

## PatentAlert

16 December 2010

# Innovations in medical textiles

### **US20100286755 - COOLING ARTICLE OF CLOTHING AND METHOD OF USE FOR SAME**

*GALLAHER STEVEN H (US) (Inventor)*

Published 2010-11-11      Priority date 2010-05-11 (US)

A cooling article of clothing and method for use of the same are disclosed for providing temporary cooling comfort to a human wearer. In one embodiment, sealed elongated envelopes are formed on the inside of a layer of the fabric, which may be fashioned into a vest or shirt. Each of the sealed elongated envelopes defines a volume for containing a pre-determined amount of polyacrylamide material. Offset spacings are interleaved between the sealed elongated envelopes. A diffusion gradient is formed from the polyacrylamide material to the sealed elongated envelopes to the layer of fabric. A diffusion gradient provides for the transfer of water from the polyacrylamide material to the layer of fabric. Water within the layer of fabric is evaporated by way of airflow through the layer of fabric, thereby providing temporary cooling comfort to the human wearer.

### **US20100280416 - SHAPE SENSING CLOTHES TO INFORM THE WEARER OF A CONDITION**

*SEARETE*

Published 2010-11-04      Priority date 2010-02-26 (US)

A garment may be configured with one or more sensors and circuitry to communicate information related to a physiological condition to the user.

### **US20100256717 - SENSORY MOTOR STIMULATION GARMENT AND METHOD**

*INTELLISKIN*

Published 2010-10-07      Priority date 2010-04-07 (US)

A garment for stimulation of a wearer's sensory motor system. The garment includes a main body portion that includes an anterior portion and a posterior portion and at least one sensory motor stimulation member associated with the main body portion. The garment is configured to be worn over at least a portion of the wearer's torso and is form-fitting when worn by the wearer. The at least one sensory motor stimulation member contacts the wearer's skin when the garment is worn. The garment is fabricated from an elastomeric material that causes the at least one sensory motor stimulation member to stimulate the cutaneous nerve receptors in the wearer's skin contacted by the at least one sensory motor stimulation member.

### **WO2010114999 - GARMENTS FOR PROVIDING ACCESS FOR SENSORS TO CONTACT SKIN**

*KIERNAN PAMELA (US) (Inventor)*

Published 2010-10-07      Priority date 2010-03-31 (US)

A garment for wearing during monitoring of muscle activity of a subject includes a torso portion defining an interior space configured and adapted to accommodate and cover at least a portion of the subject's torso. The torso portion defines an exterior space external to the interior space. A plurality of access fittings are defined in the torso portion. Each access fitting is configured and adapted to accommodate access to skin of the subject adjacent a muscle group to be monitored by a sensor unit external to the torso portion, such that at least a portion of the sensor unit remains external to the torso portion with the sensor unit accessing the skin via the access fitting.

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### **US20100229878 - GARMENT TO PREVENT PRESSURE SORES**

*DILL STAN D (US) (Inventor)*

Published 2010-09-16

Priority date 2009-03-11 (US)

The present invention is a protective garment underpants having a first liner pad having a foam and polyester layers in the crotch to buttocks area and a second liner pad having an absorbent material and open cell foam layer useful for a male and a second garment for females and children where the absorbent layer is replaced by a pad similar to the first liner pad. The polyester layer and the absorbent material layer each have a directional nap running from the back of the garment forward.

### **WO201092462 - TEXTILE ARTICLE FOR PATIENTS AFFECTED BY A SKIN DISEASE**

*LENZI EGISTO S P A*

Published 2010-08-19

Priority date 2009-02-13 (IT)

Textile article, for example a garment, particularly an under- garment, or bed linen, for patients affected by a skin disease, said article comprising at least one textile layer comprising polytetrafluoroethylene (PTFE) fibres, said fibres being present at least at one surface of the textile layer intended to be in contact with the patient's skin. The PTFE fibres make it possible to obtain a very smooth surface, which is not sticky in the least and provides a pleasing sensation of freshness and slipperiness.

