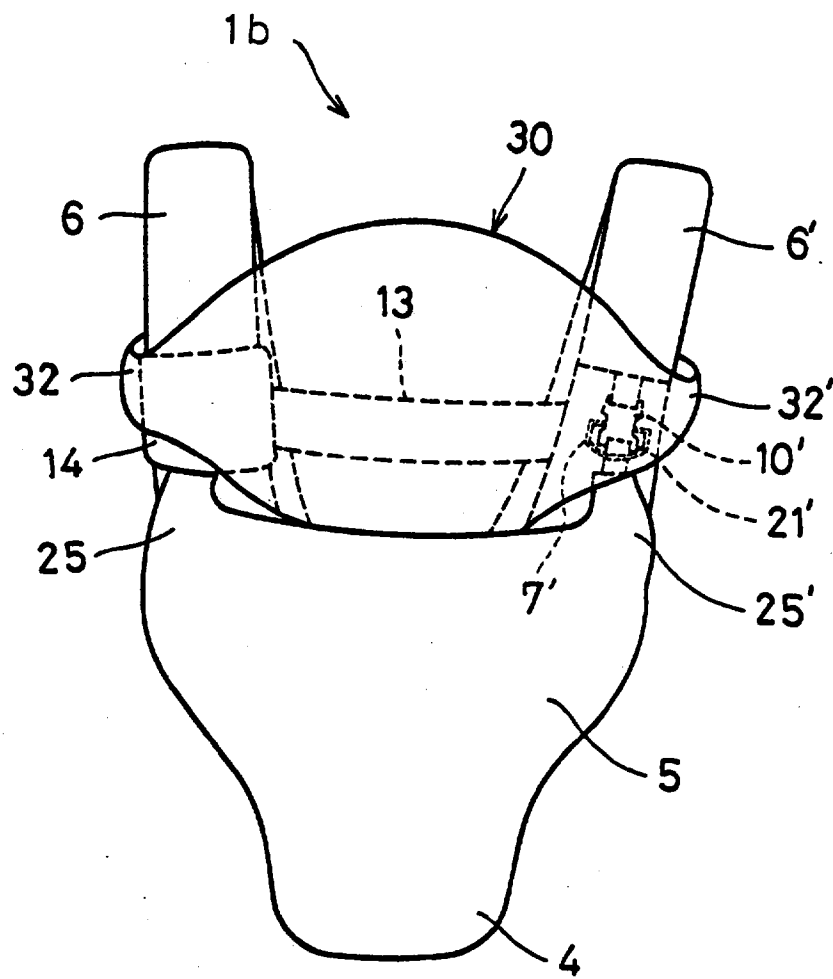


FIG. 31

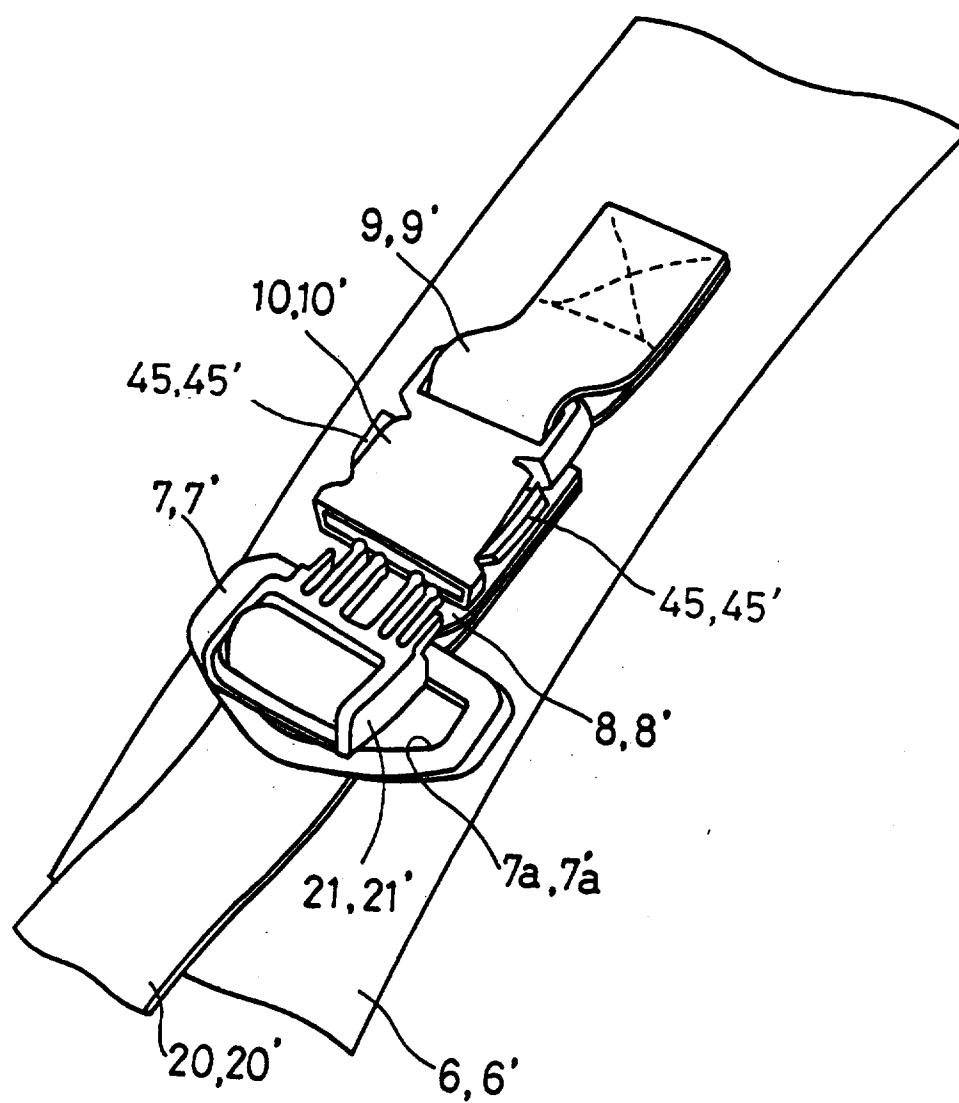


