

(19)



**Europäisches Patentamt**  
**European Patent Office**  
**Office européen des brevets**

(11)

Publication number:

**0 321 574**  
**A1**

(12)

## EUROPEAN PATENT APPLICATION

published in accordance with Art. 158(3) EPC

(21)

Application number: **88904659.5**

(51)

Int. Cl.<sup>4</sup>: **A 61 N 5/12, G 21 F 3/02**

(22)

Date of filing: **31.05.88**

Data of the international appli-  
 cation taken as a basis:

(86)

International application number:  
**PCT/JP 88/00532**

(87)

International publication number:  
**WO 88/10133 (29.12.88 88/28)**

(30)

Priority: **20.06.87 JP 94749/87 U**  
**08.07.87 JP 105093/87 U**

(71)

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(43)

Date of publication of application: **28.06.89**  
**Bulletin 89/26**

(72)

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(84)

Designated Contracting States: **DE FR GB SE**

(74)

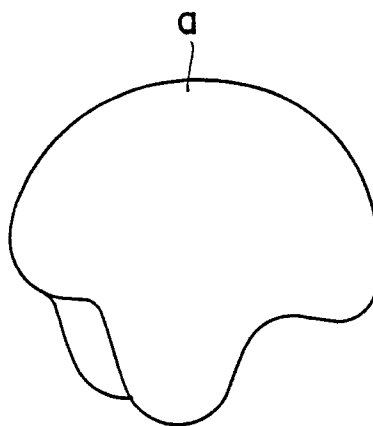
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(54)

**DEVICE FOR PREVENTING "TECHNOSTRESS" CAUSED BY ELECTROMAGNETIC WAVES.**

(57)

A device for preventing 'technostress' caused by electro-  
 magnetic waves, consisting of a cap covering the head portion  
 of a human body, the cap being composed of a material ob-  
 tained by coating a water-impregnated, water holding polymer  
 with a non-gas-permeable, non-metallic film; and a techno  
 stress preventing device consisting of stomach bandshaped  
 clothes composed of a conductive plastic or similar material.



**EP 0 321 574 A1**

TITLE MODIFIED

see first page

## S P E C I F I C A T I O N

## A TECHNO-STRESS PREVENTION IMPLEMENT

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Technical Field

Generally, there is a tendency that when strong electromagnetic waves are present near a human body or when a person has a metal product on his or her body, the high-frequency voltage (called "voltage" hereinafter) of the skin of that part of the body which is near the strong electromagnetic waves or on which he or she has the metal product increases due to the electromagnetic waves. The effective spots which are specified for acupuncture (called "tsubo" in Oriental medicine and called "tsubo" hereinafter) have a lower electrical resistance (impedance) than the skin of other parts of the human body. When the voltage of the skin of the human body increases, high-frequency current (called "current" hereinafter) flows even in the tsubo that need no stimuli. This causes techno-stress. On the other hand, water, conductive plastics and conductive substances similar to the conductive plastics act to decrease the high-frequency voltage of the skin of the human body, depending on the particular part thereof.

This invention relates to a techno-stress preventive implement to which this phenomenon and principle are applied to.

Background Art

Conventionally, the electromagnetic wave shielding aprons for shutting off electromagnetic waves generated by electronic machines and instruments are made of metal fiber. The act of wearing the apron, however, rather increases the high-frequency voltage of the front part of the body to cause techno-stress. Today, electromagnetic waves are propagating around us and the techno-stress due to, for example, the terminals of large-scale computers,

OA machines and instruments is a serious problem of the labor environment. This techno-stress causes mental and psychosomatic syndrome, and neurosis characterized by headaches, irritation, fatigue, anxieties, depression,  
5 etc., and menstrual troubles, and abnormal deliveries in women.

Generally, the measurement by a high-frequency voltmeter in the presence of strong electromagnetic waves near a human body indicates an increase in the high-  
10 frequency voltage of the skin of the part of the body near the electromagnetic waves. What are called tsubo by Oriental medicine, have lower impedance than the skin of the human body at places other than the tsubo. When the voltage of the skin of the human body increases, high-  
15 frequency current flows even in the tsubo, that need no stimuli, to cause techno-stress.

