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(54) **INFANT WRAP ESPECIALLY SUITED FOR NEWBORNS**

BABYWICKELTUCH, INSBESONDERE GEEIGNET FÜR NEUGEBORENE

LANGE POUR EMMAILLOTER LES NOURRISSONS CONVENANT PARTICULIEREMENT AUX NOUVEAU-NES

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(73) Proprietor: **Tailored Technologies, Inc.**
Winston-Salem, NC 27106 (US)

(72) Inventor: **COATES, Frederica**
Winston, Salem, NC 27106 (US)

(74) Representative: **Patentanwaltskanzlei WILHELM & BECK**
Prinzenstrasse 13
80639 München (DE)

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Description

BACKGROUND OF THE INVENTION

[0001] The current children's market worldwide provides a variety of blanket and bath products to care for newborns through toddler age children. The majority of these products are made either out of some kind of terry or looped pile fabric in the bath products or some kind of blanket /fleece material for the blanket products. These materials world wide are available and plentiful. These products are referred to as bed and bath products and they cover a range of hooded towel and blanket designs and a range of bathrobe designs with and without the hoods. This field would also encompass sleepers.

[0002] For newborns and infants, one usually anticipates that they will need at least one blanket to wrap the baby in for warmth and at least one towel or hooded towel product for after bathing the child. The shape of these products have consistently been determined to be that of a rectangle or a. square and these sizes vary from manufacturer to manufacturer accordingly to whatever materials they're using and whatever widths of fabrics they're using to cut and design these products. The square and the rectangle shape are considered economical in that the solid piece or material cut on the square and rectangular pattern marker require almost no loss of fabric in the manufacturing, hence no loss of profit. Additionally, because of these shapes are of a specific and consistent geometric design the angles of each blankets and or bath wrap are at a ninety degrees. On many designs a triangular piece of material overlaps and corresponds to one corner of the blanket at a ninety degree angle on the rectangle or square shape blanket, giving a hood design positioned at a ninety degree angle for the purpose of receiving the baby's head. This typical triangular piece of material located at a ninety degree corner of the bed or bath material constitutes the cap or hood designed to keep the baby's head either warm or to help dry it after a bath. Because we are dealing with a ninety degree angle it is necessary for the triangular piece hood material to be deep enough and white enough to fit the corner of the rectangle or square piece of fabric. In order to fit the baby's head inside this double ply of material, the triangular hood shape overlaps the ninety-degree corner of the rectangular or square shape. A newborn baby's head will fit further into the hood than is safe because this configuration may interfere with breathing. Therefore the mother or other caretaker must turn the hooded portion of the towel or blanket backwards so that it does not cover the baby's eyes, nose, or in any way make the baby uncomfortable. In cases where just a blanket is provided for the baby, the consumer traditionally tries to form it's own hood out of the way it swaddles the baby in the blanket.

[0003] Other products have been proposed for use in wrapping, swaddling or bunting an infant, especially a newborn. However, these alternative products typically are much more complicated than the simple rectangular hooded towels that dominate the market. For instance, US Design Patent D448,142 shows an infant wrap that appears to include a rounded cap or hood with an elastic border. However, this cap does not appear to fit snugly around the infant's head and would not appear to provide sufficient warmth. This design also includes an arrow shaped configuration, which would not appear to minimize scrap. US Patent 5,046,204 is another example of an infant wrap that is more complicated than the conventional hooded towel. This device includes integral booties as part of the wrap and a scalloped hood. Although conceptually interesting, designs of this type would be difficult and costly to produce, and may not be suitable for use with toddlers or older infants, because the hood and booties would most likely be sized for newborns. Other designs, such as those shown in US Patent 3,034,132; US Patent 4,897,885; US Patent 4,897,885; and US Patent 6,640,340 also appear to involve intricate shapes, which would not use material as economically as the conventional hooded towels, but also may not be easy for the inexperienced caregiver to use.

[0004] US Patent 2,538,420 discloses a service blanket that is folded over and stitched to form a bag so that an infant may be inserted into the bag, and an elastic strap holds the infant in the bag.

[0005] US Patent 5,722,094 discloses an infant swaddling apparatus, which is also in the form of a bag having a front panel attached to a larger rear panel with a pocket being formed between the panels. The infant is placed into the pocket from above and then both panels can be wrapped around the infant. The rear panel includes a hood at the top.

SUMMARY OF THE INVENTION

[0006] An infant wrap according to this invention can be fabricated of blanket material or towel type material, and can be used for swaddling an infant more securely than possible with blanket and hooded towels that are currently available. With this invention the infant, especially as a newborn, can be almost completely enclosed within the wrap with only its face being exposed. This invention creates security with a belt design positioned on the blanket or towel wrap and to secure all corners of the wrap to prevent drafts from reaching the infant. This new wrap can also be used with more confidence by those not experience in handling newborns. This is accomplished by tailoring a fabric to the shape of the baby, greater width at the arms and head, and less fabric at the feet folding the corners inward to cover baby safely and correctly and then securing the folds of fabric with a tie, belt, device in ready position for use.

[0007] A relatively simple kite shape when used with belts or other fastening means accomplishes these results. A belt can be easily stitched in position to secure the folds of the fabric around the baby. Towels and blankets are in a price sensitive market.

[0008] This simple kite shape wrap can compete with more complicated designs that are not nearly as effective in simply providing a secure baby-wrap. This inventive wrap will enhance the quick drying of a baby at bath time as well as the careful handling of the baby when wet. It will create greater warmth for the baby when the kite shaped blanket wrap is applied to the baby. The kite shape can employ a low cost but highly effective hood design which both covers the baby's head and folds inward at the baby's neck to provide warmth.

[0009] Various relatively simple and efficient manufacturing procedures can be employ to fabricate a kite-shaped design in the form of a blanket or towel wrap. Each manufacturing procedure is separate and distinct, but creates the overall purpose of swaddling a baby in comfort and safety with either a blanket or hooded towel type product.

[0010] Additionally, a kite shaped wrap in it's various forms may also carry unique fastening devices as the kite shape is folded around the baby such as medallions of hook and loop fasteners. The kite shape could also be adorned with the substitution of snap material. A wrap of this configuration can include simple tabs of various configurations for hanging either the kite shaped wrap in the baby's closet. Currently, the prior art does not reveal any such hanging device for the garment. The kite shape also lends itself to the use of decorative trim.

[0011] This invention can actually use real towels or real towel fabric manufactured for towels to fabricate the final wrap. The selvage edge of the towels can be used to join the product together along a central axis, which is flat and comfortable to the baby, yet the manufacturer can save money in the cutting process of the product. Infant wraps according to this invention are also suitable for wrapping an infant positioned in a stroller or automobile child safety seat, and the wrap can be positioned to provide room for safety harnesses and restraints employed on this equipment.

BRIEF DESCRIPTIONS OF DRAWINGS

[0012]

Figure 1 is a view of an infant lying on a kite shaped wrap in accordance with the preferred embodiment of this invention showing the infant positioned on the wrap in its generally flat configuration prior to swaddling or bunting the infant.

Figure 2 is a view of an infant who has been bunted or swaddled in the infant wrap shown in Figure 1, and the infant's body is enclosed in the infant wrap.

Figure 3 is a view of the first step in bunting or swaddling an infant with the lower cover portion of the fabric wrap folded up over the infant's legs and chest.

Figure 4 is a view showing the next step in bunting or swaddling the infant with one lateral cover portion folded over the infant's chest and over the folded lower wrap portion to hold one of the infant's arms within the towel wrap.

Figure 5 is a view of the next step in which the other lateral cover portion is folded over the first folded lateral cover portion so that both of the infant's arms are now held. When the belt or belt straps are secured a newborn infant will be fully bunted or swaddled as shown in Figure 2.

Figure 6 shows an alternate use of the infant wrap shown in Figures 1-5 in which unlike the step shown in Figure 3, the lower cover portion of the wrap is folded between the infant's legs, so that the legs will be separated.

Figure 7 shows the two lateral cover portions folded over the infant's chest with the legs separated by positioning the lower cover portion as shown in Figure 6.

Figure 8 is the following step showing the infant fully bunted or swaddled, but with its legs separated.

Figure 9 is a view of the infant bunted or swaddled as shown in Figure 8 and positioned in a child seat with a harness extending between the infant's legs.

Figure 10 shows the same preferred embodiment of the infant wrap with the child positioned in a seated position in a stroller.

Figure 11 shows the manner in which the lower wrap portion can be folded between the infant's legs in preparation for securing the infant in a stroller.

Figure 12 shows the infant strapped in a stroller with a harness extending between the infant's legs.

Figure 13 is a front view of the embodiment shown in Figures 1-12 with the wrap in a flat configuration.

Figure 14 is a rear view of the wrap shown in Figure 13 showing the manner in which belt straps can be attached between the centerline and the side corners of the wrap.

Figure 15 is a sectional view of one manner in which a rear strip can be applied on the exterior of a single fabric forming the body of the wrap. Figure 15A is a sectional view showing an alternate version in which two towel pieces are stitched or sewn together along selvage edges to form the main fabric body. Figure 15B is also a sectional view showing still another manner in which selvage edges of two towels can be attached along the centerline of the fabric body.

Figure 16 is a sectional view showing how towel edges subject to unraveling can be hemmed or secured to avoid unraveling.

Figure 17 is a rear view, similar to Figure 14, but showing a single piece belt which is attached at two spaced attachment points on the rear of the fabric body.

Figure 18 is a sectional view showing how ends of two fabric segments, which can be towel segments, can be stitched to form the fabric body.

Figure 19 is another sectional view showing how the belt can also be attached at the vertical centerline of the wrap.

Figure 20 is a front view of an alternate infant wrap

not according to the invention employing hook and loop fastener to secure lateral cover portions when the infant is fully wrapped.

Figure 21 is a rear view of the wrap shown in Figure 20 showing a hook that can be used to store the wrap.

Figure 22 is a cross sectional view showing the manner in which a decorative cover strip can be added to cover a central stitch.

Figure 23 is a front view of an alternative embodiment with over-lock treads used to trim edges.

Figure 24 is a front view of a wrap similar to the embodiment of Figure 23 showing belt segments inserted in parallel seams.

Figure 25 is front view of an alternative embodiment of a square of diamond version of the infant wrap not according to the invention.

Figure 26 is a rear view of the embodiment shown in Figure 25 showing the approximate position to be occupied by the infant.

Figure 27 is a view of the manner in which segments of the fabric body, the hood and belt straps can be cut from a towel having lateral selvage edges in a manner which will reduce scrap.

Figure 28 is a reproduction of a growth chart for a male infant published by the Centers for Disease Control.

Figure 29 is a reproduction of a growth chart for a female infant published by the Centers for Disease Control.

DETAILED DESCRIPTON OF THE PREFERRED EMBODIMENTS

[0013] The various embodiments depicted herein are representative of the simple infant wrap in accordance with this invention and of the various components that can be employed in slightly different embodiments. Other version employing this invention are not shown primarily because numerous configurations could be employed. The representative embodiments have primarily been discussed as infant wraps that can employ towel material or which can be fabricated from towels. This is not meant to exclude other materials. For instance, material suitable for use in blankets is also suitable for use in this invention. However, additional factors applicable primarily to the use of towels or towel type fabric have been discussed with reference to these representative embodiments.