### **WO201089025 - MATTRESS, IN PARTICULAR FOR USE IN CARE AND HOSPITAL FACILITIES**

*HEINRICH ESSERS GMBH & CO KG*

Published 2010-08-12

Priority date 2009-02-05 (DE)

The invention relates to a mattress, in particular for use in care and hospital facilities, comprising a base layer and a top layer disposed thereupon. The top layer is formed by an elastic knitted material spacer enclosed by a top layer cover. The top layer cover has a liquid-permeable top layer cover lower part and a liquid-permeable top layer cover upper part. The mattress allows simple and frequent reprocessing.

### **WO201079440 - TEXTILE FIBERS OR THREADS HAVING DEPOSITS FOR IN PARTICULAR THE COMBINED APPLICATION OF NATURAL CURATIVES AND ELECTROMAGNETIC RAYS**

*VOLLERT KAI*

Published 2010-07-15

Priority date 2009-01-06 (DE)

Synthetic fibers are known from the prior art. For the application of holistic medicine, methods and objects are known that emit subtle energy through application to articles of clothing. It is problematic that these objects do not remain attached due to the mechanical load of the clothing. According to the invention, during the production process of natural and synthetic fibers that are suitable for producing clothes for human and animal bodies, fine-material substances or essences, but also other types and objects, that provide a subtle energy are already introduced into the fiber. Thus the substance is distributed preferably evenly within the fiber.

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### **WO201070171 - HOSIERY GARMENT**

*LURBE MATEU JAVIER; LURBE MATEU MIGUEL*

Published 2010-06-24      Priority date 2008-12-18 (ES)

The invention relates to a garment preferably in the form of a sock consisting of a textile structure formed by chitin fibres mixed with viscose or other fibres that can be combined with chitin. The textile structure is combined with polyamide fibres which remain positioned between the chitin fibres and said polyamide fibres are complemented with ionic silver particles, all of which provides healing, skin-forming and comfort properties, among others. Two areas are provided in the sock, namely: a first area made from a chitin and polyamide structure; and a second area made from a heat-regulating fabric, corresponding to the instep area and providing temperature regulation in accordance with the heat and cold conditions of the user, as well as providing breathability and improved sweat evaporation.

### **US20100130846 - SENSOR SYSTEM, GARMENT AND HEART RATE MONITOR**

*POLAR ELECTRO OY*

Published 2010-05-27      Priority date 2010-01-28 (US)

The invention relates to a sensor system, a garment and a heart rate monitor. The sensor system comprises at least one flexible film structure comprising: a first insulation layer and at least one electric conductor layer formed on top of the first insulation layer and comprising an electrode area, which is configured to establish an electric contact with the surface of the user's skin and to generate as output an electric signal proportional to a momentary value of the electrocardiogram.

### **WO201059553 - ELECTRODE GARMENT**

*TYCO HEALTHCARE*

Published 2010-05-27      Priority date 2008-11-21 (US)

The present disclosure is directed to a wearable garment device for application of electrical current to a patient's tissue. The garment device includes a material having an aperture and a mesh material extending across the aperture. At least one electrode is attached onto one side of the mesh material. The surface of the mesh material attached to the at least one electrode is defined as the outer surface. The other surface of the mesh material is defined as the inner surface. The inner surface of the mesh material is placed against the patient's tissue to receive the electrical stimulation from the electrode.

