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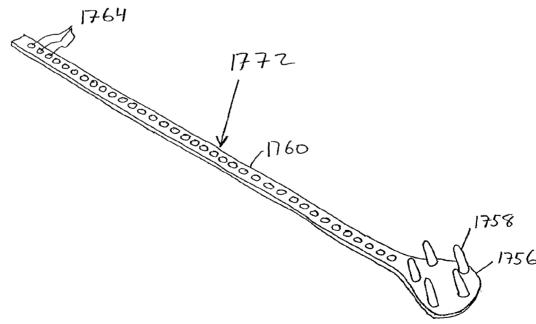
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[Continued on next page]

(54) Title: REMOTELY ANCHORED TISSUE FIXATION DEVICE AND METHOD



(57) Abstract: A tissue approximation device and method, particularly in the mid-face region, are provided. The device is an implantable, biodegradable construct that has attachment points emanating from a supportive backing. The device also has an extension member or leash which extends from the backing which is configured to receive a tissue or bone attachment device at one of a plurality of selectable locations along the elongated member, for example via engagement holes extending in a line away from the backing. Once tissue is engaged with the attachment points, the extension member is pulled until the tissue is approximated in the desired position. Then the appropriate extension member hole(s) are selected to attach the extension member to supportive tissue or bone (for example temporal fascia) for permanent tissue approximation.



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C. DOC	JMENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where a	рргоргіаte,	of the relevant passages	Relevant to claim No.
Х	US 3,646,615 A (NESS) 7 March 1972 (07.03.1972), Figures 3-5, col. 1, lines 55-65, col. 3, lines 1-4			1-9, 17-18, 22-23, 28- 34, 43-47
Y	US 6,241,747 B1 (RUFF) 5 June 2001 (05.06.2001), Figures 10-11			10-12, 35-39
Y	US 4,820,305 A (HARMS et al.) 11 April 1989 (11.04.1989), Figures 4-5			13-16, 40-42
Y	US 5,919,234 A (LEMPERLE et al) 6 July 1999 (06.07.1999), Figure 3a			19-20
Y	US 5,916,224 A (ESPLIN) 29 June 1999 (29.06.1999), Figures 1 and 7, col. 2, lines 53-56			21
Y	US 4,501,029 A (McMINN) 26 February 1985 (26.02.1985), Figure 1			24-26
Y	US 6,692,499 B2 (TORMALA et al) 17 February 2004 (17.02.2004), Figures 2 and 4a			27
Further	documents are listed in the continuation of Box C.		See patent family annex.	
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