[0014] Figures 1-5 show a kite shaped infant wrap 10, that while especially suitable for use with newborns in the manner depicted therein, can also be employed with infants through the toddler stage. This infant wrap 10 can not only be used to enclose or swaddle a newborn, but can also be used with infants when placed in child car seats 70 and strollers 72 as shown in Figures 6-12. Details of a number of embodiments of this infant wrap 10 are shown in Figures 13-26, and Figure 27 shows the manner in which one of these embodiments can be fabricated from a towel or other pile looped fabric 82 without a great deal of scrap. Figures 28 and 29 are reproductions of child growth charts published by the Centers for Disease Control and show that the size of infants form newborn through toddler stage is within such a range that one size or a relatively small number of sizes render this kite shaped infant wrap 10 are suitable for almost the entire infant population.

[0015] To swaddle an infant in conventional manner has been historically defined as binding an infant, especially a newborn, with long narrow strips of cloth to prevent free movement or to wrap tightly with clothes. Bunting has been defined as a hooded sleeping garment for infants. As can be seen with reference to the various embodiments depicted herein, the terms swaddled and bunting should be understood to include the use of a fabric 20, which can be a towel or looped pile material, which is wrapped around an infant for warmth and to secure the infant. Although belts or straps can be employed to hold the infant wrap 10 in its enveloping configuration surrounding the infant, it should be understood that the terms swaddled and bunted, as used herein, are not limited to the use of straps or strips to bind the infant or to bind the infant wrap 10. Furthermore, this infant wrap 10 is suitable not only for use with newborns, but can serve as an infant blanket or wrapping for infants at least through the toddler stage.

[0016] Figure 1 shows a kite shaped wrap 10 in a flat configuration with an infant placed in the center of the wrap 10, while lying on a flat surface. The wrap 10 is fabricated from a pliable fabric 20 having a kite shape bounded by four sides with the vertical dimension or height being greater than the horizontal dimension or width. In one embodiment the vertical dimension between the top corner 32 and the bottom corner 34 can be approximately 91.44 cm. (pre-shrunk) (thirty-six inches) or 92.71 cm (thirty-six and half inches) before washing. The corresponding horizontal dimension at its widest point between side corners 36 and 36 can be approximately 78.74 cm (thirty inches) (pre-shrunk) or 80.01 cm (thirty-one and one half inches) before washing. Other sizes are of course acceptable. A horizontal axis 14 (see Figure 13) through corners 36 and 38 divides the fabric 20 into a top upper portion 22, bounded by upper side edges 40 and 42 and a lower or bottom portion 24 bounded by lower side edges 44 and 46. As can be seen the lower cover portion 24 is larger than the top portion 22. This lower cover portion 24 will be folded upwardly over the infant's torso. In a preferred embodiment, the horizontal axis 14 intersects the vertical axis 12 approximately 30.48 cm (twelve inches) from the top corner 32. A vertical axis 12, also shown in Figure 13, divides the fabric 20 into left and right portions, which will be folded over the infant's torso.

[0017] The wrap 10 also includes a belt formed in this embodiment by two belt straps 52, in a manner, which will be subsequently described in more detail. Each belt strap 52 extends beyond the fabric 20 in the vicinity of the corners 36 and 38. These belt straps 52 are posi-

tioned so that they can wrap around a newborn's chest and arms to relatively tightly bind the wrap 10 in the manner shown in Figure 2. Belt straps 52 can be positioned slightly below the corners 36 and 38 as shown in Figure 1, or they can be positioned above these corners or aligned with the corners. In any event the belt straps 52 should be placed in a position that they will wrap around the infant below the neck. One purpose of the wrap is to hold a newborn's arms, over which the newborn has little control in a secure, but comfortable position, which the newborn, fresh from the womb actually enjoys. The infant's arms can either be held by its side or crossed over its chest. In the embodiment shown herein the width of the belt formed by belt straps 52 from end to end measures thirty-nine inches (pre-shrunk)

[0018] The wrap 10 also includes a hood 60, which spans the upper corner 32. The upper corner 32 forms an obtuse angle, and the hood, which is formed by a generally flat triangular fabric piece stitched or sewn along upper edges 40 and 42, will also bound this same obtuse angle. As shown in Figure 1, the infant will first be placed on the fabric 20 with its head extending into the hood 60. The generally triangular shape of the hood 60 will center the infant's head at the upper corner 32, and the hood will also serve to align the infant so that the wrap 10 is symmetrical disposed relative to the infant. Note that the infant could be easily placed so that it will be aligned along a vertical axis extending between the top corner 32 and the bottom corner 34 as shown. The hood 60 has a depth sufficient to cover a newborn infant's forehead, but not cover its eyes or breathing passages.

[0019] The infant shown in Figure 1 is fully clothed, but it should be understood that the infant wrap 10, when fabricated from a loop pile or towel fabric material, can be used to at least partially dry the naked infant after bathing, and in any event is intended to prevent the infant from becoming cold while damp. The infant wrap 10 will also serve to almost completely envelope the newborn infant in order to keep a newborn warm and snug.

[0020] With the infant in the position shown in Figure 1, the first step in swaddling or bunting a newborn infant is to fold the lower cover portion 24 along a lower fold line 25 up over the infant's legs and chest as shown in Figure 3. The folded lower cover portion 24 is then in a position to keep the infant's chest dry. Lower cover portion 24 can thus be considered to form a protector over the infant's chest. The lower cover portion 24 can also be easily placed between at least the lower portion of the infant's arms and its chest. The symmetrically tapered configuration of the lower cover portion 24 due to the wrap's kite shape will also provide a snug fit over the infant's chest as shown. This step is easily carried out by one who would not be experienced in caring for a newborn or swaddling a newborn because the tapered lower cover portion 24 can be properly aligned relative to the infant's body and need not be adjusted or otherwise fitted to its body as would be the case if the lower cover portion were not symmetrically tapered. Another consideration is that the tapered shape will require less fabric to construct the wrap 10, as will be subsequently discussed in more detail.

[0021] Figure 4 shows the next step in bunting or swaddling a newborn. With the lower cover portion 24 in position, one lateral cover portion 26 can be folded over the infant's arms and chest as well as over the tapered lower cover portion 24, which has just been upwardly folded over the infant's legs and chest. As seen in Figure 4, this first lateral cover portion 26 can be said to have a generally triangular shape, similar to a lapel, adjacent one side of the fabric 20, although this lateral cover portion 26 would be folded over the infant's chest and would not be folded back as for a conventional lapel on a jacket. Lateral cover portion 26 can be folded over the infant's arms so that with the arms extended along the sides of the infant, the arm will be between the lateral cover portion 26 and the lower cover portion 24. The arm will thus be tightly and comfortably held along the infant's side and will be covered by overlapping layers of fabric for proper warmth. As seen in Figure 4, as the lateral cover portion is folded over a portion of the hood 60 as well as a previously overlapping section of the tapered lower cover portion 24 will be folded. These folds at the top and bottom will help maintain a relatively straight fold line 56 along the side of the infant when wrapped. Notice that the folded hood and lower sections will generally be above and below the infants arms, which will also lead to a relatively straight lateral fold. Figure 4 also shows how one belt strap 52 is partially lifted as the lateral cover portion 26 is folded over the infant's chest. As will be later discussed in more detail, each belt strap 52 is attached at a point beyond the central position where the baby will be occupied so that the attachment point will be lifted as each lateral cover portion 26 is lifted forming a curled belt section 52A. Each belt strap 52 will then be in a position so that at least the curled belt section 52A can be easily grasped and it will not be necessary to fumble around searching for a strap that has become trapped beneath the baby. If the infant can be kept in the same position, it will be easier to wrap the fabric around the infant. The kite shape of this infant wrap 10, and the manner in which the belt straps 52 are attached, simplifies this task.

[0022] Figure 5 shows that the next step is merely to fold the other lateral cover portion 26 over the top of the first folded section. This second fold is accomplished in the same manner and all folds are symmetrical relative to the vertical axis along which the infant has been positioned. The infant is thus symmetrically wrapped and should be held in a comfortable manner. When the two lateral cover portions are folded in the manner shown in Figures 4, side sections of the hood 60 will also be folded over on opposite sides of the infant's face. These folded layers 68 (see Figure 2) will thus cover the infant's cheeks and the neck without covering the nostrils or mouth. A newborn will thus be covered so that it will remain warm, but this hood will still be sufficiently spaced from the baby's mouth and nostrils so that there will be no interfer-

ence with its breathing. After the lateral and lower cover portions of the wrap 10 have been folded in the manner shown in Figures 3-5, the belt straps can be tied to secure the wrap 10 tightly around the swaddled on bunted newborn. Of course this same effect will be achieved as the infant grows, but the kite shaped wrap 10 is especially suited for use with newborns.

[0023] When the infant is wrapped in the manner shown in Figure 2, he or she can be easily transported and the wrap 10 will not tend to become unraveled or undone. Kite shaped infant wrap 10 is, however more versatile, and the infant can be wrapped so that it can be easily placed in an automobile child seat or strapped in a stroller. Figures 6-8 demonstrate one different manner of securing the infant within the wrap 10. As shown in Figure 6, the tapered lower cover portion 24 can be placed between the infant's legs so that the legs may be separated. This is much more complicated with a rectangular or square fabric segment. As shown in Figure 7, the lateral cover portions 26 can be folded over the lower cover portion 24, which has been bunched up between the baby's legs, and the belt straps 52 can be secured as shown in Figure 8. The infant is thus in position to be placed in an automobile child seat 70, as shown in Figure 9, with a seat harness 71 secured between the baby's separated but securely wrapped legs.

[0024] Figures 10-12 show that the infant wrap 10 is not only used when the infant is strapped in a stroller 72, but the infant wrap 10 can be folded or wrapped around the infants while seated in the stroller. As shown in Figure 10 the infant wrap 10 has been first placed in the stroller seat and the baby is then centrally positioned with the hood partially covering its head. The lower tapered fabric portion 24 is again easily bunched between the infant's legs and the lateral cover portions 26 are folded around while the baby is seated. The stroller harness 73 is placed between the separated but wrapped legs, and the infant is secured both by harness 73 and by the wrap 10.

[0025] Construction details of one version of the infant wrap 10 are shown in Figures 13-16. Figures 13 and 14 show respectively the front and back of the same infant wrap deployed in its flat configuration. In this embodiment the main fabric body can be formed from one continuous piece of material or from two or more segments. The kite shape is clearly shown in Figures 13 and 16, where the wrap is symmetrical with respect to vertical axis 12 and asymmetrical with respect to the horizontal axis 14. Figure 13 shows the generally triangular hood 60 stitched to the top of the fabric 20. The upper apex 62 of hood 60 bounds the same obtuse angle as the fabric upper corner 32. Both upper corners are gently rounded and this hood upper corner 62 will fit the head of a newborn infant so that infant will be symmetrically centered when lying on the wrap 10. The flat lower hood edge 64 is spaced from the upper corner 62 by a distance sufficient for a newborn infant's head to be positioned within the hood 60, but the hood is shallow enough so that the hood does not cover the infant's eyes or face.