### **FR2937844 - BED LINEN SET FOR USE IN E.G. HOSPITAL, HAS INTERMEDIATE DUVET-PAD MADE OF BARRIER TEXTILE, WHERE TEXTILE IS IMPERMEABLE TO LIQUIDS SUCH AS BODY FLUID OR LIQUID FOOD, AND PROTECTS DUVET AGAINST MICROBIAL CONTAMINATION**

*MAJ*

Published 2010-05-07      Priority date 2008-11-06 (FR)

The set has a duvet, an intermediate duvet-pad and a duvet-cover, where the intermediate duvet-pad is made of barrier textile. The textile is impermeable to liquids such as body fluid or liquid food, and protects the duvet against microbial contamination. The resistance of the textile against microbial penetration at dry state is less than 10 power 1.4 colony-forming units (CFU). The resistance of the textile against microbial penetration at wet state is greater than 10 power 2.8 CFUs. An independent claim is also included for a method for managing changing of a bed linen set in a healthcare facility.

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### **US20100114263 - PHOTOTHERAPY GARMENT**

*UNIVERSITY OF ARKANSAS*

Published 2010-05-06

Priority date 2009-11-04 (US)

A phototherapy garment including a form-fitting bodysuit having a shell made from a stretchable, washable material covering the arms, legs, and torso which provides phototherapeutic light via a layer of cross-woven side-glow optical fibers. The bodysuit has an adjustable fastening system along the arms, legs, and torso to allow for variable sizing and a snug fit. Light is transmitted into the fibers via a waterproof base unit that is detachably attached to a housing dock on the side of the bodysuit. The LEDs emit high-intensity light of a wavelength or wavelengths suitable for treatment of various medical conditions. Each wavelength is transmitted separately into a respective one of a series of cross-woven optical fibers. Optionally, a reflective liner within the bodysuit may redirect irradiation from the fibers back toward the skin so no energy is wasted. Another embodiment includes a transparent liner. The base unit includes a power supply that may include a rechargeable battery. The suit may also include biofeedback and data logging systems.

### **WO201062668 - INTEGRATION OF FUNCTIONAL ELECTRICAL STIMULATION IN PROSTHETIC SOCKETS, LINERS, AND GARMENTS FOR IMPROVED AMPUTEE CARE AND PERFORMANCE**

*MUCCIO PHILIP EDWARD (US) (Inventor)*

Published 2010-06-03

Priority date 2008-10-30 (US)

The present disclosure provides a functional electrode stimulation (FES) apparatus for use with prosthetic limbs. FES may provide the benefits of pain management, muscle building, prevention of muscle atrophy, and muscle re-education of residual limb and/or peri-residual limb muscles. The FES apparatus comprises a portable electrical stimulator; means to carry a current between the electrical stimulator and a prosthetic limb liner or socket; a plurality of elastic conductors integrated with the prosthetic limb liner or socket and capable of carrying the current from the means; a plurality of thin planar conductive fabric electrodes capable of carrying the current from the elastic conductors; and a plurality of thin electrodes capable of carrying the current between the thin planar conductive fabric electrodes and the skin of a patient.

### **EP2180091 - PRESSURE-SENSITIVE CONDUCTIVE YARN AND BIOLOGICAL INFORMATION-MEASURING GARMENT**

*OKAMOTO CORP; RITSUMEIKAN TRUST*

Published 2010-04-28

Priority date 2008-10-24 (JP)

An object of the present invention is to provide a pressure-sensitive conductive yarn capable of detecting different biological information simultaneously when used as an electrode. A pressure-sensitive conductive yarn comprising a core yarn formed of an elastic yarn around which a winding yarn having conductivity is wound, wherein the winding yarn is a mixed yarn of a conductive fiber and a nonconductive fiber to cause variations in its electrical resistance with elongation or contraction.

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### **WO201032133 - ANTI-MICROBIAL BAMBOO FIBERS AND FABRICS**

*PODDAR ROHITASHWA (IN) (Inventor)*

Published 2010-03-25      Priority date 2008-09-18 (US)

The invention provides a method for modifying bamboo fibers, yarns, and textiles, by contacting them with a solution of water-soluble components of the Neem tree, *azadirachta indica*. The modified materials exhibit improved antimicrobial properties.