FIG. 32

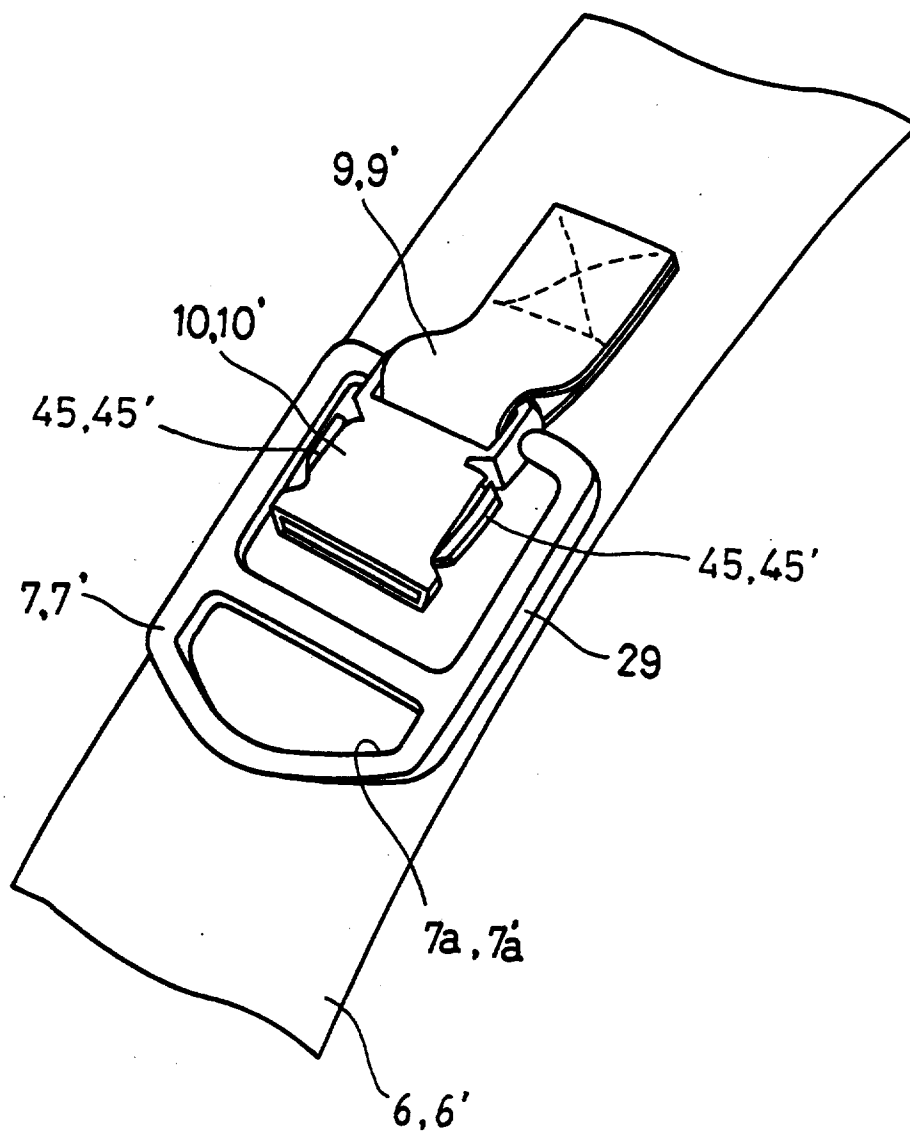


FIG. 33

