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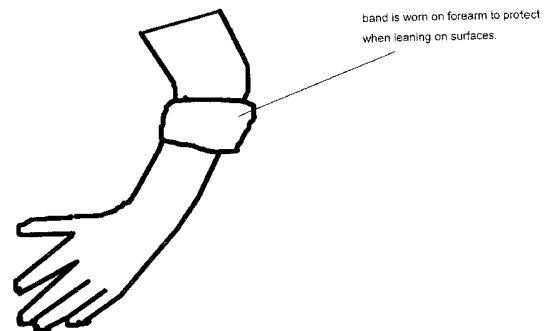
(56) Documents Cited:  
**WO 2002/015746 A1** **WO 2000/057749 A1**  
**WO 1999/005062 A1** **NL 001026062 C2**  
**US 6517507 B1** **US 6082682 A1**  
**US 20040082894 A1**

(58) Field of Search:  
UK CL (Edition X ) **A3V, A4L, B6F**  
INT CL<sup>7</sup> **A41D, A47B**  
Other: **WPI, EPODOC**

(54) Abstract Title: **A forearm guard to prevent repetitive strain injury**

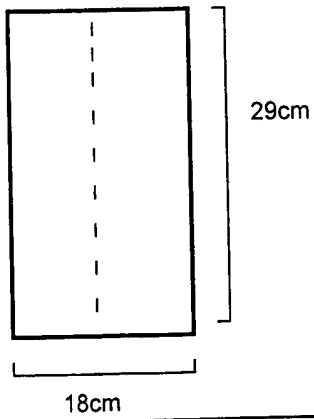
(57) A forearm guard comprising a tubular band with internal padding that prevents repetitive strain injury when using a computer mouse or keyboard. The band is formed from a woven stretchable material with an absorbing pad made from flexible foam such as visco elastic foam. The guard cushions and protects the forearm when it rests upon a desk, and raises the wrist of the user away from the desk preventing wrist from coming into contact with the desk.

FIG 3



1./2

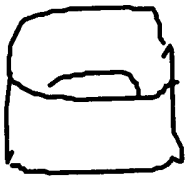
**FIG 1**



1 Cut material to dimensions shown and fold along line

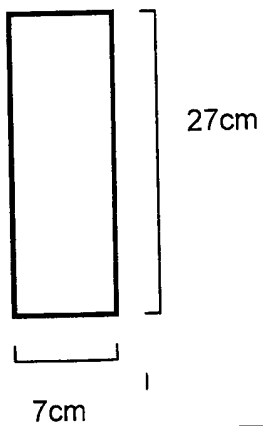


2. Sew along loose long edge and top short edge.  
3 Turn inside out.



4 Insert absorbing pad and bend to form a tube  
5. Sew edges together to form tube

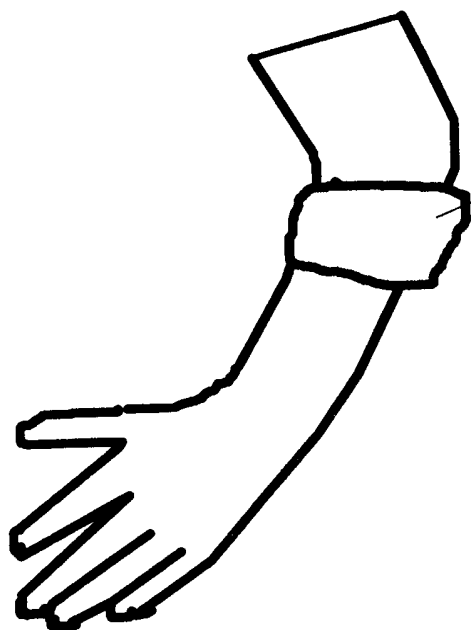
**FIG 2**



Absorbing pad preferrably visco elastic foam  
Cut to size

2/2

**FIG 3**



band is worn on forearm to protect  
when leaning on surfaces

## **DESCRIPTION**

**Title :** Forearm Guard

**Description :** Upper forearm guard to reduce pressure

### **Background of the Invention:**

1. The utilization of protective equipment for computer operators is well known in the prevention of repetitive strain injury. There are a number of devices to sit in front of the keypad and the mouse or incorporated into the mouse pad. These are effective but can impede the operator.
2. There are also a number of devices to protect the wrist and notwithstanding the protection purportedly offered by other devices, this invention was created after looking at ways in which to allow correct wrist and hand alignment whilst helping to protect against repetitive strain injury. The conclusion is this invention to be worn on the upper forearm, raising the wrist away from the desk so as to avoid any contact and pressure to the wrist.

### **Object of the Invention**

3. It is the object of this invention to provide a more comfortable device which raises the forearm and correctly aligns the wrist and hand, raising the wrist from the desk and resting on the device worn on the upper forearm and thus preventing any pressure on the wrist and preventing the wrist from coming into contact with the desk or any pressure.
4. More specifically it is the principle object of this invention to help prevent against repetitive strain injury.
5. It is another object of this invention to provide a forearm guard suitable for use for any desk worker wherein the guard is light and can be removed without any fasteners.