When a person has a metal product on his or her body the electromagnetic wave causes the voltage of the skin of the body to increase, especially for the part where  
20 the metal product is worn. The measurement by a high-frequency voltmeter indicates the electromagnetic wave, which is alternating, exhibits the same tendency even when a metal product is not in direct contact with the skin. In this case also, current flows in the tsubo that  
25 need no stimuli, to therefore result in techno-stress (except the tsubo that need stimuli). Generally, a person should therefore not wear a metal product in an environment where electromagnetic waves are present for the preservation of health. In order to effectively use  
30 the techno-stress implement according to this invention it is also necessary that a person wear no metal product (e. g., shoes with steel plates).

Water, conductive plastics and conductive substances such as conductive plastics act to decrease the high-  
35 frequency voltage of the skin, depending on part of the body. Accordingly it is possible to use the conductive substances so as to prevent the high-frequency voltage

from increasing, so that only a smaller quantity of high-frequency current flows in the tsubo, with a result that techno-stress can be decreased.

5 An object of this invention is to use this principle to provide an implement for preventing the human techno-stress.

#### Disclosure of the invention

10 The techno-stress implement according to this invention is provided by a cap for covering the head of a human body, and which is made of a material comprising a water retaining high-molecular polymer containing water, which is a conductive substance, and a non-gas permeable non-metal coating film covering the water-retaining high-molecular polymer. When the water containing cap is worn  
15 on the head of a human body, the water acts to decrease the high-frequency voltage of the head, to result in the prevention of techno-stress.

The techno-stress prevention implement according to this invention is also provided by a garment in the form  
20 of a belt which is made of a conductive plastics or a similar conductive substance. When the garment in the form of a belt made of a conductive plastics or a similar substance is worn, the high-frequency voltages of the front, side parts and the back of the human body are  
25 decreased, and the techno-stress is consequently prevented.

#### Brief Description of the Drawings

Fig. 1 is a perspective view of a cap made of a material comprising a water-retaining high-molecular  
30 polymer containing water, which is a conductive substance, and a non-gas permeable non-metal coating film covering the water-retaining high-molecular polymer; Fig. 2 is a partial sectional view of the material; and Fig. 3 is a perspective view of a garment in the form of a belt  
35 made of a conductive plastic or a similar conductive substance.

#### Best Mode for Carrying out the Invention

This invention will be explained in more detail with reference to the drawings attached hereto.

Fig. 1 shows an embodiment of this invention. The cap (a) for covering the head of a human body according to the embodiment is made of a material which comprises a water-retaining high molecular polymer (b) containing water, which is a conductive substance, and a non-gas permeable non-metal coating film (c) covering the surfaces of the water-retaining high-molecular polymer (b). Fig. 2 shows a partial section of the material having the above-described structure. When high-frequency voltage is measured by a high-frequency voltmeter on the head of a person wearing the water-containing cap (a), it is shown that the high-frequency voltage of the head decreases. A decrease of the voltage of the head, which is directly connected to the center of the autonomic nervous system, brings about a balanced voltage within the body. Consequently, less high-frequency current flows in the tsubo in the head, and the balance of the autonomic nervous system is less impaired, with techno-stress decreased as a consequence.

Furthermore, the water-retaining high-molecular polymer of the cap (a) enables a large amount of water to be held in a non-flowing state. Moreover, the non-gas permeable coating film prevents the evaporation of the water. The non-metal coating film prohibits the rise of the high-frequency voltage of the skin.

Fig. 3 shows another embodiment of this invention. A garment (d) in the form of a belt (e) is made of a conductive plastic or a similar conductive substance. The conductive plastic used in this embodiment is suitably a plastic mixed with carbon powder and having a high electrical resistance (e.g.,  $150\text{k}\Omega/\text{cm}$ ). When the belt (e) made of a conductive plastic or a similar conductive substance is worn, the high-frequency voltages of the front, sides and the back of the body are decreased. The tsubo according to the Oriental medicine

are concentrated on the abdomen and the hips. A decrease of the voltage of the part and the resultant balanced voltage bring about a decrease in the high-frequency current which flows in the tsubo of this part, to  
5 decrease techno-stress as a consequence. The material used in the former embodiment (which comprises a water-retaining high-molecular polymer, and a non-gas permeable non-metal coating film covering the same) cannot be used in the belt, because the water acts to lower the  
10 temperature of the abdomen.

