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Neonatal Octopus Pouch

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(71) Applicant(s)
Vincenzina Brehaut

(72) Inventor(s)
Brehaut, Vincenzina

(74) Agent / Attorney
Vincenzina Brehaut, 51B Parsons Ave WA, Manning, WA, 6152

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ABSTRACT

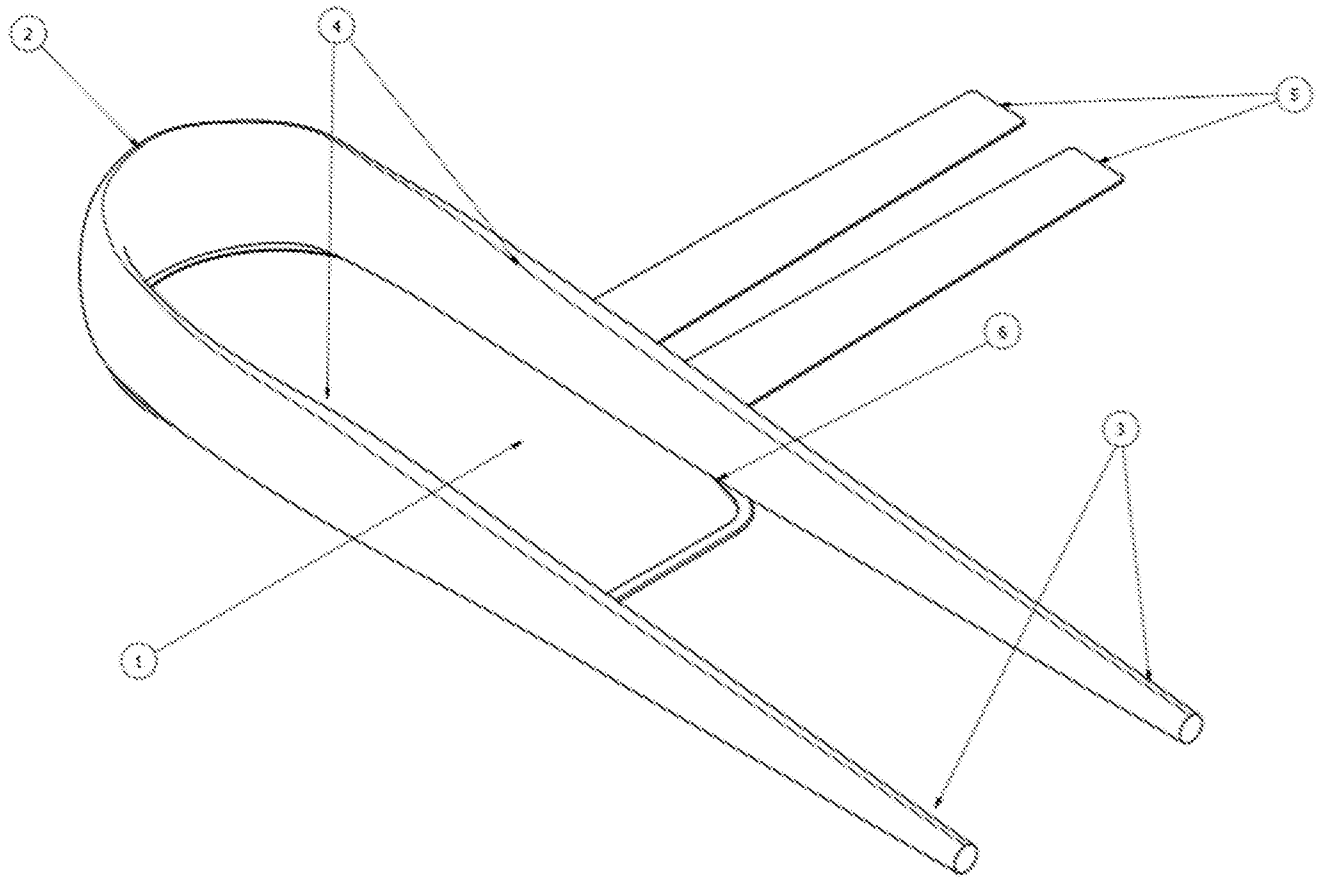
NEONATAL OCTOPUS POUCH

The primary function of neonatal positional aids already on the market is developmental care. Linen is used in many Neonatal Intensive Care Units around the world to swaddle or nest neonates to meet developmental needs and prevent neonatal skin injuries for those neonates who are admitted for ongoing care. A combination of positional aids and linen is used to support the sick neonate who requires Continuous Positive Airway Pressure (CPAP) for respiratory support. The Neonatal Octopus Pouch is an innovation that provides boundaries, stabilises neuromuscular development, promotes growth and supports potential pressure areas for the premature or sick neonate in Neonatal Intensive Care Units.

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NEONATAL OCTOPUS POUCH DRAWINGS

FIGURE 1



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TITLE

Neonatal Octopus Pouch

TECHNICAL FIELD OF THE INVENTION

The present invention relates to a pouch that is designed for preterm and sick neonates, for use whilst receiving ongoing care in the Neonatal Intensive Care Unit in the hospital setting. The present invention relates to the neonatal octopus pouch.

BACKGROUND OF THE INVENTION

[0001] Neonates that are born prematurely or that are compromised at birth may require admission to the Neonatal Intensive Care Unit (NICU) for respiratory, thermal, nutritional support and ongoing medical and nursing care. Respiratory support may be required for a prolonged period of time depending on the gestation and condition of the neonate. Respiratory support may be initially provided by a ventilator or Continuous Positive Airway Pressure (CPAP) using a CPAP circuit.

