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- (71) Applicant (for all designated States except US): **FILLIGENT USA, INC.** [US/US]; 711 Almondridge Drive, Rural Hall, North Carolina 27045-9576 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **STEWART, Neal, G.** [AU/CN]; 5C Costa Court, Discovery Bay, Hong Kong (CN). **LO, Lok Yuen** [CN/CN]; Room 612, Man Hing House, Tai Hang Sai, Kowloon, Hong Kong (CN). **MOW-**

BRAY-D'ARBELA, Melissa [GB/CN]; 1st Floor, 31 South Bay Road, Repulse Bay, Hong Kong (CN). **LI, Wing Yan** [CN/CN]; Flat C, 11th Floor, 199 Shaukeiwan Road, Shaukeiwan, Hong Kong (CN). **SO, Hau Yee Carmen** [CN/CN]; Room 511, Hong Lee Court, 24 Hong Lee Road, Kwun Tong, Hong Kong (CN). **RYAN, Dacey John** [NZ/CN]; 2F, 16 Fourth Lane, Sha Kok Mei, Sai Kung, New Territories, Hong Kong (CN).

(74) Agent: **TROJAN, Joseph, R.**; Trojan Law Offices, 9250 Wilshire Blvd., Suite 325, Beverly Hills, CA 90212 (US).

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[Continued on next page]

(54) Title: ANTIMICROBIAL DEVICES FOR DIABETES DETECTION

(57) Abstract: The present invention describes devices that reduce the risk of infection through antimicrobial activity and also detect diabetes and provide information about the progression or recovery of diabetes over time. In one embodiment, an antimicrobial and anti-odor insole material is provided for addressing foot odor and microbial colonization aggravated by perspiration and the warm environment of shoes and socks, conditions which can be exacerbated by diabetes. It can also be helpful to reduce the risk of foot infections in this vulnerable patient group. In addition, the devices described herein can be in the form of a patch to be worn on any part of the body which exhibits similar problematic physical conditions including perspiration and body odor.

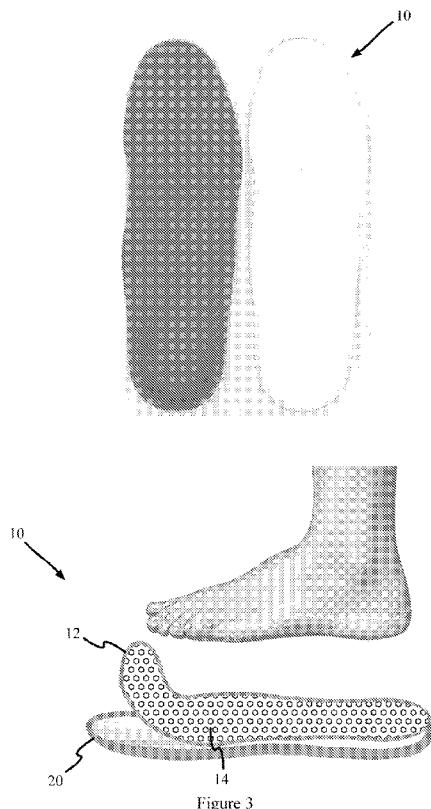


Figure 3



SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A01N 59/16 (2012.01)

USPC - 424/617

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8)- A01N 59/16 (2012.01);

USPC- 424/617

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC- 424/630, 641;

Patents and NPL (classification, keyword; search terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWest (US Pat, PgPub, EPO, JPO), GoogleScholar (PL, NPL), FreePatentsOnline (US Pat, PgPub, EPO, JPO, WIPO, NPL);
 search terms: indicator, detect, diabetes, glucose, sugar, insulin, color, colour, change, divalent, ion, cation, copper, Cu, zinc, Zn, acetate, Cu(II), Zn(II), antimicrobial, antibacterial, insole, shoe, boot, sock, liner, reactive,

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2007/0092547 A1 (BIRNBAUM et al.) 26 April 2007 (26.04.2007), para [0006], [0039], [0040], [0052], [0053], [0080]-[0083], [0097]	1-33
Y	US 6,063,637 A (ARNOLD et al.) 16 May 2000 (16.05.2000), col 1, ln 64 to col 2, ln 21; col 4, ln 22-35; col 5, ln 33-61; col 18, ln 32-47	1-33
Y	US 2005/0262736 A1 (PEOPLES) 01 December 2005 (01.12.2005), para [0006]-[0012], [0049], [0057], [0058], [0090], [0155], [0167]	1, 2, 4-19, 21-33
Y	US 2007/0026228 A1 (HARTMANN et al.) 01 February 2007 (01.02.2007), para [0008], [0027], [0028], [0103], [0109], [0110], [0118], [0119]	1, 4, 12-18, 22-33
Y	WO 2010/111623 A1 (STRATTEN et al.) 30 September 2010 (30.09.2010), para [0004]-[0061]	1-33
Y	US 2006/0246149 A1 (BUCHHOLZ et al.) 02 November 2006 (02.11.2006), para [0009]-[0301]	1-33
Y	US 2003/0040106 A1 (HASHIMOTO et al.) 27 February 2003 (27.02.2003), para [0007]-[0117]	1-33

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"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

"&" document member of the same patent family

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Mail Stop PCT, Attn: ISA/US, Commissioner for Patents
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Facsimile No. 571-273-3201

Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300

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