[0026] Belt straps 52 are secured to the rear face of fabric 20 as shown in Figure 14. These belt straps 52 are long enough to extend beyond the corners 36, 38 so that the belt straps 52 are exposed when the wrap 10 is laid flat, and so that they protrude a sufficient distance so that the can be tied after the infant is wrapped as shown in Figure 2. The attachment points 54 where the belt straps are secured to the rear surface of fabric 20 are shown in Figure 14. It should be understood that the phrase attachment points are used to refer to the location at which the belt is attached or secured to the fabric 20, but that physically these attachment points will normally comprise a line or stitch or other means of securement that is not confined to a single point. These attachment points 54 are symmetrically spaced apart on opposite sides of vertical axis 12 by a distance greater than the width of an infant's torso, including the arms. In one embodiment, attachment points 54 are spaced apart by a distance of 30.48 cm (twelve inches). When a newborn infant is wrapped, these attachment points 54 will be located above the infant's back along its sides. This positioning serves to partially lift the belt straps 52, as shown by loops 52A in Figure 4, when the lateral cover portions 26 are folded over the infant's chest. This important because even if the belt straps had been hidden beneath the fabric body 20, when the baby was first lain on the wrap, the belt straps 52, at least at the attachment points 54 would always be exposed so that the person wrapping the newborn infant could grasp the belts 52, without rotating or moving the partially bundled infant Maintaining the baby in a relatively still position is important so that the infant can be properly and symmetrically wrapped. This is especially important when the infant is swaddled or securely wrapped by a person who does not normally care for the child. The kite shape, and the attachment points 54 make the wrapping process straight-forward and lead the care giver to properly bundle and care for the infant. Infant wraps where the newborn cannot be symmetrically positioned on the wrap require the caregiver to make adjustments during the wrapping process, which normally require experience. This problem is especially apparent when a newborn is wrapped in a standard rectangular towel wrap, where the infant cannot be placed symmetrically because the hood is positioned at one oblong corner leaving excess fabric to secure, which does not directly cover the infant.

[0027] Figure 14 also shows that the hood 60 extends at least as far out as the attachment points 54 on both sides of the vertical axis. Preferably, the lower hood edge 64 extends laterally beyond the attachment points 54. The width of the hood 60 is significantly larger than the width of the infant's head at this outermost position where it is secured to the edges 40, 42 of the fabric. Therefore when the lateral cover portions 26 are folded over, the hood 60 also folds over to form folds 68 on opposite sides of the infant's face and neck as shown in Figures 2 and 8.

[0028] Figures 15, 15A, 15B and 16 are section views, which illustrate the manner in which a few of the various

segments of the wrap 10 can be assembled. Figure 15 shows a configuration in which a single fabric piece 20 forms the kite shaped body. _ A decorative strip 18 extends along the vertical axis 12 on the rear surface of fabric body 20, where it is stitched. In this version the strip 18 can be merely decorative or it can include a loop at the upper end, similar to the loop 78 shown in Figure 21, for hanging the wrap when not in use. Figure 16 shows a strip 18 secured around the outer edges of the kite shaped fabric body. If the fabric 20 is cut from a material which may tend to unravel, such as a towel or other looped pile fabric, this edge hem strip will prevent the fabric from unraveling along the edges. Figure 15A shows an alternate approach to assembling the fabric body in which two segments are sewn or stitched together along the vertical axis 12 to form the kite shaped body 20. In the configuration shown in Figure 15A, the fabric edges that are sewn together have a reduced thickness, which can be characteristic of selvage edges that are employed on towels to prevent the looped pile fabric from unraveling. This construction technique will be discussed in more detail with reference to Figure 27. Figure 15B shown another technique in which a hem strip is wrapped around one segment of the fabric body where two segments are stitched to form the kite shaped body 20.

[0029] Figures 17-19 show another version of the kite shaped wrap. Figure 17 shows a rear view of a wrap 10 in which the fabric body 20 is formed from two segments sewn together along the central vertical centerline or vertical axis 12. In this version a single belt 50 extends from end to end and is sewn to the two fabric pieces at the center seam. Although belt 50, comprising two pieces 50A and 50B is sewn at the center seam, there are two additional attachment points 54 spaced on opposite sides of the central seam. In this embodiment, the two attachment points 54 are formed by stitching the belt segments 50 to the fabric along two intermittent machine stitches or tacking stitches, which each extend in a straight line from the top edge to the bottom edge of the belt. The belt segments are further secured by stitches 51 located between the attachment points 54 and the center of the kite shaped wrap 10. Figure 18 shows that the two fabric segments 20A and 20B that are sewn together to form fabric body 20 are folded upwardly at the edge where they are sewn. Although this does create a bulge along the seam or along the infant's back, a towel type material is rather soft and this stitching technique will serve to retard unraveling. Alternatively a selvage edge will reduce the thickness of the material at this point and would reduce the thickness of this seam. As shown in Figure 19, the belt segments 50A and 50B are also sewn along this seam. If the belt 50 were only attached or secured along the centerline or vertical axis 12 of the kite shaped wrap, the ends of belt 50 could be hidden beneath the wrap as the wrap is being folded around the infant so that the belt 50 may not be accessible, and it becomes more difficult to wrap the baby. As with the embodiment of Figures 13 and 14, attachment points 54 adequately spaced from the kite centerline will solve this problem. Although these attachment points can be locations where the belt 50 is stitched or otherwise permanently secured to the fabric body 20, other means of attachment can also be employed. Belt loops or belt locks could be used at the attachment points 54 or the belt sections could be secured at these points by hook and loop fasteners or by snaps. Many other means of attachment could likewise be employed.

[0030] Figures 20-22 shows embodiments not according to the invention in which belts or belt straps have been replaced by hook and loop fasteners. These views show that different versions of hook and loop fasteners can be employed. Figure 20 shows a primary fastener 74 on one surface of fabric 20, which can be mated with a second primary fastener 76 on the other surface at the opposite side of the wrap 10. Fastener 76 can be a hook fastener, which can be covered when not in use by a strip 77, here show with the hook fastener 76 exposed. In this version the hood fastener 76 is on the rear surface of the wrap 10 so that it will face outward when folded over the baby. With the hook fastener 76 facing outwardly, there will be less chance for an abrasive hook surface to engage the infant's skin or cause irritation. The lateral wrap portion containing the hook fastener 76 would be folded over the baby first, after which the other lateral cover portion containing loop fastener 74 would be folded over so that the aligned hook and loop fasteners 74 and 76 can be secured together.

[0031] There are a number of shapes that can be employed with these hook and loop fasteners. A second version is shown by the hook and loop fasteners 74A and 76A, which could be employed instead of fasteners 74 and 76. In this.version the loop fastener 74A would be an elongated strip which would allow the hook fastener to be attached at different lengthwise points depending on the girth of the infant being swaddled or wrapped. The more abrasive hook fastener 76A could be in the form of a die cut hook fastener having no protruding edges, which might inadvertently scrap the baby. When combined with less abrasive fasteners, this circular medallion shape can offer a significant advantage over conventional hook and loop fastener strips. It should be understood that other fasteners could also be employed. Although snaps and buttons do have certain disadvantages, they could nevertheless be employed without departing from the scope of this invention.

[0032] Another addition to the basic wrap 10, shown in the embodiment of Figures 20-22 is a fabric loop 78 that is located at the top corner of the kite shaped wrap 10. This fabric loop 78 can be employed to hang the wrap 10 when not in use. When hung in this manner, the wrap 10 will be in a position for moisture to evaporate so that the wrap 10will dry more quickly. In this embodiment, the fabric loop 78 is formed by an extension of a hem strip 18 extending up the vertical axis on the rear of the wrap 10. Figure 22 shows the manner in which the central seam would be covered by strip 18. Many other versions

of a hook or loop could also be employed.

[0033] Figures 23 and 24 show other versions of a wrap 10 that could be fabricated using a towel or other fabric employing a looped pile configuration. Both Figures 23 and 24 show versions in which over locked looped threads 19 are employed along trim edges. These over locked treads will prevent unraveling especially when the wrap is fabricated from towel segments. Figure 23 shows a version in which a single piece of material is used to form the fabric body. Figure 23 also shows another means for attaching the belt In this embodiment, a continuous rectangular machine stitch 53, having a generally rectangular shape is formed to secure the belt to the fabric. The end edges of this continuous machine stitch define the attachment points 54, which are positioned so that the belt is partially lifted when the wrap is folded over the infant. Figure 24 shows another version in which more than two pieces are employed to form the fabric body. Here parallel seams 55 are formed between two outer generally wing shaped fabric segments and a central fabric segment 57. It should be understood that this particular multi-piece construction is not limited to versions using over locked threads.

[0034] Although the kite shape has numerous advantages when used for an infant wrap, many of the inventive features of this invention can be employed with an infant wrap having another shape. Figures 25 and 26 show a version not according to the invention in which the fabric. body 20 has a square or diamond shape with rounded corners. As shown in Figure 26, the infant can be placed in a central location where the wrap will be symmetrical relative to the baby and to the vertical axis. Here to, the belt 50 can be attached at points 54 extending beyond the position to be occupied by the infant so as to simplify strapping the baby in the wrap.

[0035] Although there are a number of ways in which a kite shaped wrap can be constructed, Figure 27 shows one particularly economical way of fabricating a kite shaped wrap from a towel 80 having selvage edges 84 on opposite sides. Two fabric body segments 20A and 20B are cut so that the edges adjacent the central seam will be cut from the selvage edges 84 on a conventional towel 80 or towel material. Where these selvage edges are sewn together, they form a thinner overall seam, which will be more comfortable to the infant. The other components can also be cut from the same towel 80 with little loss of material Cut edges that do not have a ravel proof selvage edge can be hemmed when assembled to form an infant wrap 10. As discussed with respect to other embodiments of this invention, there are a number of acceptable construction or fabrication techniques that can be employed with this invention.

[0036] The growth charts in Figures 28 and 29, for boys and girls respectively, show that the body size for almost all infants will fall within a relatively small and predictable range. The kite shaped infant wrap can thus be sized so that almost all newborns can use the same size garment. As the infants grow it will become less important that they be swaddled or bunted, but the same kite shape towel wrap 10 can still be used at least until the infant reaches the age of six months and normally until they reach the age of nine months. The same kite shaped towel wrap can thus be used at least from the newborn through the toddler stages, and the various components can be configured in relation to the size of infants falling within these predictable ranges.

[0037] As previously discussed the embodiments depicted herein are intended to be only representative. Numerous modifications within the skill of those in the art could be incorporated without departing from the invention described and claimed herein. For example, the embodiments show that the side edges are essentially straight lines. A slight curvature could be added to those edges without interfering with the advantages of the kite shape. Elastic could be added to the hood. Small cutouts, for example for the legs when the lower cover portion of the wrap is placed between the infant's legs, could also be added if desired. These suggested modifications are neither exhaustive of the possibilities nor are they especially recommended. They are presented merely to show that a large number of modifications or additions could be employed, and it would be impossible to list all conceivable variations. Therefore the invention represented by these embodiments if defined by the following claims.