### **EP2177156 - ITEM OF CLOTHING FOR MONITORING PHYSIOLOGICAL CHARACTERISTICS**

*CAIROS TECHNOLOGIES AG*

Published 2010-04-21      Priority date 2008-10-14 (DE)

The piece has a monitoring device positioned at a rear side of the piece, for monitoring physiological characteristics e.g. heart rate and breathing frequency, of a wearer e.g. football player, of the piece. A conductive electrode is connected to the monitoring device, which is separably connected with the piece. The conductive electrode is connected to a conductive connection at a surface of the rear side of the piece, where a part of the piece is formed from a non-conductive fiber. The monitoring device includes an universal serial bus interface.

### **WO201038176 - GARMENT FOR POSITIONING A PLURALITY OF SENSORS AND A SENSOR CARRIER**

*PHILIPS INTELLECTUAL PROPERTY; KONINKL PHILIPS ELECTRONICS NV*

Published 2010-04-08      Priority date 2008-10-02 (EP)

To detect slowly deteriorating health conditions requires monitoring of physiological signals over a long period of time wherein the change in those physiological signals that are indicative for a health problem is small. To enable the acquisition of data of physiological signals a garment for positioning a plurality of sensors relative to the skin of a wearer is provided in which the position of the sensors relative to each other and the wearer are unaffected over time when the garment is repeatedly put on and off. Said garment comprises a wearable body structure of flexible material and is characterized in that the garment further comprises a bendable and inextensible sensor carrier, each of the plurality of sensors being affixed to a predetermined position on a skin facing side of the carrier.

### **WO201028504 - VARIABLE VOLUME GARMENTS**

*UNIV FRASER SIMON*

Published 2010-03-18      Priority date 2008-09-15 (US)

A variable volume garment is provided. The garment comprises at least one garment section defining a bore through which a body part extends when the garment is being worn. The garment section incorporates a dielectric electroactive polymer (EAP) structure comprising a pair of deformable electrically conductive layers located on opposing sides of a deformable dielectric layer. A cross-section of the garment section bore has a first dimension when there is a first electrical potential between the electrically conductive layers and the cross-section of the garment section bore has a second dimension less than the first dimension when there is a second electrical potential less than the first electrical potential between the electrically conductive layers. Methods are provided for donning and doffing the garment, adjusting the fit of the garment and influencing the flow of blood and/or other bodily fluids using the garment.

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### **US20100037369 - MUSCLE SUPPORT GARMENT AND METHOD**

*REICHERT ANDREAS B (US) (Inventor)*

Published 2010-02-18      Priority date 2009-08-14 (US)

A muscle support garment and method for applying compressive forces to muscles within a treatment area are disclosed. A band of stretchable wrap material is secured to the garment and is wound in an overlapping spiral manner on the inside of the garment, encircling the treatment area. The band of wrap material is longitudinally adjustable to vary its tension and the compressive forces applied, from external of the garment. Overlapping loop retainer structures secured inside the garment slidably entrain and retain the wrap material in an overlapping manner. The garment may include an inner liner.

### **US20100036210 - ELASTIC CLOTH DEVICE WITH A FUNCTION OF PHYSIOLOGICAL DETECTION**

*ZENTAN TECHNOLOGY*

Published 2010-02-11      Priority date 2008-08-06 (TW)

An elastic cloth device with a function of physiological detection includes two elastic bodies, two fastening elements, and a connecting strap. The two elastic bodies are aligned with an interval in-between and each includes an elastic cloth strap woven with at least one strain sensing unit; wherein the strain sensing unit has a surface emerging from the elastic cloth strap. Each fastening element is combined with one end of the corresponding elastic body and electrically coupled with the corresponding strain sensing unit. The connecting strap is connected with the ends of the elastic bodies so that the elastic bodies are spacedly connected in series. Accordingly, when a physiological strain reaction has an effect on the elastic cloth straps, the straps drive the strain sensing units to produce a physiological strain signal which is electrically transmitted to the fastening elements, thereby the function of physiological detection is achieved.