[0002] There are numerous forms of CPAP circuits. The CPAP circuit tubing and prongs are firmly secured to the neonate's head and is reliant on an adequate seal to provide effective CPAP. The Hudson CPAP tubing is secured to the head using a hat with velcro strips. The tubing is secured to both lateral sides of the head with velcro attaching to the CPAP hat. The tubing can place pressure on the temporal regions of the neonate's head if the head isn't supported off the underlying mattress. Support rolls are created using linen, wraps and blankets which are placed beneath the neonate's head to relieve the pressure and minimise the risk of skin injuries from the pressure of the tubing on the neonate's head.

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[0003] Developmental care of a neonate admitted to a NICU can promote neurological development, reduce the impact of environmental stresses, conserve energy and promote growth. Developmental care involves providing the best optimal handling and positioning measures to reduce oxygen needs and promote body alignment. Reducing environmental stimuli and painful procedures by providing adequate pain relief may reduce the impact of the stress on the neonate. Growth and development of preterm neonates may be compromised due to gestational age, illness or support that may be required whilst in the NICU. There is growing awareness of developmental support of neonates in NICUs around the world which is highlighted by the use of positional techniques and use of positional aids. The major aim of correct neonatal positioning is to reduce stress and improve outcomes. It's common practice in NICUs to create a pouch like support or nest using linen, wraps and blankets to provide a boundary to contain and support neonatal development.

[0004] The present invention was created following twenty years of nursing sick and preterm neonates admitted to NICU. The present invention is made with soft, washable cotton interlock fabric, the boundary and arms are filled with washable fibre filling. Once washed the pouch may be re used. Various sizes of the neonatal octopus pouch are designed to accommodate neonatal weight and gestational ages.

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BRIEF DESCRIPTION OF DRAWINGS

NEONATAL OCTOPUS POUCH

Figure 1

1. Base is made from washable cotton fabric which extends the length of the pouch from the distal boundary to above the neonate's head. The base length varies in size depending on the size of the pouch to accommodate various neonatal weights/ sizes The boundary and arms are sewn to the base to form the pouch.