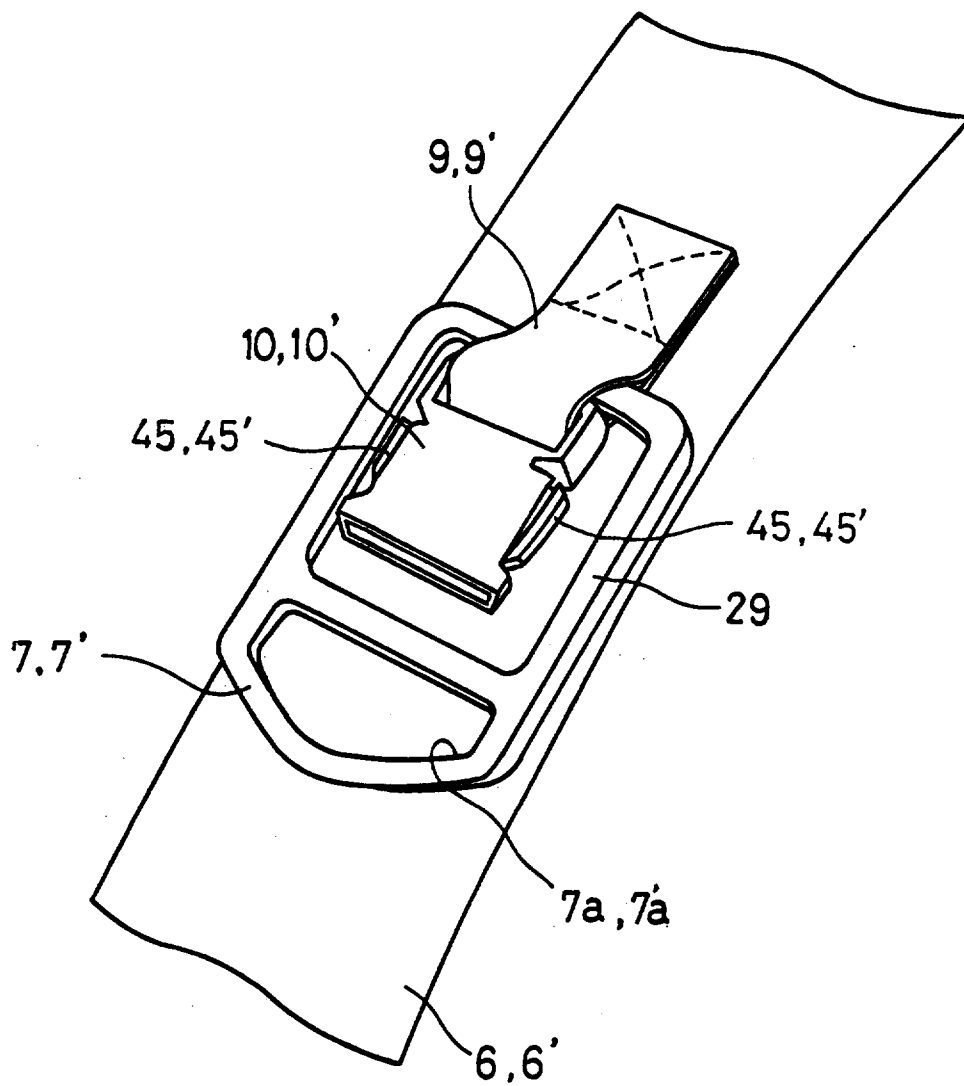


FIG. 34

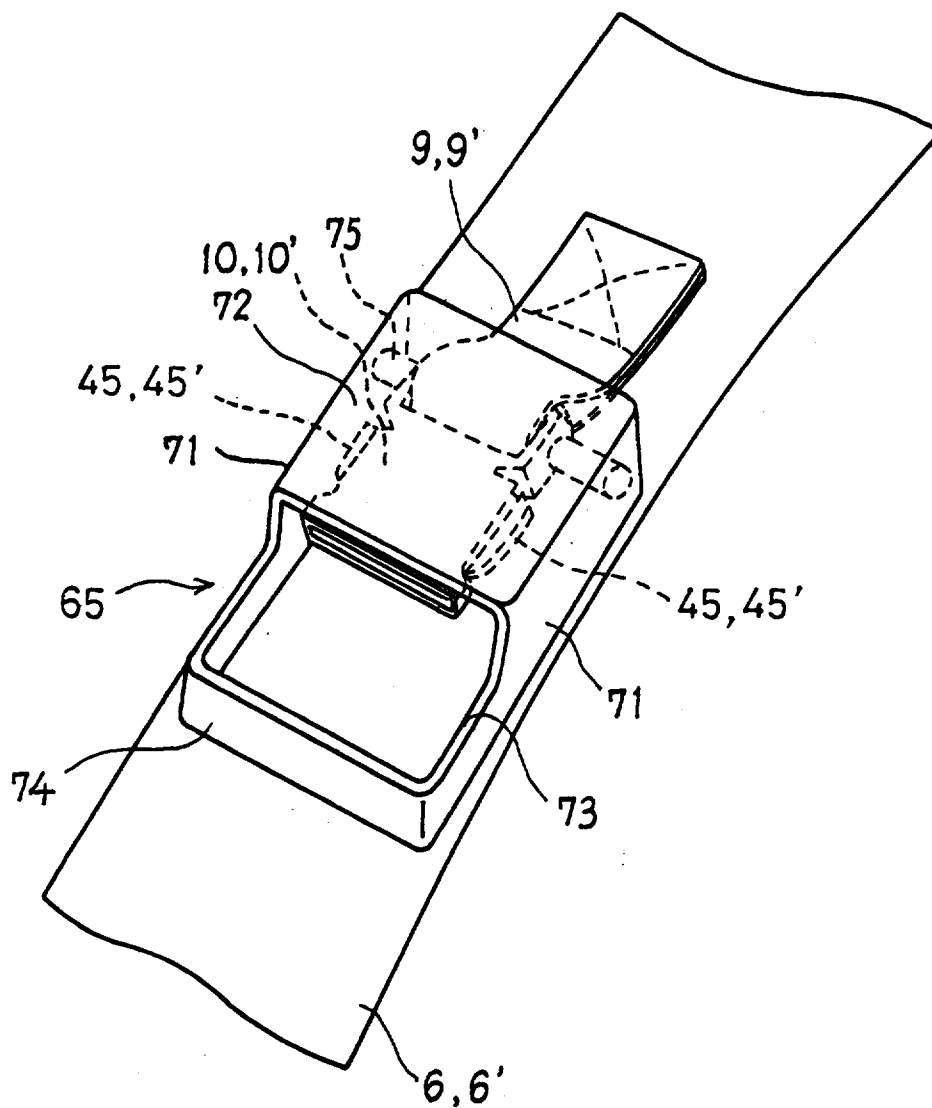