### **WO201099729 - REMOTE TWELVE-LEAD ELECTROCARDIOGRAM MONITORING CLOTHING**

*LI ZHIBING (CN); TIAN HUI (CN); LI CHUNLIN (CN); LU XILIE (CN); WANG HAO (CN); WU XUN (CN) (Inventors)*

Published 2010-09-10      Priority date 2009-03-06 (CN)

A remote twelve-lead electrocardiogram monitoring clothing includes a garment, an electrode module and a circuit system. The garment has a given specification and model according to features of monitoring object. The electrode module is provided on the specific part of the garment for collecting electrocardiosignals. The circuit system consists of an integrated circuit box which is positioned in the pocket of the garment and served to collect signals, analyze and process signals, store signals and send signals.

### **WO201007565 - DRUG DELIVERY GARMENT**

*KONINKL PHILIPS ELECTRONICS NV*

Published 2010-01-21      Priority date 2008-07-18 (EP)

Drug delivery device comprising a garment, such as a sock, T-shirt, or underpants, comprising at least one pocket encasing at least one drug dispenser with an outlet, such as a jet nozzle, in line with an opening in the pocket. The garment is at least partly made of a stretchable fabric. When worn, the outlet can face the skin of a patient and drug delivery can take place.

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### **WO201003312 - INTELLECT HEATING FABRIC**

*UNIV HONG KONG POLYTECHNIC*

Published 2010-01-14      Priority date 2008-07-07 (US)

An intellect heating fabric weaved by common textile materials and conductive textile materials comprises: heating units which are spread over the fabric to provide heating for specific parts of user's body; input terminal which is connected with external power supply for providing power to the heating units. Furthermore, the conductive textile materials blend with the common textile materials in order to connect the input terminal with the heating units.

### **WO2009133483 - GARMENTS**

*HEEL DOUGLAS JAMES (ZA) (Inventor)*

Published 2009-11-05      Priority date 2008-05-02 (ZA)

The invention provides a garment for stimulating the human body to trigger desired responses in selected physiological systems. The garment includes a flexible structure that is configured to extend in close proximity around part of the body and includes inwardly extending protuberances in locations corresponding to activation areas on the human body, for triggering desired responses in selected physiological structures.

### **US20090264969 - MULTI-MODE COOLING GARMENT**

*ADROIT DEVELOPMENT*

Published 2009-10-22      Priority date 2009-01-29 (US)

Apparatus for cooling a person in extreme environments. The apparatus includes a garment having a vest with attached tubing. The vest includes an evaporative cooling device and the tubing is configured to circulate chilled water. The vest includes a material that is able to receive and absorb an amount of liquid water with a mass greater than the material. When liquid water is applied to the vest, the vest absorbs the water for later evaporation. The tubing enables the garment to have a lower differential temperature between the inside surface and the outside surface, thereby reducing the rate of evaporation, which enables the passive cooling to be operable for an extended period of time. When the heat load does not permit the differential temperature to be reduced, the tubing removes additional heat, thereby providing additional heat removing capacity beyond the passive cooling.

### **WO2009124367 - IMPROVEMENTS APPLIED TO A TEXTILE PRODUCT**

*HIRATA MARIO (BR) (Inventor)*

Published 2009-10-15      Priority date 2008-04-07 (BR)

Improvements applied to a textile product, and more particularly wherein the improved product is a woven textile product - fabric containing bioceramic microparticles embedded into the fibers thereof with high capacity of irradiation in the infrared region, provided to be used both in humans and animals, more particularly the invention is related to a textile product containing bioceramic microparticles with high capacity of infrared irradiation which, in contact with the heat of the human body, is capable of transmitting infrared radiation in the range between 3  $\mu\text{m}$  and 14.8  $\mu\text{m}$ , preferentially in the 14.8 micron range, said infrared radiation at this wavelength being capable of regulating the blood microcirculation, as the result of its high protection, the blood microcirculation being the nervous center of human and/or animal metabolism.

