A structural/biological implant and method of use. The implant being utilized as a single or multiple staged system that is designed to encourage new alveolar bone growth with or without the need to obtain autologous bone. The implant has an apical portion that is fastened into existing bone, with the remainder of the implant left outside of existing bone. The exposed portion of the implant may have an external shape or configuration with a variety of attached and/or integrally formed mechanical retention and stability elements. Osteotropic/angiotropic material may be associated with the implant to induce and or conduct new bone growth and possible vascularization, thus, rather than fitting the implant into the bone, the bone is grown integratively with the implant. The osteotropic/angiotropic materials may be simultaneously placed with the staged implant to provide consistent stabilization for the materials and to provide an immediately available surface for bone cell adhesion and growth. The invention thus allows implants to be used in location where the volume and/or shape of the bone would not be adequate for existing implant systems.
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61C 19/04; A61C 8/00

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)


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)

EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 5,538,424 A (Gelb) 23 July 1996; Figs. 1-6.</td>
<td>1-3, 7-9, 11, 26-27</td>
</tr>
<tr>
<td>Y</td>
<td></td>
<td>6, 10, 12-25, 28-30</td>
</tr>
<tr>
<td>A</td>
<td>US 6,547,564 B1 (Hanson) 15 April 2003; whole document.</td>
<td></td>
</tr>
</tbody>
</table>

Further documents are listed in the continuation of Box C.

See patent family annex.

Date of the actual completion of the international search
08 December 2005 (08.12.2005)

Date of mailing of the international search report
24 JAN 2006

Name and mailing address of the ISA/US
Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
Facsimile No. (571) 273-3201

Authorized officer
Vy Q. Bui

Telephone No. 703-308-0858

Form PCT/ISA/210 (second sheet) (April 2005)