2. Distal boundary is tall and deep to allow the neonate to have a decent base to move legs against, to promote growth and development of the neuromuscular systems.

3. Two lateral arms extend from the two lateral boundaries. The lateral arms are designed to support the neonatal head and reduce the risk of skin injuries when neonate requires respiratory CPAP support. One arm can be placed beneath the neonatal head to lift the head from the firm surface and promote neutral alignment of head/ neck. The second lateral arm can be placed to contour the head and provide containment. If no respiratory support is required, the two lateral arms can be placed to contour the neonate's head as a developmental pouch.

4. The two lateral boundaries taper from the high distal boundary to form the two lateral arms. The lateral boundaries are tall and are designed to swaddle the neonate's body when the two arms are in position. When the neonate is positioned in neutral alignment, the lateral boundaries allow for the neonate to flex, move and be contained within the pouch.

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5. The two wide arm straps are secured to one lateral side of the base. The arm straps are designed to be placed over the neonates' torso and /or abdomen, over the opposite lateral boundary and secured beneath the base. When the arm straps are secured in place they provide a secure and comfortable environment, to optimise alignment and growth, without restricting the neonate's movement.

6. The two lateral arms are free from the base towards the head, to allow the lateral arms to be placed beneath the neonate's head and contour the head without altering the contour of the base of the pouch. At this point leads and monitoring equipment can be placed outside the pouch to reduce the risk of skin pressure injuries if left within the pouch.

NEONATAL OCTOPUS POUCH

Figure 2

Displays different views of the neonatal pouch

1. Top view
2. Side view
3. Front view

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CLAIMS

What is claimed is:

1. The Neonatal Octopus Pouch has four arms, one continuous boundary that extends from one lateral arm to the other, two arm straps and a base.

2. The lateral arms provide support to the neonate's head when requiring Hudson CPAP for respiratory support. One arm is placed beneath the neonate's head, lifting the CPAP tubing off the hard surface mattress to reduce the risk of pressure injury. The second lateral arm is placed around the neonate's head to contour the head, to provide a boundary and containment.

3. The neonatal octopus pouch lateral arms can be used to support the neonatal head when the neonate is positioned facing either left or right lateral, prone, quarter prone or supine.

4. The neonatal octopus pouch has a high boundary that extends from both lateral arms, deepest point at the distal end. The deep lateral and distal boundaries contour the neonate to provide support and contain the neonate in the desired neutral position. The deep boundary allows for the neonate to move both feet in the pouch, to push off the boundary using muscles for development. The deep boundary supports neonatal containment and neutral alignment when positioned correctly and promotes a secure environment for the neonate to rest and grow.

5. The neonatal octopus pouch has two wide arm straps attached to the base on one of the lateral boundaries, that can be placed over the neonate's back/torso/abdomen and secured under the opposite lateral boundary. These two arms function to provide a secure and comfortable environment to optimise growth, without restricting neonatal movement.

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6. The base is a flat soft surface for the neonate to be positioned on. When the neonate is positioned on the pouch, the base extends from the neonate's feet to above the head. The length of the base is relative to the size of the neonate, to ensure that the base extends past the neonate's head, so there is reduced risk of pressure injury and reduced use of linen. The lateral arms and high boundary are sewn to the base to form the pouch.

7. The two lateral arms of the neonatal pouch are free from the pouch base near the head, to allow the arms to lay across the base to ensure the neonate's head remains in neutral midline position and alignment is optimised. At this point medical equipment attached to neonate such as ECG leads, saturation and temperature probes can be placed flat against the base under the arm and placed to rest outside the pouch.