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### **WO2009129244 - METHOD FOR IMPARTING ANTIMICROBIAL CHARACTERISTICS TO HYDROPHILIC FABRICS**

*THOMAS TOM (US) (Inventor)*

Published 2009-10-22      Priority date 2008-04-14 (US)

The present invention is directed to a method for imparting antimicrobial characteristics to hydrophilic fabrics. The method involves: providing a hydrophilic fabric; providing a first solution comprising at least one oligodynamic metal ion, wherein the first solution is free of basic nitrogen compounds; contacting the hydrophilic fabric with the first solution to allow the hydrophilic fabric to absorb metal ions from the first solution; and precipitating or reducing the metal ions that have been absorbed by the fabric so that the hydrophilic fabric contains an oligodynamic metal salt or free oligodynamic metal and has antimicrobial characteristics. The invention is also directed to disposable medical cloths having antimicrobial characteristics.

### **WO2009142672 - ANTIMICROBIAL AND ODOR ADSORBING TEXTILE**

*MILLIKEN & CO*

Published 2009-11-26      Priority date 2008-03-28 (US)

The antimicrobial and odor adsorbing fabric substrate has a surface and at least a portion of the surface is coated with a finish. The finish contains a compound selected from the group consisting of silver particle-containing compounds, silver ion-containing compounds, silver ion-generating compounds, and any combinations thereof, a hyperbranched polyethyleneimine derivative, potassium citrate, inorganic chloride, a polyurethane binder, and a cross-linking agent. The silver-ion containing compound is selected from the group consisting of silver zirconium phosphate, silver zeolite, silver glass, and any mixtures thereof or a conductive silver containing nanoparticle.

### **WO2009112281 - GARMENT INTEGRATED APPARATUS FOR ONLINE POSTURE AND BODY MOVEMENT DETECTION, ANALYSIS AND FEEDBACK**

*ETH ZURICH*

Published 2009-09-17      Priority date 2008-03-14 (EP)

The invention is in the field of smart textiles for posture classification. It concerns a garment, in particular upper body garment, comprising an apparatus for detection of the orientation of at least one body segment integrated to the garment, wherein the apparatus comprises a plurality of sensing terminals and at least one processing unit in communication with the terminals, and wherein the garment is loose-fitting.

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**WO200999587 - SYSTEMS AND METHODS FOR COLLECTING BODY MEASUREMENTS, VIRTUALLY SIMULATING MODELS OF ACTUAL AND TARGET BODY SHAPES, ASCERTAINING GARMENT SIZE FITTING, AND PROCESSING GARMENT ORDERS**

*WESTMARK INTERNATIONAL INC*

Published 2009-08-13      Priority date 2008-02-04 (US)

Methods and systems are provided for obtaining coordinated body measurements of an individual using a measuring device having a belt with a first scale of measurement indicia and a strip with a second scale of measurement indicia. Also provided are a method and system of virtually rendering a simulated model of an actual body shape and a target body shape of an individual. Methods and systems of size fitting garments and processing garment orders are also provided.

**EP2237752 - CLOTHING PIECE WITH HEATING DEVICE**

*THERM IC PRODUCTS GMBH*

Published 2010-10-13      Priority date 2009-01-26 (WO)

The object of the invention is a clothing piece, such as a glove, with a heating device, in particular for the warming and/or temperature control of a skin surface with deep-acting effect upon areas of a human body, comprising at least one heat transfer element, at least one connection for an energy supply device, at least one control field with an encapsulation and with at least one circuit board with an electrical control circuit for controlling the temperature of the heat transfer element and at least two switches for the manual adjustment of the temperature. The encapsulation comprises a chamber that holds the circuit board and a protruding edge that surrounds the chamber, wherein the edge is made of a flexible material. In addition, the switches are made up of at least two contact elements located on the inside of the encapsulation and at least two contact elements formed on the circuit board.