Claims

1. An infant wrap (10) comprising:

a fabric (20) having two adjacent top side edges (40, 42), and two adjacent bottom edges (44, 46),

top side edges (40, 42) being joined to bottom side edges (44, 46) at opposite side corners (36, 38), the fabric (20) being symmetrical about a vertical axis (12) extending from the top corner (32) to the bottom corner (34)

lateral cover portions (26) of the fabric (20) being formed on opposite sides of the vertical axis (12) between side corners (36, 38) and a central section having a width sufficient for the infant to lie on so that the lateral cover portions (26) can be folded over the infant, the lateral cover portions (26) being securable in front of the infant, the fabric having a width sufficient to swaddle the infant;

belt sections (52) extending beyond opposite lateral cover portions (26) of the fabric (20) to secure the lateral cover portions (26) on the front of the infant, the belt sections (52) being attached to the lateral cover sections (26) at points of attachment (54) inwardly from side corners (36, 38) thereof, so that the belt sections (52) can be lifted between the points of attachment (54) and the ends of the belt sections (52) as

the lateral cover sections are folded over the infant; and

the infant wrap (10) being **characterized in that** the fabric (20) is kite shaped having the two adjacent top side edges (40;42) extending away from a top corner (32) at an obtuse angle, and the two adjacent bottom edges (44;46) extending away from a bottom corner (34) at an angle less than the obtuse angle at the top corner (32) and asymmetrical about a horizontal axis (14) extending between the side corners (36,38), wherein the top corner (32) is spaced from the bottom corner (34) along the vertical axis (12) by a distance is greater than the spacing between the side corners (36, 38) along the horizontal axis and **in that** it comprises a hood (60) attached to top side edges (40, 42) of the fabric (20) on opposite sides of the top corner (32) the hood having a width sufficient to receive the infant's head.

2. The infant (10) wrap of claim 1 wherein the belt sections (52) comprise separate straps individually attached to the fabric (20) proximate to the lateral cover portions (26).

3. The infant wrap (10) of claim 1 or 2 wherein the fabric (20) comprises a towel fabric,

4. The infant wrap (10) of one of the claims 1 to 3 wherein the belt sections (52) are attached at attachment points (54), which are symmetrically spaced apart on opposite sides of vertical axis (12) by a distance greater than the width of an infant's torso, including the arms.

5. The infant wrap (10) of one of the claims 1 to 4 wherein the top corner (32) forms an obtuse angle so that the top of the hood (60) also is formed at substantially the same obtuse angle.

6. The infant wrap (10) of one of the claims 1 to 5 wherein the hood (60) has a generally triangular shape to center an infant's head at the upper corner (32) so that the infant is centered relative to the kite shaped fabric (20) when laid on the infant wrap (10).

Patentansprüche

1. Babywickeltuch (10) umfassend:

- ein Tuch (20) mit zwei aneinander angrenzenden oberen seitlichen Rändern (40, 42) und zwei aneinander angrenzenden unteren Rändern (44, 46), wobei die oberen seitlichen Ränder (40, 42) an gegenüberliegenden seitlichen Enden (36, 38) mit unteren seitlichen Rändern (44, 46) verbunden sind, wobei das Tuch symmetrisch in Bezug auf eine Hochachse (12) ist, die sich von dem oberen Ende (32) zum unteren Ende (34) erstreckt;
- seitliche Teile (26) des Tuchs (20) zum Zudekken, welche auf gegenüberliegenden Seiten der Hochachse (12) zwischen seitlichen Enden (36, 38) und einem Mittelteil, das so breit ist, dass der Säugling dort liegen kann, gebildet sind, so dass die seitlichen Teile (26) zum Zudecken über dem Säugling zusammengelegt werden können, wobei die seitlichen Teile (26) zum Zudecken beim Säugling vorne befestigt werden können, wobei das Tuch breit genug ist, um den Säugling zu wickeln;
- Gurtstücke (52), die über die gegenüberliegenden seitlichen Teile (26) des Tuchs (20) zum Zudecken hinausgehen, um die seitlichen Teile (26) zum Zudecken beim Säugling vorne zu befestigen, wobei die Gurtstücke (52) an den seitlichen Teilen (26) zum Zudecken an Befestigungspunkten (54) befestigt sind, die von seitlichen Enden (36, 38) dieser seitlichen Teile (26) zum Zudecken ausgehend innen angebracht sind, so dass die Gurtstükke (52) zwischen den Befestigungspunkten (54) und den Enden der Gurtstücke (52) angehoben werden können, während die seitlichen Teile zum Zudecken über dem Säugling zusammengelegt werden; und wobei
- das Babywickeltuch (10) **dadurch gekennzeichnet ist, dass** das Tuch (20) eine Rautenform aufweist und zwei aneinander angrenzende obere seitliche Ränder (40, 42) aufweist, die sich ausgehend von dem oberen Ende (32) in einem stumpfen Winkel ausdehnen und die zwei aneinander angrenzenden unteren Ränder (44, 46) sich von dem unteren Ende (34) ausgehend in einem Winkel ausdehnen, der kleiner ist als der stumpfe Winkel beim oberen Ende (32), und das Tuch (20) asymmetrisch in Bezug auf eine horizontale Achse (14) ist, die sich zwischen den seitlichen Enden (36, 38) erstreckt, wobei das obere Ende (32) von dem unteren Ende (34) entlang der Hochachse (12) beabstandet ist mit einer Entfernung, die größer ist als der Abstand zwischen den seitlichen Enden (36, 38) entlang der horizontalen Achse, und dass es eine Kapuze (60) aufweist, die an seitlichen Rändern (40, 42) des Tuchs (20) auf gegenüberliegenden Seiten des oberen Endes (32) angebracht ist, wobei die Kapuze groß genug ist, um den Kopf des Säuglings aufzunehmen.

2. Babywickeltuch (10) gemäß Anspruch 1, wobei die Gurtstücke (52) einzelne Bänder aufweisen, die einzeln an dem Tuch (20) in der Nähe der seitlichen Teile (26) zum Zudecken angebracht sind.

3. Babywickeltuch (10) gemäß Anspruch 1 oder 2, wobei das Tuch (20) aus einem Handtuch-Stoff besteht.

4. Babywickeltuch (10) gemäß einem der Ansprüche 1 bis 3, wobei die Gurtstücke (52) an Befestigungspunkten (54) befestigt sind, die symmetrisch beabstandet auf gegenüberliegenden Seiten der Hochachse (12) sind, mit einer Entfernung, die größer ist als die Größe des Rumpfs eines Säuglings einschließlich der Arme.

5. Babywickeltuch (10) gemäß einem der Ansprüche 1 bis 4, wobei das obere Ende (32) einen stumpfen Winkel bildet, so dass das obere Ende der Kapuze (60) auch mit einem im Wesentlichen gleich großen stumpfen Winkel ausgebildet ist.

6. Babywickeltuch (10) gemäß einem der Ansprüche 1 bis 5, wobei die Kapuze (60) eine im Allgemeinen dreieckige Form aufweist, um den Kopf des Säuglings an dem oberen Ende (32) mittig auszurichten, so dass der Säugling in Bezug auf das rautenförmige Tuch (20) mittig positioniert ist, wenn er auf das Babywickeltuch (10) gelegt wird.

Revendications

1. Lange pour emmailloter les nourrissons (10) comprenant:

   un tissu (20) doté de deux bords latéraux supérieurs (40, 42) adjacents et de deux bords inférieurs (44, 46) adjacents, les bords latéraux supérieurs (40, 42) étant joints aux bords latéraux inférieurs (44, 46) au niveau de coins latéraux opposés (36, 38), le tissu (20) étant symétrique par rapport à un axe vertical (12) s'étendant du coin supérieur (32) au coin inférieur (34) ;
   des parties couvrantes latérales (26) du tissu (20) étant formées sur les côtés opposés de l'axe vertical (12) entre les coins latéraux (36, 38) et une section centrale ayant une largeur suffisante pour permettre d'allonger le nourrisson dessus de façon à ce que les parties couvrantes latérales (26) puissent être repliées au-dessus du nourrisson, les parties couvrantes latérales (26) pouvant être solidement attachées sur l'avant du corps du nourrisson, le tissu ayant une largeur suffisante pour emmailloter le nourrisson ;
   des sections de ceinture (52) s'étendant au-delà des parties couvrantes latérales (26) opposées du tissu (20) pour fixer solidement les parties couvrantes latérales (26) sur l'avant du corps du nourrisson, les sections de ceinture (52) étant fixées aux sections couvrantes latérales (26) au niveau des points de jonction (54), à l'intérieur depuis les coins latéraux (36, 38) de celles-ci, de sorte que les sections de ceinture (52) puissent être soulevées entre les points de jonction (54) et les extrémités des sections de ceinture (52) à mesure que les sections couvrantes latérales sont repliées au-dessus du nourrisson ; et le lange pour emmailloter les nourrissons (10) étant **caractérisé en ce que** le tissu (20) prend une forme de cerf-volant ayant les deux bords latéraux supérieurs (40, 42) adjacents s'étendant hors d'un coin supérieur (32) selon un angle obtus, et les deux bords inférieurs (44, 46) adjacents s'étendant hors d'un coin inférieur (34) selon un angle inférieur à l'angle obtus au niveau du coin supérieur (32) et étant asymétriques par rapport à un axe horizontal (14) s'étendant entre les coins latéraux (36, 38), dans lequel le coin supérieur (32) est espacé du coin inférieur (34) le long de l'axe vertical (12) d'une distance supérieure à l'espacement prévu entre les coins latéraux (36, 38) le long de l'axe horizontal et **en ce qu'**il comprend une capuche (60) fixée aux bords latéraux supérieurs (40, 42) du tissu (20) sur les côtés opposés du coin supérieur (32), la capuche ayant une largeur suffisante pour recevoir la tête du nourrisson.

2. Lange pour emmailloter les nourrissons (10) selon la revendication 1, dans lequel les sections de ceinture (52) comprennent des bandes séparées fixées individuellement au tissu (20) à proximité des parties couvrantes latérales (26).

3. Lange pour emmailloter les nourrissons (10) selon la revendication 1 ou 2, dans lequel le tissu (20) comprend un tissu en éponge.

4. Lange pour emmailloter les nourrissons (10) selon l'une quelconque des revendications 1 à 3, dans lequel les sections de ceinture (52) sont fixées aux points de fixation (54) symétriquement espacés sur les côtés opposés de l'axe vertical (12) d'une distance supérieure à la largeur du torse d'un nourrisson, bras compris.

5. Lange pour emmailloter les nourrissons (10) selon l'une quelconque des revendications 1 à 4, dans lequel le coin supérieur (32) forme un angle obtus tel que le dessus de la capuche (60) est également formé sensiblement selon le même angle obtus.

6. Lange pour emmailloter les nourrissons (10) selon l'une quelconque des revendications 1 à 5, dans lequel la capuche (60) a une forme pour l'essentiel triangulaire permettant de centrer la tête d'un nourrisson au niveau du coin supérieur (32) de sorte que le nourrisson soit centré par rapport au tissu (20) en forme de cerf-volant lorsqu'il est allongé sur le lange

prévu pour emmailloter les nourrissons (10).

