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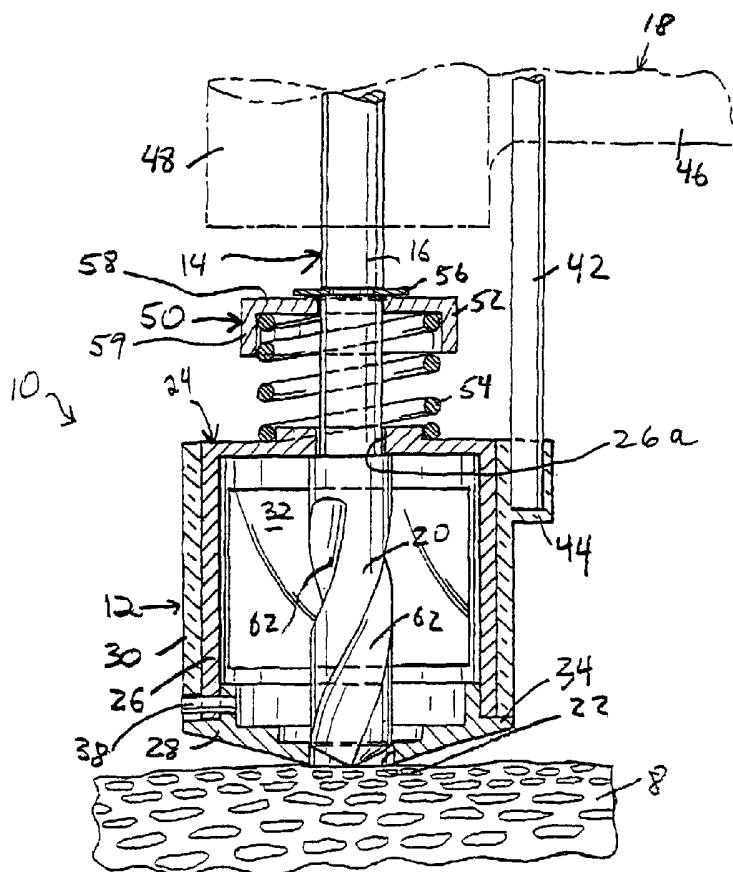
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[Continued on next page]

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(54) Title: ROTARY APPARATUS FOR GRAFTING AND COLLECTING BONE



(57) Abstract: A bone grafter attachment for removing and collecting bone fragments from a donor site using a surgical rotational handpiece includes a rotatable drill having a shank engageable with the handpiece and a cutting member, and a container for receiving bone fragments. The container has an opening through which the cutting member passes. The container is held against the donor bone during operation, and the container is held against rotation during rotation of the drill. The drill is axially movable relative to the container to enable the drill to penetrate into the bone. When the drill is rotated by the handpiece and the cutting member thereof engages bone, bone fragments are created and pass over the cutting member and through the opening into the container. Preferably, the cutting member of the drill has flutes through which the bone fragments pass into the container.



GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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Published:

- with international search report
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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/11283

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61B 17/56

US CL : 606/80

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)

U.S. : 606/80, 116

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| A | US 5,556,399 A (HUEBNER) 17 September 1996 (17.09.1996), see whole document. | 30-32 |
| A | US 4,844,064 A (THIMSEN et al) 4 July 1989 (04.07.1989), see whole document. | 30-32 |



Further documents are listed in the continuation of Box C.



See patent family annex.

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|---|--|
| * Special categories of cited documents: | |
| "A" document defining the general state of the art which is not considered to be of particular relevance | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
| "E" earlier application or patent published on or after the international filing date | "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone |
| "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | "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 |
| "O" document referring to an oral disclosure, use, exhibition or other means | "&" document member of the same patent family |
| "P" document published prior to the international filing date but later than the priority date claimed | |

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/11283

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 1-29
because they relate to subject matter not required to be searched by this Authority, namely:
Please See Continuation Sheet
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such
an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all
searchable claims.
 2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite
payment of any additional fee.
 3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report
covers only those claims for which fees were paid, specifically claims Nos.:
 4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is
restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
- Remark on Protest** ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US04/11283

Box II Observations where certain claims were found unsearchable 1. because they relate to subject matter not required to be searched by this Authority, namely:

Claims 1-29 are drawn to non-statutory subject matter. In claim 1, lines 8-10, applicant positively recites part of a human, i.e. "said container being held against the surface of the bone at a down site". Thus claims 1-29 include a human within their scope and are non-statutory.