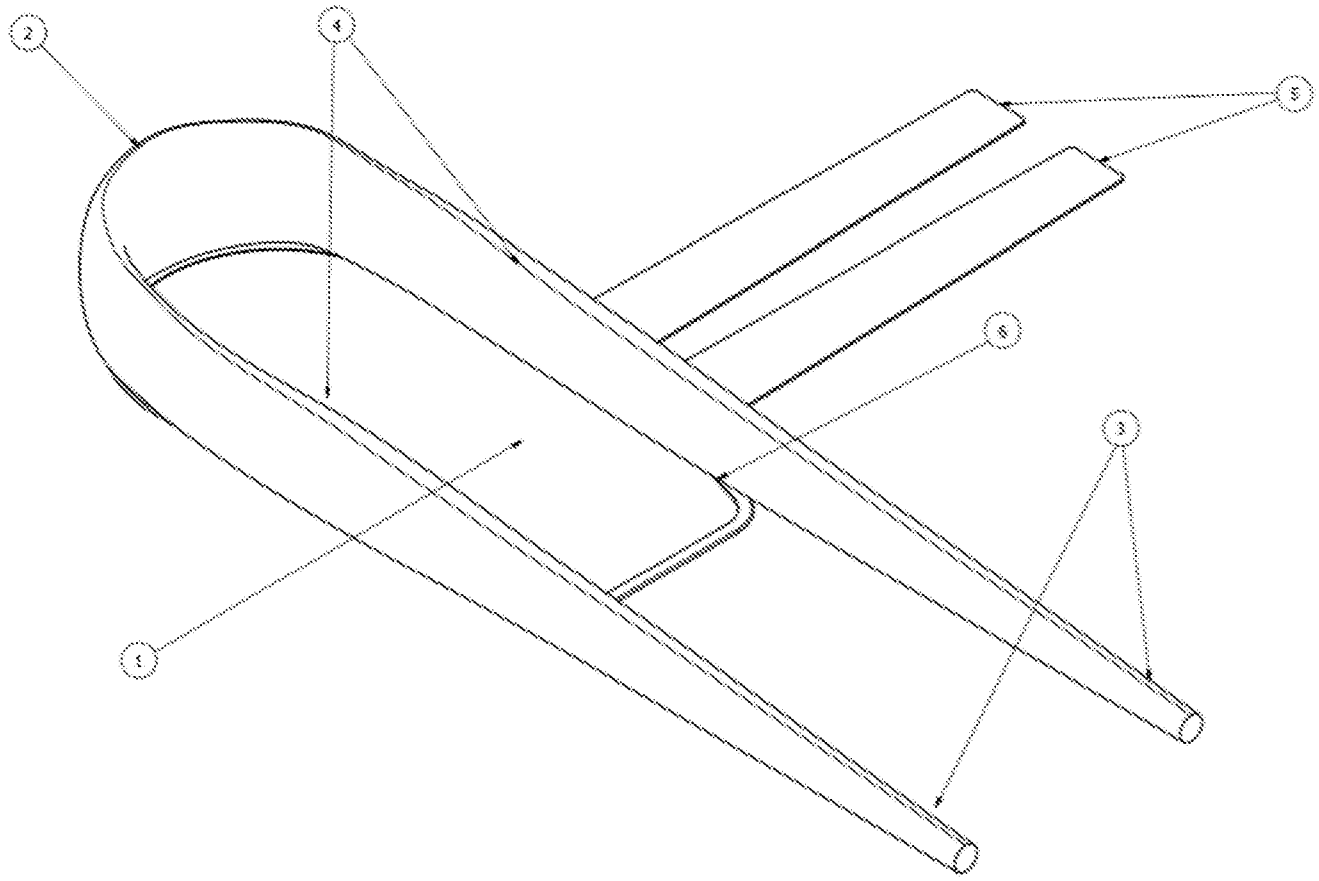
8. The neonatal octopus pouch is designed to drastically reduce the use of linen in Neonatal Intensive Care Units.

9. The neonatal octopus pouch is made from washable cotton fabric and fibre filler that can be safely laundered and re-used

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NEONATAL OCTOPUS POUCH DRAWINGS

FIGURE 1



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NEONATAL OCTOPUS POUCH DRAWINGS

FIGURE 2