FIG. 35

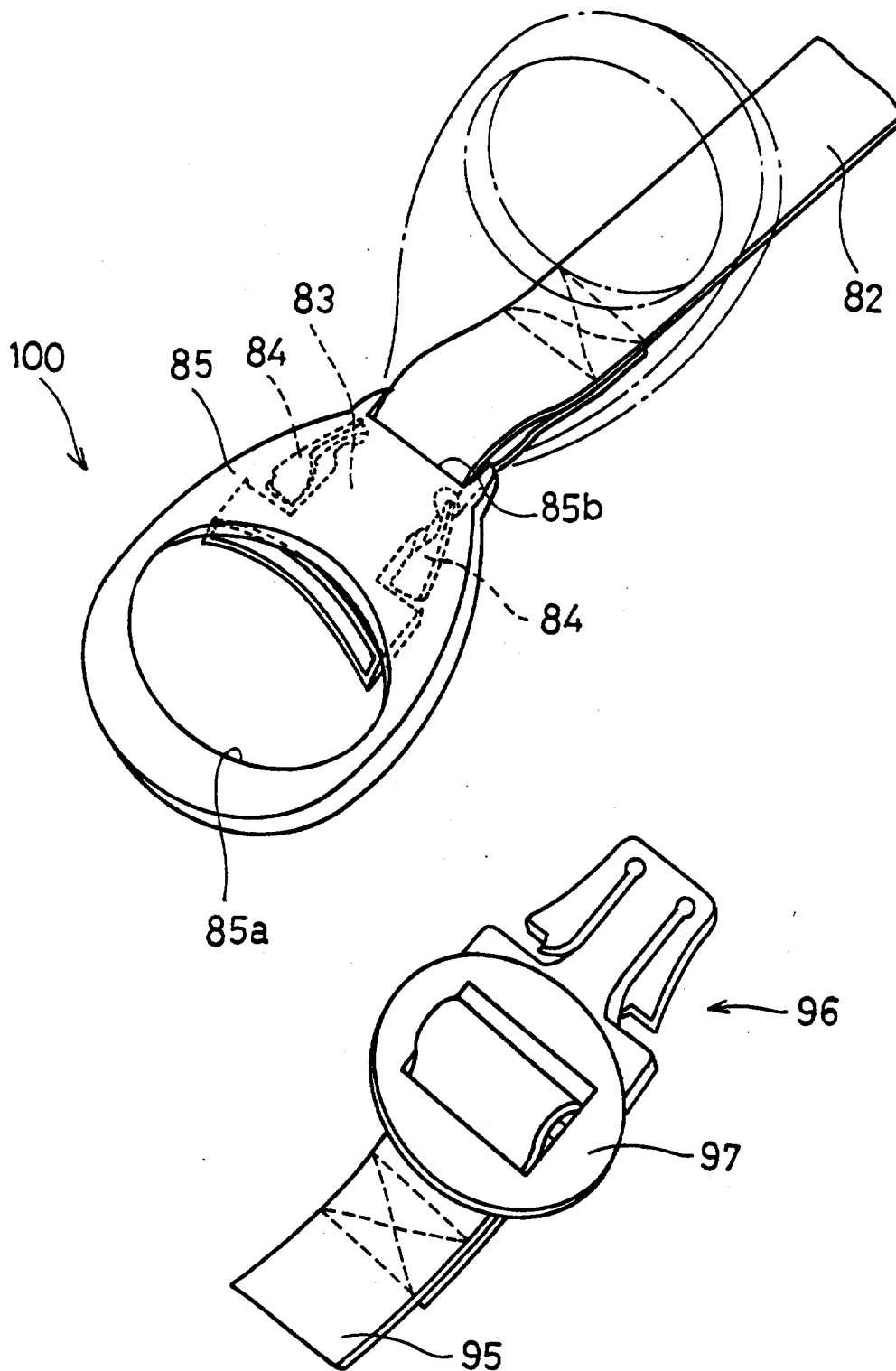


FIG. 36A