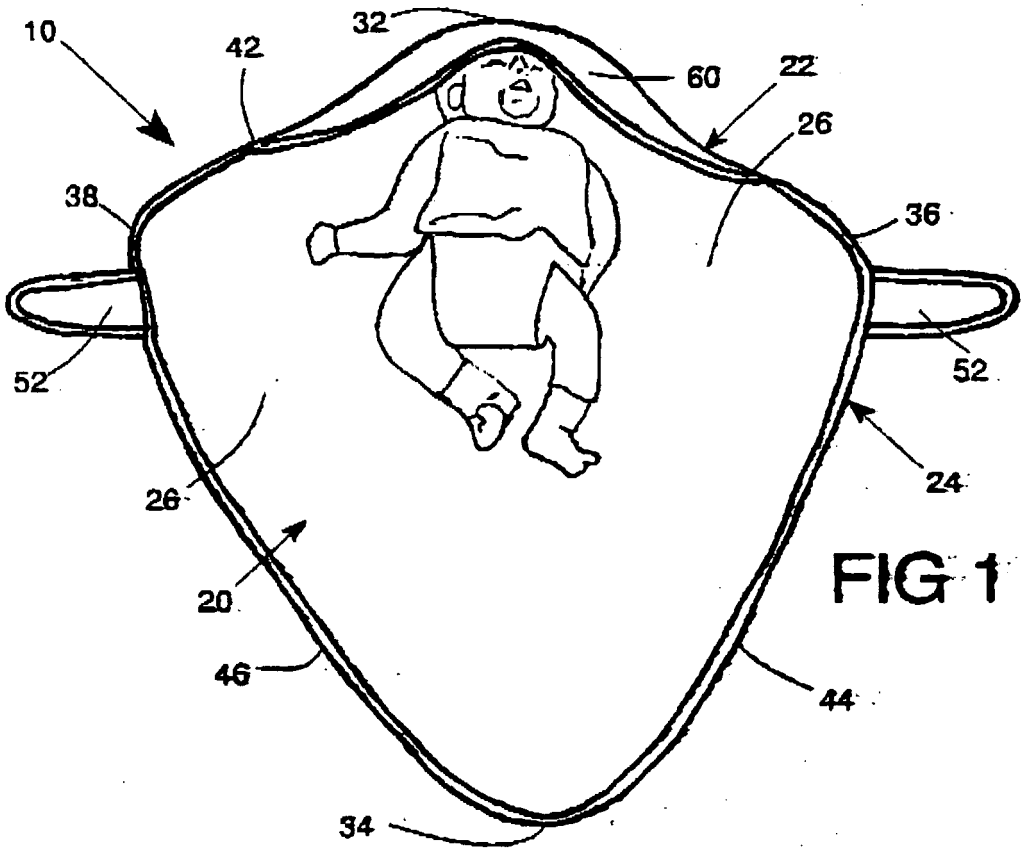

10
42
32
60
22
26
38
36
52
52
24
26
20
46
44
34

FIG 1

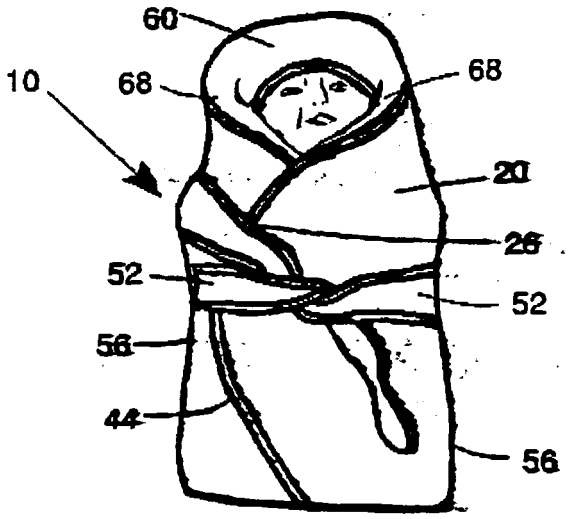

60
10
68
68
20
26
52
52
56
44
56

FIG 2

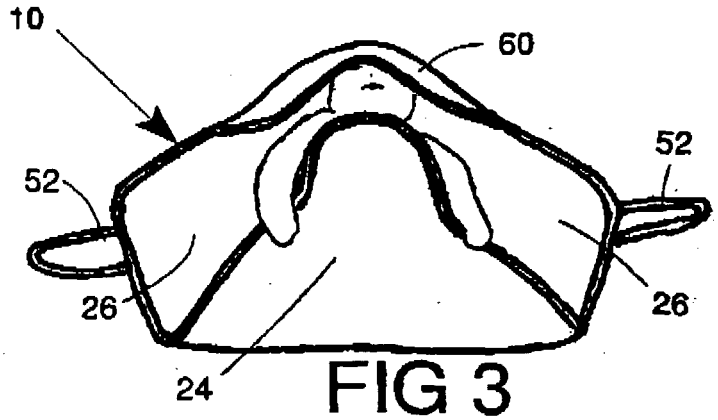


FIG 3

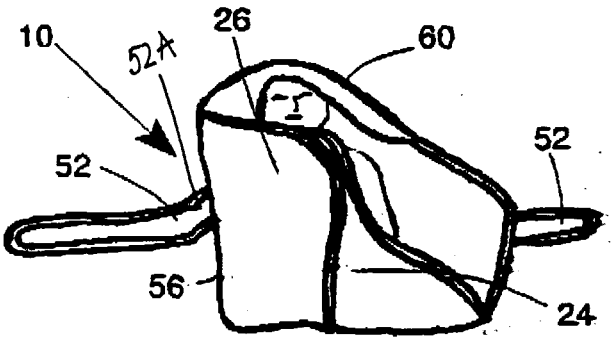
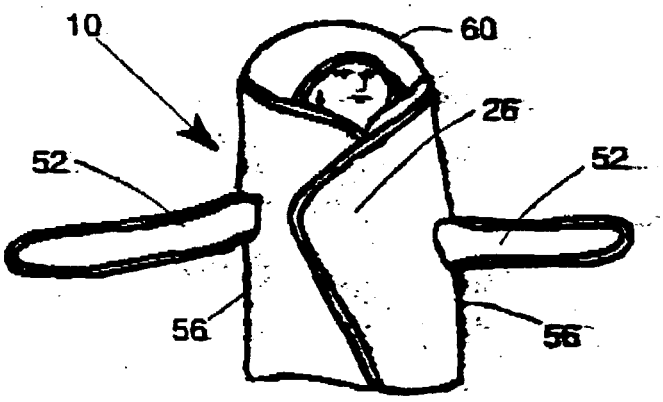