#### Industrial Applicability

As described above, the techno-stress preventive implement according to this invention is used to prevent techno-stress due to electromagnetic waves emitted from  
15 electronic machines and instruments, etc. and those generated by metal products worn by a human body. This invention is also effective to remove techno-stress due to electromagnetic waves generated by the ignition coil of a car, and those due to various electromagnetic waves  
20 (called "electron smog").

The material comprising a water-retaining high-molecular polymer containing water, which is conductive, and a non-gas permeable non-metal coating film covering the same is usable as an electromagnetic shielding  
25 material.

Furthermore, it is possible to decrease techno-stress due to the electromagnetic waves by developing fashion accessories and non-metal accessories which use the principle of this invention to thereby decrease the  
30 high-frequency voltage of the skin of the human body.

Claims

1. A techno-stress preventive implement characterized in that a material comprising a water-retaining high-molecular polymer containing water and a non-gas permeable non-metal coating film covering the surfaces of the polymer is formed into a cap.

2. A techno-stress prevention implement characterized in that a conductive plastic or similar conductive substance is formed in a garment in the form of a belt.

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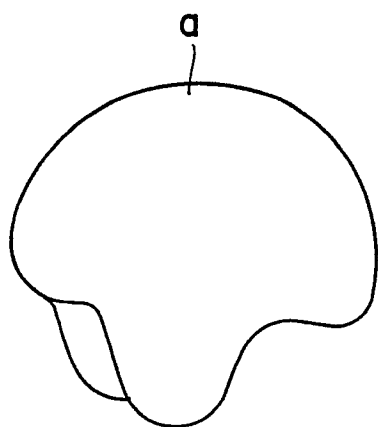


FIG. 1

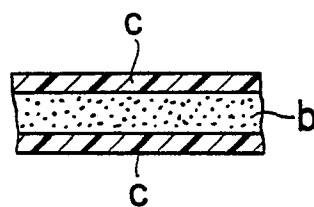


FIG. 2

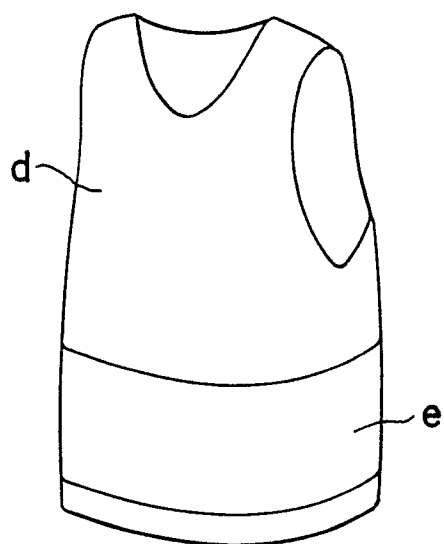


FIG. 3



## INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP88/00532

**I. CLASSIFICATION OF SUBJECT MATTER** (if several classification symbols apply, indicate all) <sup>6</sup>

According to International Patent Classification (IPC) or to both National Classification and IPC

Int.Cl<sup>4</sup> A61N5/12, G21F3/02**II. FIELDS SEARCHED**Minimum Documentation Searched <sup>7</sup>

Classification System |

Classification Symbols

IPC

A61N5/12, G21F3/02

Documentation Searched other than Minimum Documentation  
to the Extent that such Documents are Included in the Fields Searched <sup>8</sup>

Jitsuyo Shinan Koho

1926 - 1988

Kokai Jitsuyo Shinan Koho

1971 - 1988

**III. DOCUMENTS CONSIDERED TO BE RELEVANT** <sup>9</sup>Category <sup>10</sup> | Citation of Document, <sup>11</sup> with indication, where appropriate, of the relevant passages <sup>12</sup> | Relevant to Claim No. <sup>13</sup>

- |   |   |      |
|---|---|------|
| A | JP, U, 61-064115 (Asahi Chemical Industry Co., Ltd.)<br>1 May 1986 (01. 05. 86)<br>(Family: none) | 1, 2 |
| A | JP, A, 61-247477 (Nippon Zeon Co., Ltd.)<br>4 November 1986 (04. 11. 86)<br>(Family: none)        | 1, 2 |

<sup>10</sup> Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

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"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"G" document member of the same patent family

**IV. CERTIFICATION**

Date of the Actual Completion of the International Search

August 3, 1988 (03. 08. 88)

Date of Mailing of this International Search Report

August 15, 1988 (15. 08. 88)

International Searching Authority

Japanese Patent Office

Signature of Authorized Officer