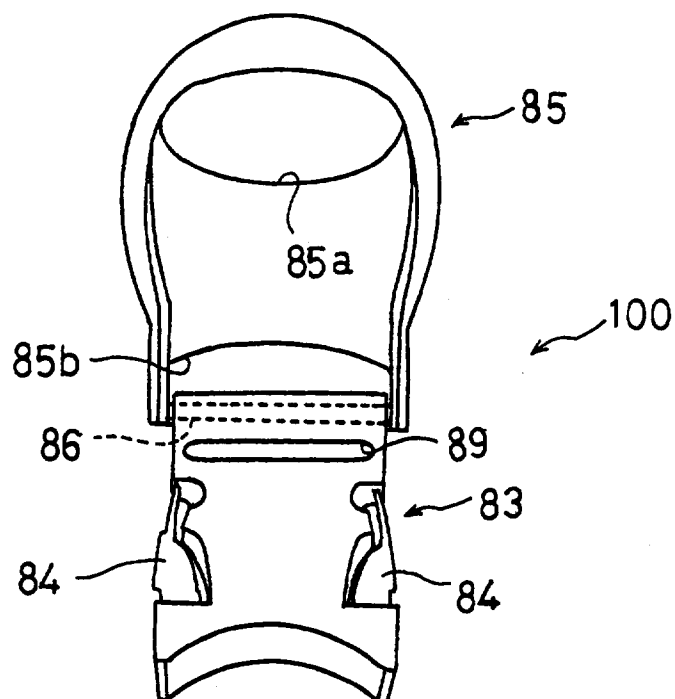


FIG. 36B

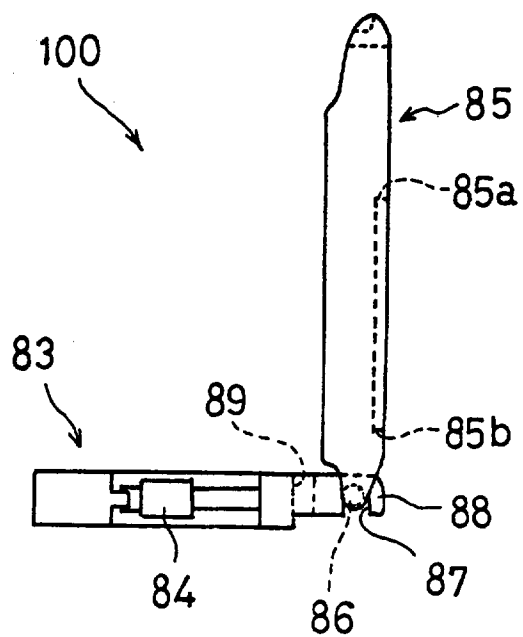