FIG 4

FIG 5



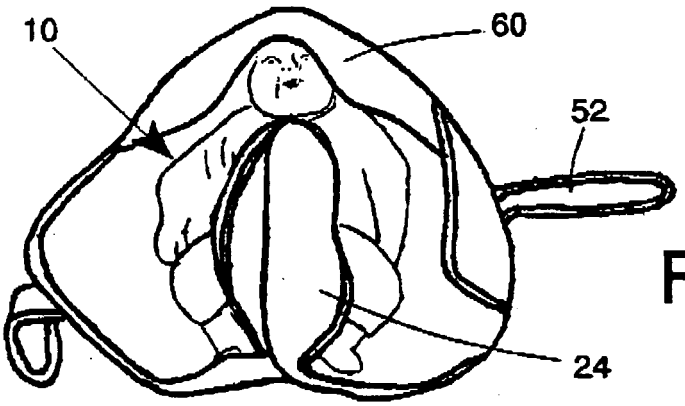


FIG 6

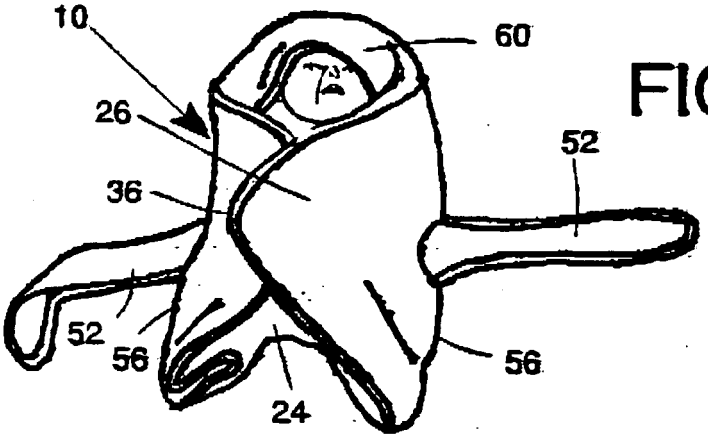


FIG 7

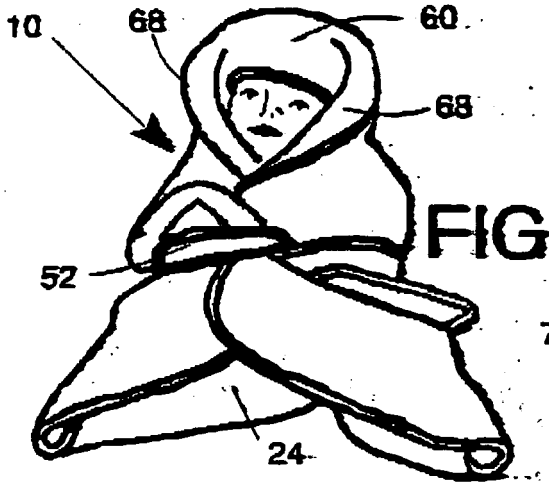


FIG 8

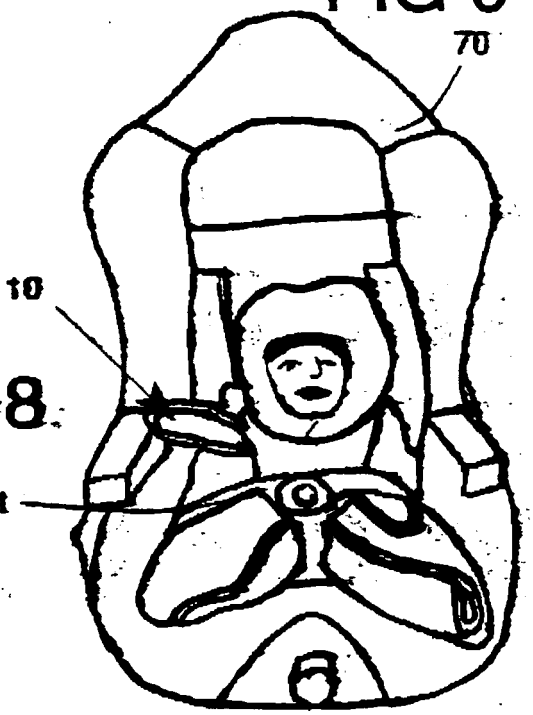


FIG 9

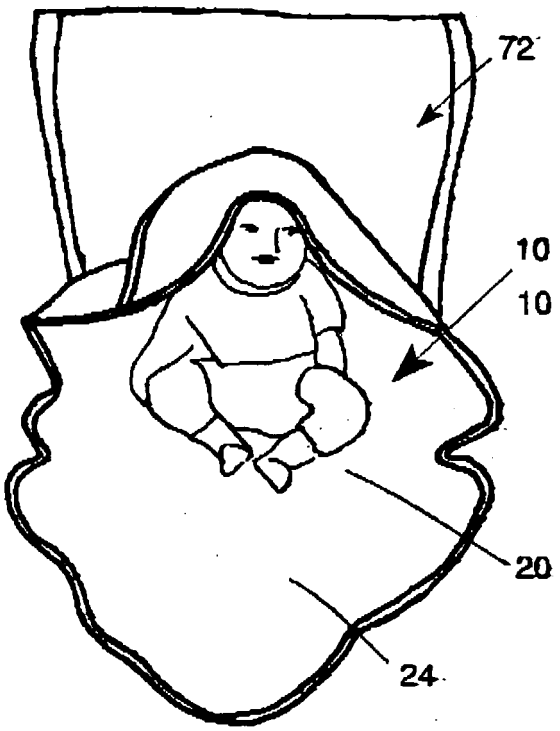


FIG 10

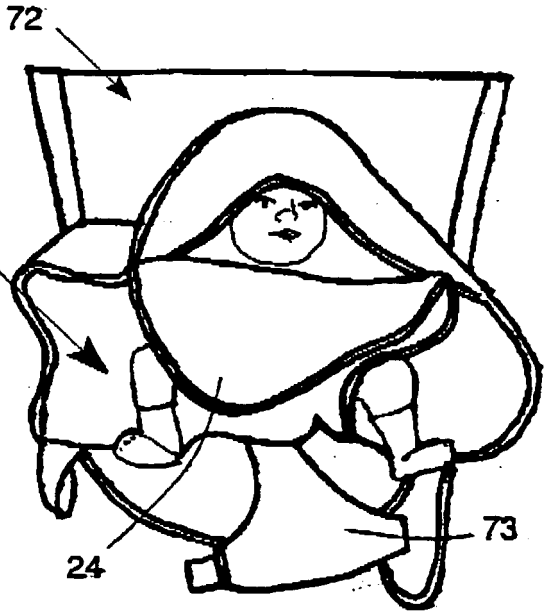


FIG 11

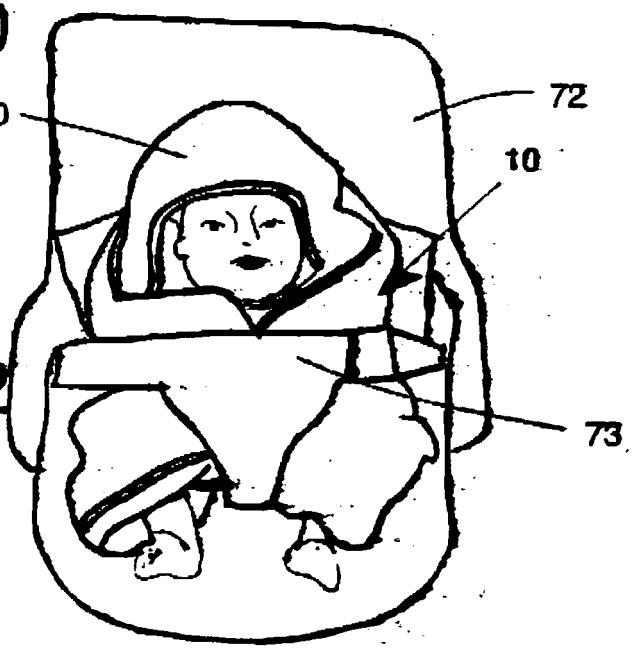


FIG 12

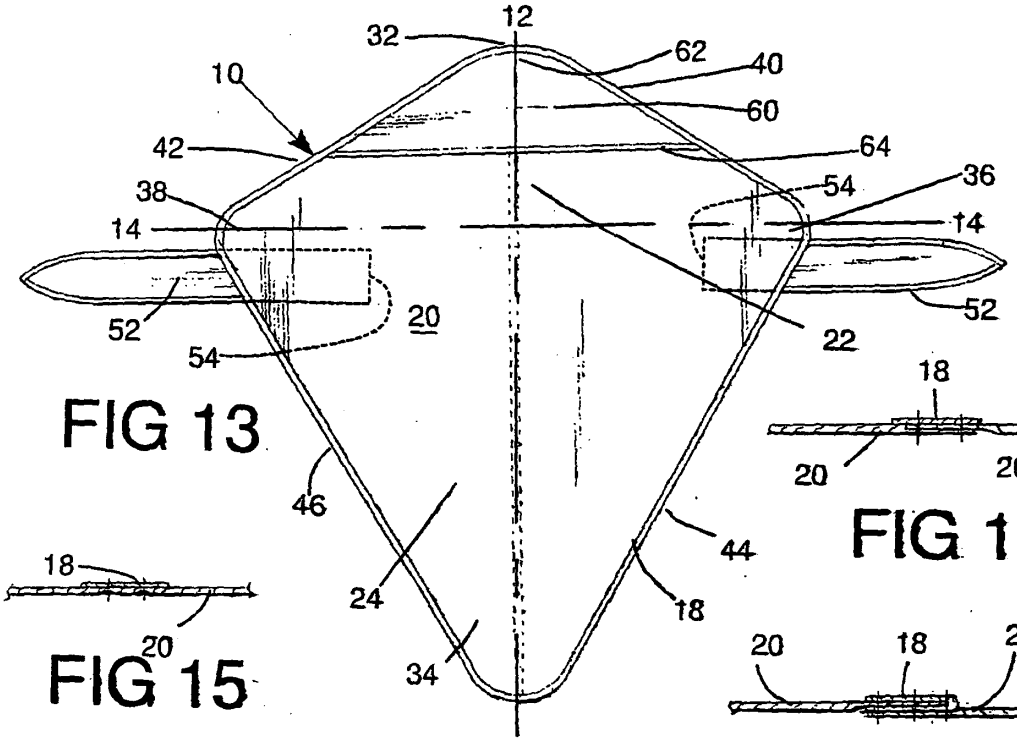


FIG 13

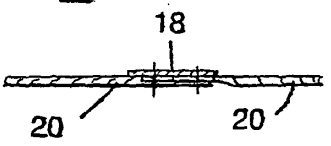


FIG 15A

FIG 15

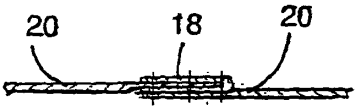


FIG 15B