**GB200907567 - TEMPERATURE LEVELLING GARMENT**

*HOPE PAUL FRANCIS (GB) (Inventor)*

Published 2009-06-10      Priority date 2009-05-05 (GB)

A garment comprises a phase change material incorporated into a pocket, or panel, in the garment to regulate body temperature. The phase change temperature of the material is selected at 28°C in order to provide an optimum operating temperature for muscles when exercised. The pockets are stitched or welded into the material of the garment and are positioned on the garment so that, when in use, they are adjacent a particular muscle group to be protected. The phase change material may be in the form of microcapsules. In particular the garment is power shorts or leggings with pockets over the hamstring, abductors, gluteus maximus and calves.

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### **EP2210534 - PILLOW FOR THE PREVENTION OF CRANIAL DEFORMITIES IN NEWBORN**

*THINK PIPE LINE S L N E*

Published 2010-07-28      Priority date 2009-01-22 (ES)

The pillow has an orifice of suitable dimensions, which decreases the local pressure exerted on the skull, the pillow is formed by a body of foam or another material deformable under pressure and a fabric coating which protects the core and improves the hold of the head, whose coating has an upper layer and another lower one sewn together in the same orifice and following its perimeter and at mid height of the foam core. The cavity formed has dimensions which adapt to the natural shape of the newborn baby's head.

### **GB200810098 - SANITARY GARMENT AND METHOD FOR MAKING SAME**

*MABU NATURALS INTERNAT INC*

Published 2008-07-09      Priority date 2008-06-02 (US)

A reusable sanitary garment is provided, having a three-part construction, incorporating an outer garment portion, a sling portion, and at least one pad, supported within the sling, which, in turn, is affixed to, and supported within, the outer garment. Both the outer garment portion and the sling portion are preferably fabricated, in an ecologically sustainable manner, from recycled plastics materials. The pad may be fabricated as a reusable, washable article, or may be fabricated as a disposable article, preferably from recycled, and easily recyclable or biodegradable materials. The outer garment portion, the sling portion and/or the reusable pad may be fabricated to incorporate bamboo charcoal material, having enhanced antibacterial, deodorant, wicking and absorptive qualities.

### **GB200906879 - A GARMENT**

*FLANNERY CLODAGH (IE) (Inventor)*

Published 2009-06-03      Priority date 2008-05-07 (IE)

A blanket for a wheelchair user comprising; a top panel for fitting over the users lap, an integral lower panel for fitting around the user's lower legs and fastening means for retaining the lower panel in place around the user's lower legs. There may be a gusset between the panels for improved fit. The fastening means may comprise hook-and-loop fastener strips on the front side of the lower panel and a longitudinally-directed strip on the rear side. The lower panel may be of smaller width than the top panel.

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### **WO2009135395 - MULTIFUNCTIONAL CERVICAL REHABILITATION HEALTH PILLOW WITH HEIGHT ADJUSTABLE CERVICAL PILLOWS**

*YANG QIAOSHENG (CN) (Inventor)*

Published 2009-11-12      Priority date 2008-05-05 (CN)

A multifunctional cervical rehabilitation health pillow with height adjustable cervical pillows, which comprises a pillowcase and an inner pillow. The cervical pillows are located in the middle along two long edges of the pillowcase, and the side pillows are provided at two sides of the inner pillow. The cervical pillows are cylindrical or column shaped with arc shaped upper parts, plane bottom and steamed bread shaped cross section with small upper part and big lower part. The bases and the pedestals are located at the lower parts of cervical pillows for lifting the cervical pillows. The Chinese medicine is removed of impurity, crushed and packed by nonwoven cloth, then put into the through holes in the middle of the cervical pillows, the Chinese medicine comprises hemlock parsley, angelica dahurica, salvia miltiorrhiza, shelled semen biotae, tuckahoe and borneol.

