US007377133B2

(12) **United States Patent**
Sandbach et al.

(10) **Patent No.: US 7,377,133 B2**
(45) **Date of Patent: May 27, 2008**

(54) **KNITTED SENSOR**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **10/592,989**

(22) PCT Filed: **Mar. 17, 2005**

(86) PCT No.: **PCT/GB2005/001035**

§ 371 (c)(1),
(2), (4) Date: **Sep. 15, 2006**

(87) PCT Pub. No.: **WO2005/091319**

PCT Pub. Date: **Sep. 29, 2005**

(65) **Prior Publication Data**

US 2007/0141939 A1 Jun. 21, 2007

(30) **Foreign Application Priority Data**

Mar. 18, 2004 (GB) 0406079.4

(51) **Int. Cl.**
D04B 1/22 (2006.01)

(52) **U.S. Cl.** **66/170**; 66/202

(58) **Field of Classification Search** ..... 66/202, 66/169 R, 170
See application file for complete search history.

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(57) **ABSTRACT**

A sensor having a three layer construction comprising a first knitted conductive textile plane, a second conductive textile plane and an intermediate separating plane penetrable by the first knitted conductive textile plane to allow the first conductive textile plane and the second conductive textile plane to make electrical contact under a mechanical interaction. The intermediate separating plane defines structural endpoints from which the first knitted conductive textile plane deforms towards the second conductive textile plane under a mechanical interaction. The first knitted conductive textile plane has conductive yarn knitted to form a repeating pattern of stitches each comprising a stitch looping portion SLP having a looping portion footprint LPF. Within the sensor, there is at least one of a plurality of described dimensional relationships between stitches of the first knitted conductive textile plane and structural endpoints of the intermediate separating plane.

8 Claims, 20 Drawing Sheets