FIG 16

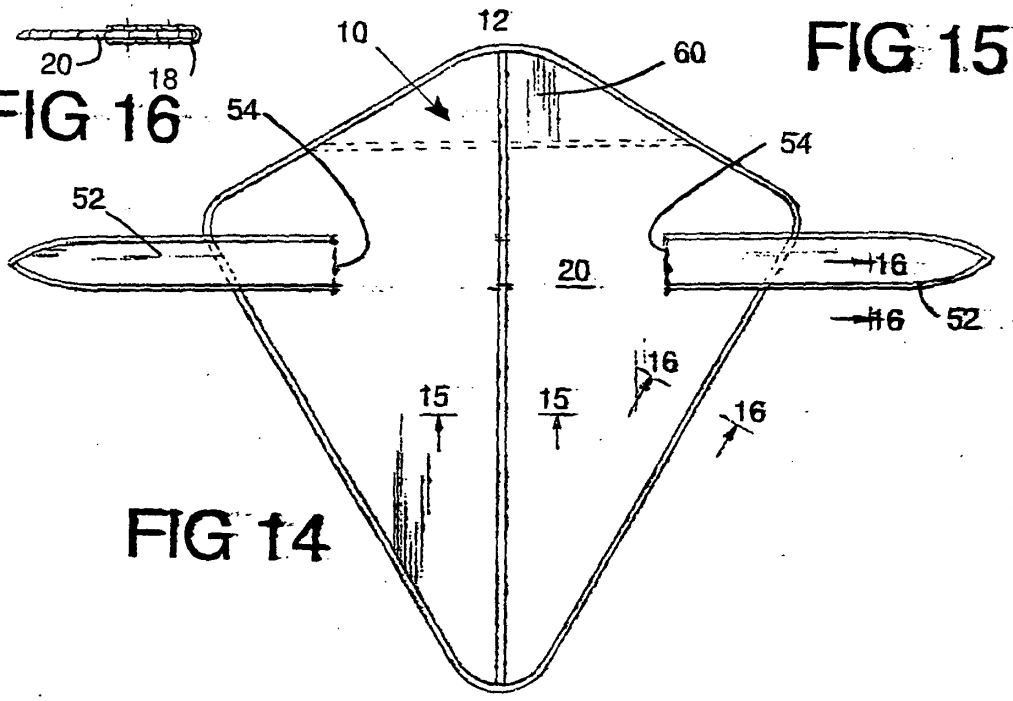


FIG 14

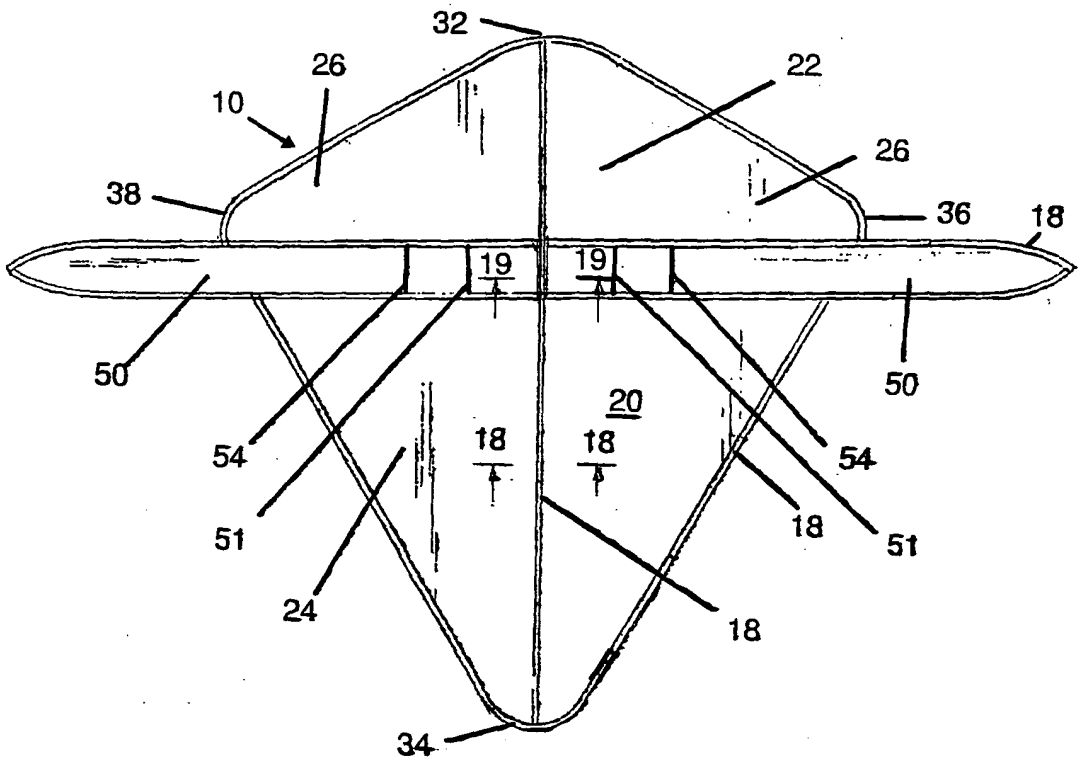


FIG 17

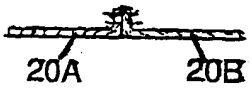


FIG 18

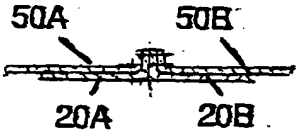


FIG 19

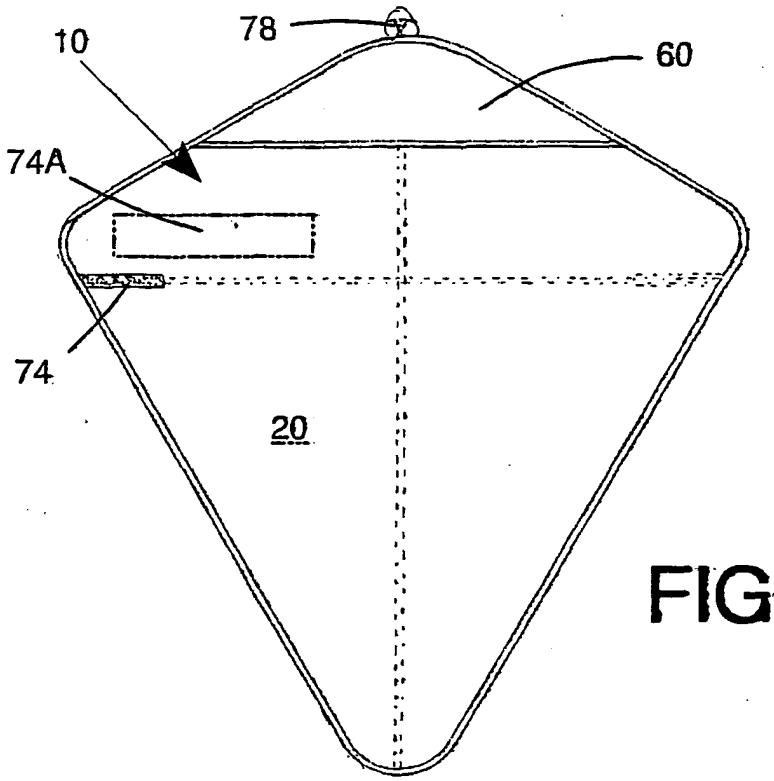


FIG 20

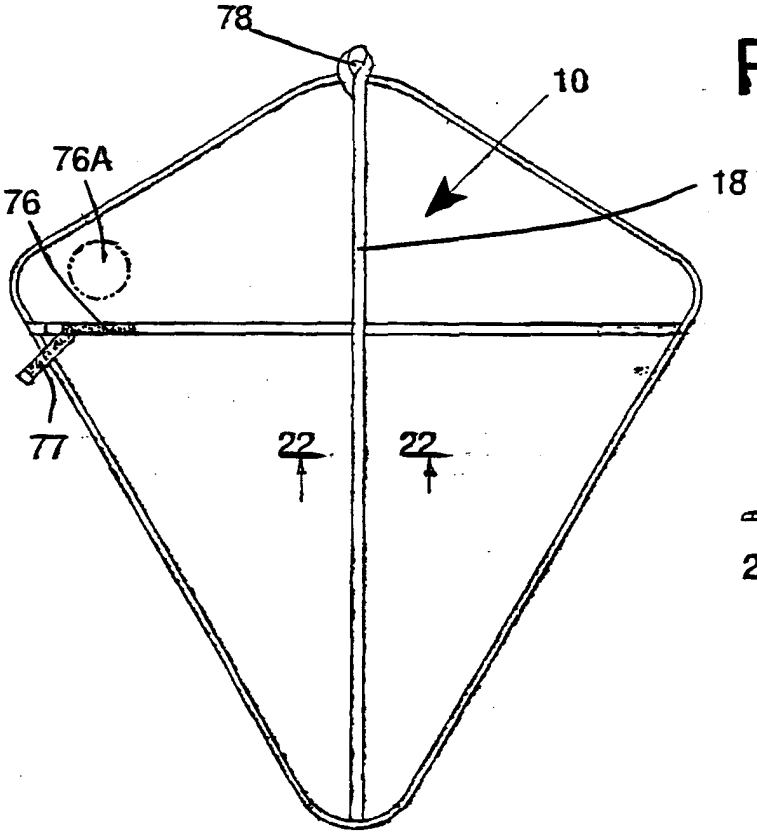


FIG 21

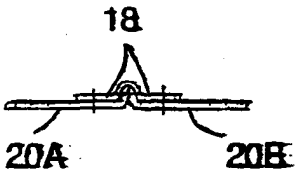


FIG 22

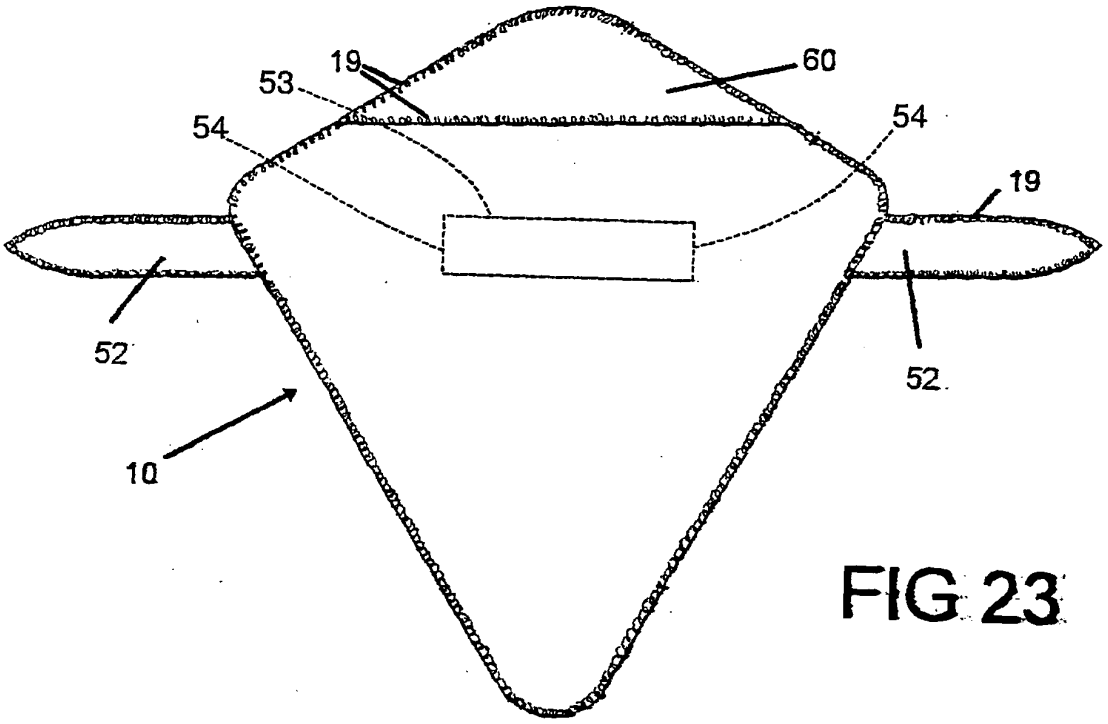


FIG 23

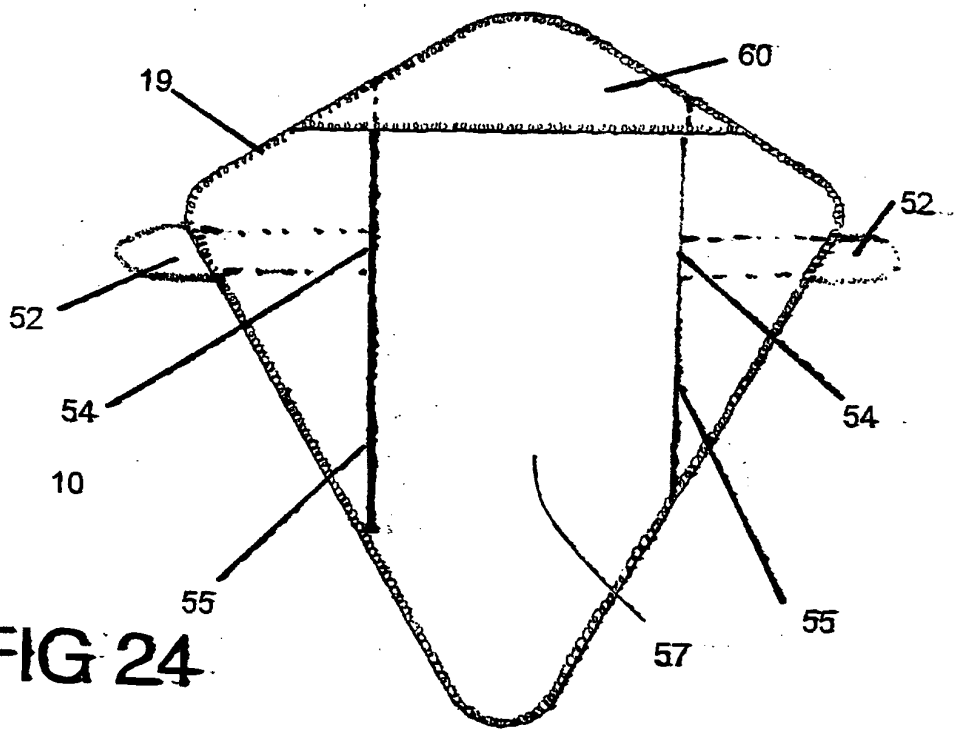


FIG 24

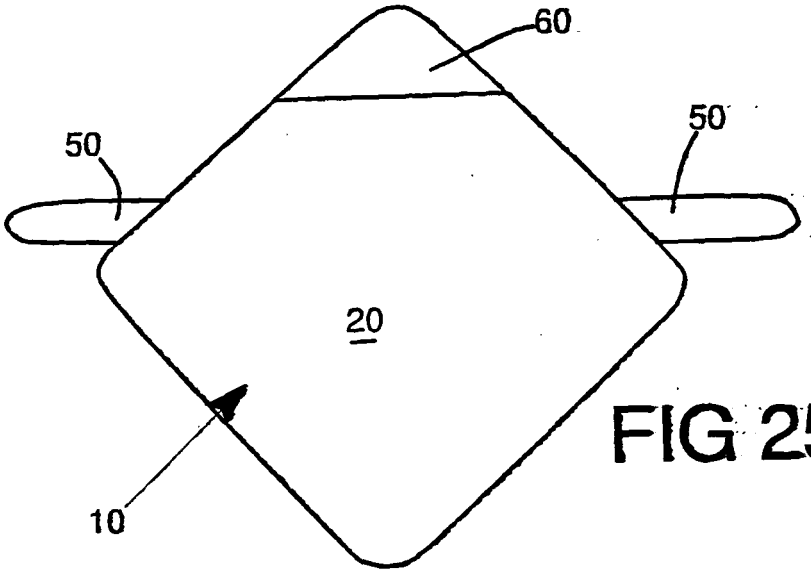


FIG 25