### **Summary of the Invention**

6. The above and related objects are achieved by providing a forearm guard which comprises a sleeve of stretchable material and a flexible impact absorbing pad affixed to the inside of the sleeve. The sleeve is preferably comprised of washable fabric that includes an elastomeric component, and/or is woven to provide stretch ability. The sleeve can be of any suitable length and diameter effective to secure the impact absorbing pad

over the forearm and thereby protect the forearm of the wearer during desk work. In the preferred embodiments of this invention, the forearm guard is particularly suitable in the protection of the forearm of a computer operator more particularly to be worn on the same forearm used to operate the mouse. The structure of the forearm guard, as proposed by this invention, allows freedom of movement of the forearm during computer or desk work while at the same time protecting the forearm from resting hard upon the desk and raising the wrist and hand into correct alignment to help prevent against repetitive strain injury.

### **Essential Features:**

7. Comfortable stretchable fabric - a full range of colours, designs and styles.
8. Internal cushioning material or product the preferred material for this invention is visco elastic foam.
9. Sewn into a tube, filled with foam and edges sewn to form a band.

### **Brief description of the drawings**

- Fig 1. Depicts a view of the forearm guard of this invention showing the stretch fabric including its overall dimensions and how the tubular devise is to be sewn to form a tubular band.
- Fig 2. Depicts a view of the absorbing internal pad of the forearm guard including its overall dimensions.
- Fig 3. Depicts where the band is to be worn.

### **Detailed description of the invention including preferred embodiments**

10. The forearm guard of this invention shown in Fig 1 is designed for use by a computer or desk worker specifically to protect the forearm and worn on the same arm that operates the mouse to correctly align the wrist and hand and raise the wrist off the desk whilst resting on the forearm guard. The components specifically a stretch material sleeve and an absorbing internal pad. These components are to provide effective protection of the forearm.
11. In the preferred embodiments of this invention, the sleeve is slim tubular in design to stretch over the hand and push up the forearm to below the elbow. The flexible nature of the sleeve allows comfort and flexibility for the wearer.
12. The absorbing internal pad is flexible, the preferred material for the internal pad is visco elastic foam which provides comfort, padding and

restores itself to its original state after being subjected to pressure. The thickness of the pad is typically 13mm in thickness. The preferred embodiments of this invention achieve protection without substantial weight or restriction of movement.

13. The forearm guard of this invention is described in reference to computer operators but it may also be desirable for other desk workers eg. Students writing as the forearm guard assists in raising the wrist off the desk and allows correct alignment of the hand and wrist to help prevent strain and stress to the wrist.

### Claim

14. A forearm guard having a sleeve and absorbing pad associated comprising:
- (i) A sleeve of tubular construction wherein the overall length conforms to the dimensions of the forearm of the wearer as is the overall diameter.
  - (ii) The sleeve being fabricated from a woven fabric containing stretchable material.
  - (iii) An absorbing pad comprising of flexible foam preferably visco elastic foam with an effective thickness of about 13mm.



INVESTOR IN PEOPLE

Application No: GB0512709.7

Examiner: Sally Vaughan

Claims searched: 1

Date of search: 29 September 2005

### Patents Act 1977: Search Report under Section 17

#### Documents considered to be relevant:

| Category | Relevant to claims | Identity of document and passage or figure of particular relevance   |
|----------|--------------------|--|
| X        | 1                  | WO00/57749 A1<br>(PUTNAM) see all figs, page 1 lines 6 - 18 and page 1 line 31 - page 2 line 9                                   |
| X        | 1                  | US2004/0082894 A1<br>(STAGER) see all figs and paras 0011 - 0013 & 0061  |
| X        | 1                  | US6517507 B1<br>(FAHERTY) see all figs, col 1 lines 54 - 65 and col 3 lines 6 - 37   |
| X        | 1                  | NL1026062 C2<br>(HERMES), WPI Abstract Accession No.2005/139612-15 and all figs  |
| X        | 1                  | WO02/15746 A1<br>(SHIPMAN) see all figs, page 2 lines 20 - 24, page 3 lines 19 - 23, page 4 lines 10 - 15 and page 9 lines 1 - 6 |
| X        | 1                  | WO99/05062 A1<br>(BEH) see all figs, abstract, page 10 line 21 - page 11 line 7 and page 13 lines 16 - 20                        |
| X        | 1                  | US6082682 A1<br>(SO et al) see all figs, col 1 lines 34 - 48, col 2 lines 16 - 28 and lines 49 - 53                              |

#### Categories:

|   |  |   |   |
|---|--|---|---|
| X | Document indicating lack of novelty or inventive step  | A | Document indicating technological background and/or state of the art  |
| Y | Document indicating lack of inventive step if combined with one or more other documents of same category | P | Document published on or after the declared priority date but before the filing date of this invention.         |
| & | Member of the same patent family   | E | Patent document published on or after, but with priority date earlier than, the filing date of this application |

#### Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC<sup>X</sup> :

A3V; A4L; B6F

Worldwide search of patent documents classified in the following areas of the IPC<sup>07</sup>

A41D; A47B

The following online and other databases have been used in the preparation of this search report

WPI, EPODOC