### **EP2193190 - IMPROVEMENTS RELATING TO FABRIC TREATMENT COMPOSITIONS**

*UNILEVER NV; UNILEVER PLC*

Published 2010-06-09      Priority date 2008-09-15 (WO)

A fabric treatment composition which comprises an emulsified sugar polyester, a probiotic and a deposition aid, results in the deposition of the probiotic onto fabric during a laundry treatment process.

### **EP2146592 - CLOTHES AND METHOD FOR PREVENTING SLEEPING RESPIRATORY OBSTRUCTION AND/OR DECUBITUS**

*BIO SLEEP MED CO LTD*

Published 2010-01-27      Priority date 2008-05-09 (WO)

Clothes have a capability of preventing sleeping respiratory obstruction and/or decubitus, which is worn by a user. The clothes include a plurality of air chambers provided at the rear of the clothes, the air chambers being capable of being shrunk and expanded. An air supply unit supplies air to each of the air chambers, and a pressure detecting unit measures the pressure of each of the air chambers to produce a measured pressure as an electrical signal. A controller receives the measured pressure signal from the pressure detecting unit to supply the air to the air chambers by using the air supply unit when a snoring or a sleep apnea of the user is detected or a predetermined time elapses in the same posture in order to change a posture of the user.

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### **US20080201827 - SURGICAL APPAREL FOR COVERING AN AREA OF A PATIENT'S HEAD AND REDUCING HEAT LOSS**

*HIPPS SARAH (US) (Inventor)*

Published 2008-08-28      Priority date 2007-02-28 (US)

Surgical apparel comprising a substantially conically shaped shell having a narrower closed end and a wider open end dimensioned to fit over a crown area of a head of a surgical patient is described herein. The shell may include one or more layers of fabric having a thermal transfer property adapted to complement the closed end to reduce an amount of heat transfer from the head of the surgical patient to the ambient during a surgical procedure. Also, the fabric may be relatively inexpensive to enable disposal of the surgical apparel after a single use on the surgical patient.

### **EP2106225 - AROMA-THERAPEUTIC BEDDING SET, A METHOD AND A HERB DISPERSING STRUCTURE FOR THE MANUFACTURE THEREOF**

*JUHASZ LEVENTE (HU); JUHASZ LEVENTENE (HU) (Inventors)*

Published 2009-10-07      Priority date 2007-04-25 (WO)

A set of aroma therapeutical bed-clothes comprises pile fabric layers or yarns of natural or artificial material and dried and chipped medical plants uniformly distributed and embedded between the layers and/or into the yarns.

### **EP2068966 - SURGICAL AND MEDICAL GARMENTS AND MATERIALS INCORPORATING SHEAR THICKENING FLUIDS**

*REGENT MEDICAL LTD*

Published 2009-06-17      Priority date 2007-09-03 (WO)

A surgical garment in the form of a surgical gown, a surgical glove or a surgical mask incorporates a shear thickening fluid as a layer on at least one of the inner and outer surface of the garment, the viscosity of which shear thickening fluid increases to inhibit penetration of the garment.

### **EP2049202 - TEXTILE MATERIAL FOR MANAGEMENT OF SKIN HEALTH COMPLICATIONS ASSOCIATED WITH SKIN FOLDS, AND ITS METHOD OF USE**

*COLOPLAST AS*

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A textile material for management of skin health complications associated with skin folds includes a disposable textile of selected dimensions, impregnated with a selected concentration of an antimicrobial silver complex. The disposable textile is designed to be placed within a skin fold for management of skin health complications associated therewith. A method of use of the disposable textile material includes the steps of performing a routine skin inspection, selectively using a skin cleanser to topically clean the skin fold, selectively using an antifungal powder to topically cover the skin fold, determining approximate dimensions of the skin fold, providing the textile material dimensioned such that at least one selected portion is exposed to air outside of the skin fold, and placing the textile material over skin of the skin fold such that the skin fold may envelope the textile material with the at least one selected portion thereof being exposed to air.