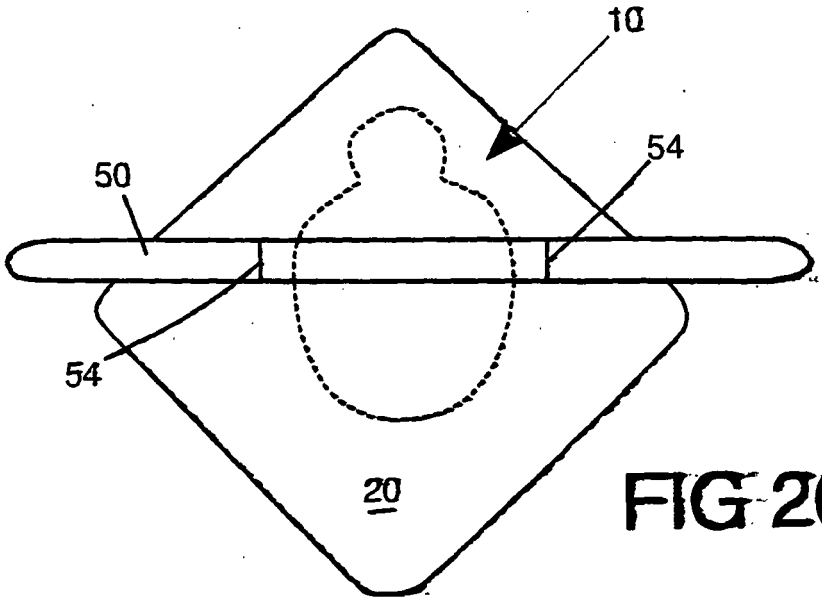


FIG 26

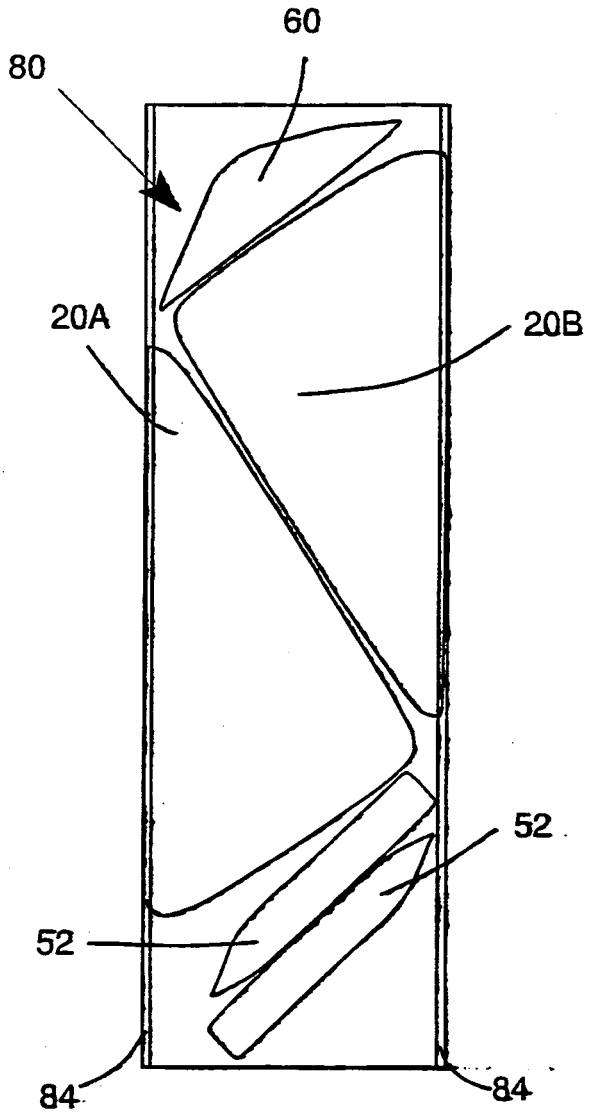


FIG 27

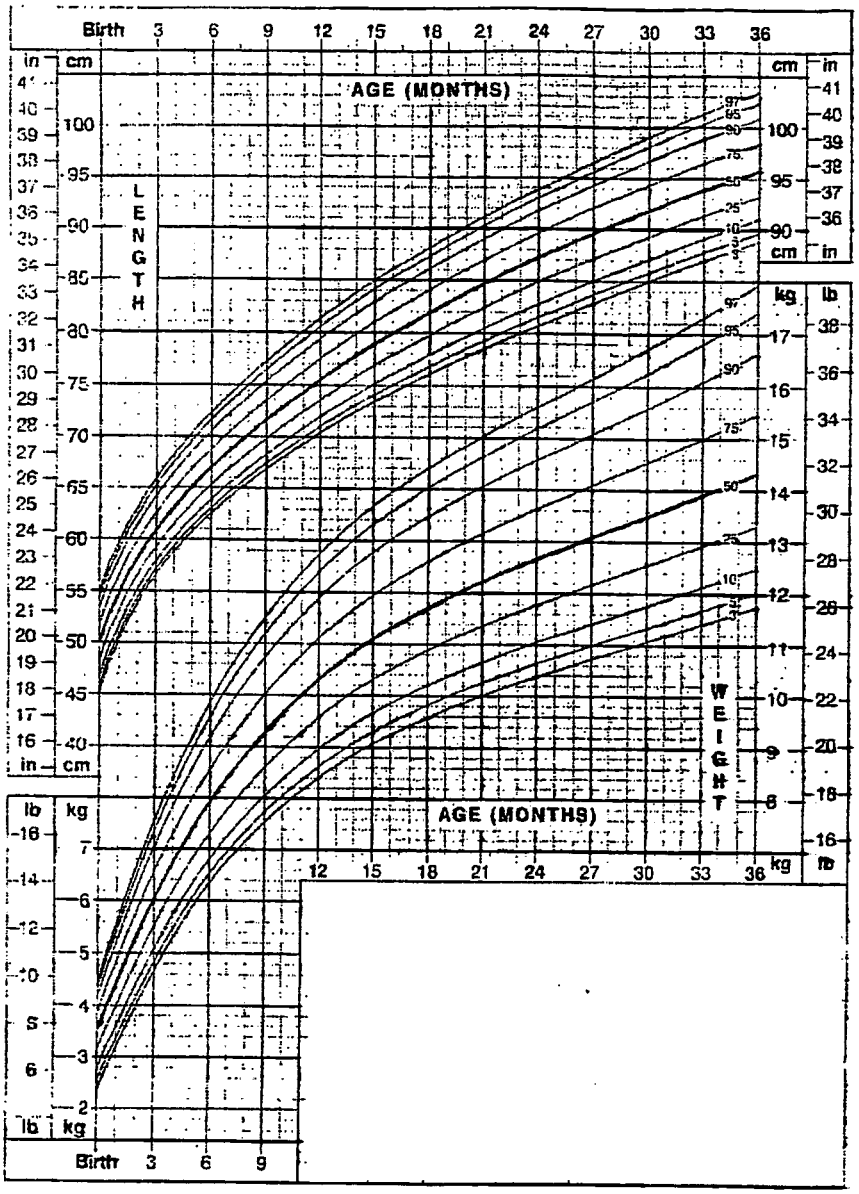

Birth 3 6 9 12 15 18 21 24 27 30 33 36
AGE (MONTHS)
LENGTH
WEIGHT
in cm
cm in
kg lb
lb kg
97
95
90
75
50
25
10
3

FIG 28

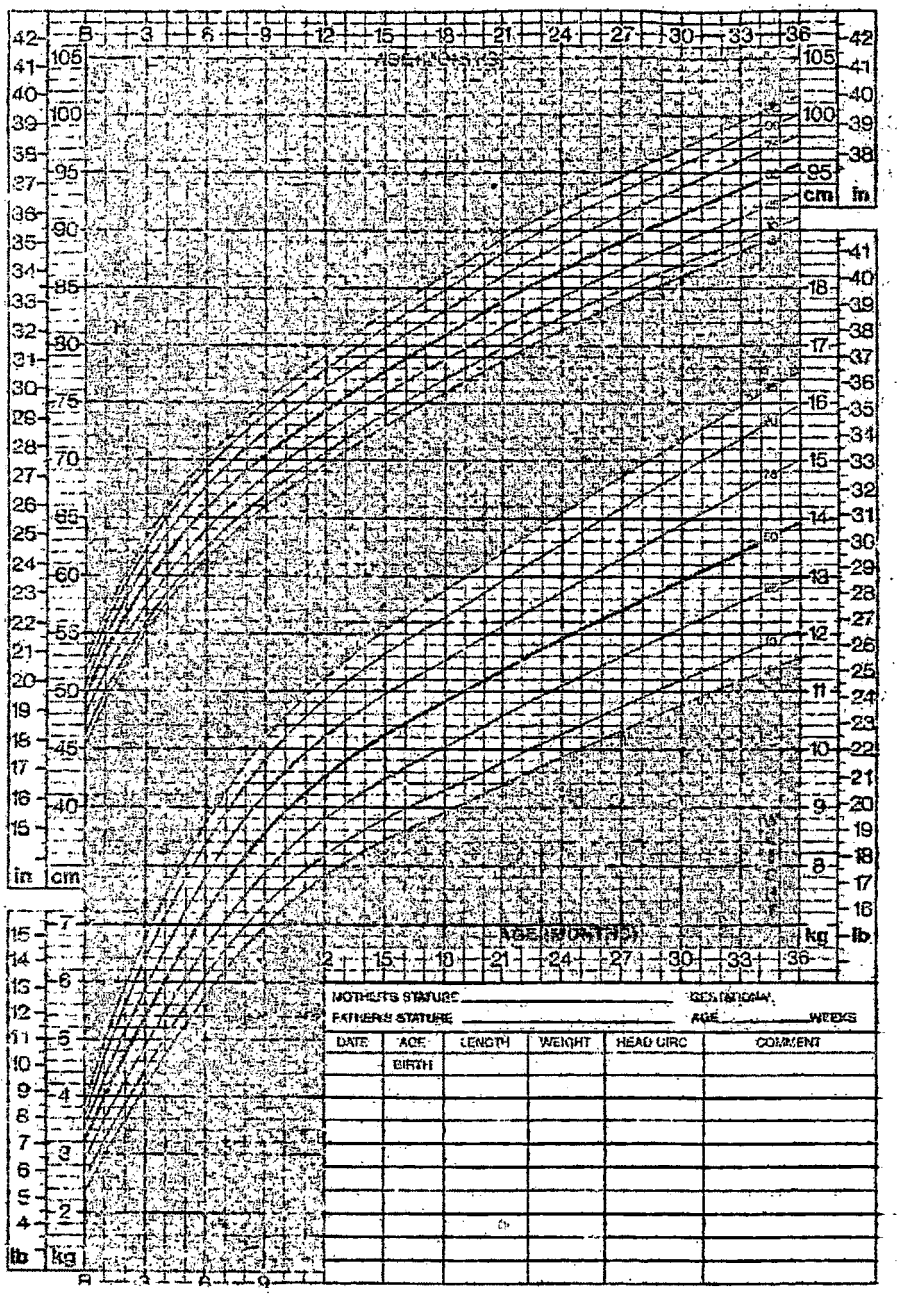

AGE (MONTHS)
MOTHER'S STATURE
FATHER'S STATURE
GESTATION
AGE
WEEKS
DATE
AGE
LENGTH
WEIGHT
HEAD CIRC
COMMENT
BIRTH
cm
in
kg
lb

FIG 29

REFERENCES CITED IN THE DESCRIPTION

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