FIG. 37

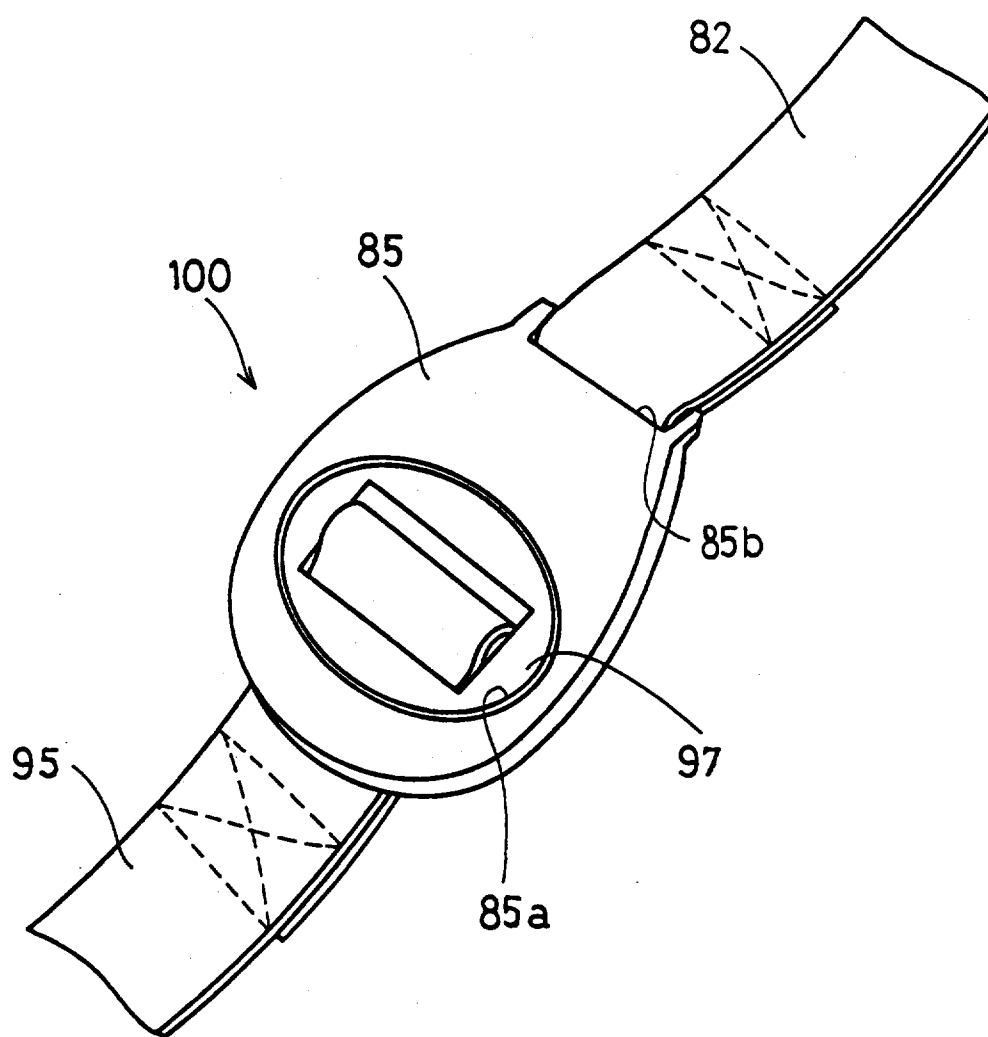


FIG. 38

