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(54) Title: PLIABLE MEDICAL DEVICE AND METHOD OF USE

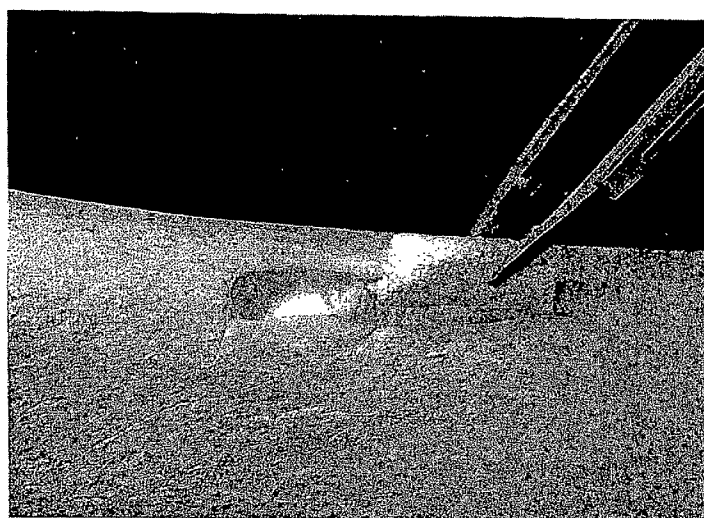


FIG. 3

(57) Abstract: A firm but pliable medical device for use as a bone graft substitute or bone graft extender retains its shape without the requirement of a containment device, such as a syringe. Because the device is solid, it is easy to locate or position in-vivo and, in the moist environment of the body, it will hold its shape well, for an extended time. Because the lyophilized pliable medical device is porous, it adsorbs blood and other beneficial cells containing body fluids, such as bone marrow, contributing to its superior bone repair efficacy in comparison to an analogous putty that has not been lyophilized. In addition these lyophilized pliable medical devices are easier to terminally steam sterilize than the analogous putty because there is no moisture present to boil and "blow-out" of the containment device (syringe). The glycerin that is present in the formulation lends pliability but has a low vapor pressure.

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A. CLASSIFICATION OF SUBJECT MATTER

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USPC - 623/23.63

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)

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USPC - 424/422, 424, 425, 426, 428; 514/512; 623/23.51, 23.55, 23.57, 23.58, 23.59, 23.63

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

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

USPTO EAST System (US, USPG-PUB, EPO, DERWENT), MicroPatent, Google Patents

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/0009235 A1 (MANRIQUE et al) 09 January 2003 (09.01.2003) entire document	1, 6, 17-21, 26, 31, 37-38, 43, 54-57

Y		2-5, 7-16, 22-25, 27-30, 32-36, 39-42, 44-53
Y	US 2004/0091462 A1 (LIN et al) 13 May 2004 (13.05.2004) entire document	2-5, 7, 22-25, 27, 39-42, 44
Y	US 5,681,873 A (NORTON et al) 28 October 1997 (28.10.1997) entire document	4-5, 24-25, 41-42
Y	US 2003/0077825 A1 (BHATNAGAR et al) 24 April 2003 (24.04.2003) entire document	8, 28, 45
Y	US 6,203,573 B1 (WALTER et al) 20 March 2001 (20.03.2001) entire document	9-14, 29-30, 46-51
Y	US 6,974,862 B2 (RINGEISEN et al) 13 December 2005 (13.12.2005) entire document	12-14, 32-34, 49-51
Y	US 5,910,315 A (STEVENSON et al) 08 June 1999 (08.06.1999) entire document	15-16, 35-36, 52-53
Y	US 2002/0071827 A1 (PETERSEN et al) 13 June 2002 (13.06.2002) entire document	58-61
Y	US 2004/0185021 A1 (HUBBARD) 23 September 2004 (23.09.2004) entire document	58-61
Y	US 2005/0177238 A1 (KHANDKAR et al) 11 August 2005 (11.08.2005) entire document	59-61
Y	US 3,728,446 A (ROBERTS et al) 17 April 1973 (17.04.1973) entire document	61

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"P" document published prior to the international filing date but later than the priority date claimed	"&" document member of the same patent family

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