

PATENT ASSIGNMENT

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NATURE OF CONVEYANCE:	ASSIGNMENT
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Property Type	Number
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Total Attachments: 11
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1 July 2004

Patent Transfer Agreement

between

Ronald P GRELSAMER, MD

and

Abila Medical Research Foundation

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Patent Transfer Agreement

THIS AGREEMENT is entered into between

Ronald P Grelsamer, MD, 35 E 85th Street, New York, N.Y. 10028

and

Abila Medical Research Foundation, Avenida Samuel Lewis y Calle 56, Edificio Tila, Oficina 3, Po Box 87 1382, Panama, Republic of Panama (the "Purchaser")

Ronald P Grelsamer and the Purchaser are collectively referred to as the "Parties".

1. Sale and Transfer

- 1.1 Ronald P Grelsamer hereby sells and transfers to the Purchaser all of his right, title and interest in and to
- (i) any IPR in existence at the time of the signing of this Agreement related to the Patent N° : US6,620,199 B2 as per copy enclosed in Appendix 1.1 (the "Sold IPRs");
 - (ii) any and all rights of enforcement with respect to the Sold IPRs, including all rights to sue and recover for past infringement thereof, and any and all causes of action related thereto.
- The Purchaser hereby accepts the above sale and transfer.
- 1.2 Ronald P Grelsamer shall execute and deliver, at any time upon request, free of charge, all such documents, forms and authorizations as may be required by the relevant registration authorities in all countries concerned, for the registration of the transfer of the Sold IPRs.
- 1.3 The Purchaser shall pay all fees charged by the registration authorities in connection with the registration of the transfer of the Sold IPRs.
- 1.4 From the date of this Agreement the Purchaser shall be fully responsible for all costs and fees related to the Sold IPRs including but not limited to maintenance costs and other future legal costs related to the defense of the Sold IPRs.

2. **Transfer of Information and Assistance in Case of Disputes**

- 2.1 Ronald P Grelsamer shall within 5 (five) Business Days from the date of this Agreement supply the Purchaser with all documents related to the Sold IPRs, in particular all official files including correspondence with the authorities and registration certificates as well as any correspondence with third Persons related to the Sold IPRs.
- 2.2 In case of any kind of dispute related to the IPR between the Purchaser and a third Person Ronald P Grelsamer agrees to provide all reasonable assistance to the Purchaser, free of remuneration, including providing the Purchaser with information and testifying in court.

3. **Purchase Price**

- 3.1 For the sale and transfer of the Sold IPRs by Ronald P Grelsamer to the Purchaser, the Purchaser shall pay US\$600,000.00 (in words: US Dollars six hundred thousand) as purchase price (the "Purchase Price").
- 3.2 The Purchase Price is payable in three annual instalments of US\$200,000.00 (in words: US\$ two hundred thousand) each. The first instalment is payable on Closing Date by bank transfer on a bank account to be named by Ronald P Grelsamer. Thereafter, the annual instalments are payable on the respective anniversary of the Closing Date.

4. **Representations and Warranties**

Ronald P Grelsamer represents and warrants that the following statements regarding the Sold IPRs are correct as per the date hereof:

- 4.1 Ronald P Grelsamer is the owner and has full and exclusive title to the Sold IPRs, none of them is wholly or partially owned or controlled by any third Person.
- 4.2 Appendix 1.1 contains a complete, up-to-date and information on the Sold IPRs currently owned by Ronald P Grelsamer.

- 4.3 The registrations and registration applications of the Sold IPRs listed in Appendix 1.1 are formally valid, subsisting and are not withdrawn, cancelled or abandoned. All applicable fees have been paid and all other actions and measures required to maintain or protect any such IPR have been taken in due time.
- 4.4 Ronald P Grelsamer has not granted or is obliged to grant, any third party any licences, options, pledges or any other right with regard to the Sold IPRs.
- 4.5 No third Person has made or threatened to make a claim, suit or proceeding against Ronald P Grelsamer relating to the Sold IPRs whether for (entire or partial) invalidity, infringement, damages or otherwise. To the actual knowledge of Ronald P Grelsamer and the knowledge he reasonably ought to have ("Ronald P Grelsamer's Knowledge") no third Person is planning to make such a claim nor does any valid basis for such a claim exist.
- 4.6 To Ronald P Grelsamer's Knowledge there is no basis for making a claim whether for infringement, damages or otherwise on a third Person relating to Sold IPRs.

5. Indemnities

- 5.1 If any of the representations and warranties set forth in Section 4 is or turns out to be incorrect or in case of a breach or non-fulfilment of any other obligation under this Agreement obliging Ronald P Grelsamer, he shall indemnify and hold harmless the Purchaser from and against all losses resulting thereof, up to a maximum amount of Us\$ 600,000.00 (US Dollars six hundred thousand).
- 5.2 Any claim by the Purchaser under this Section 5 shall be made not later than 1 (one) year after the date hereof.

The Parties hereto have executed this Agreement in 2 (two) originals, of which Ronald P Grelsamer and the Purchaser have each taken one.

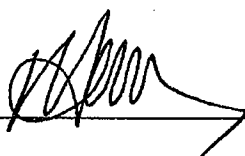
Place: New York
Date: July 19 2004

Ronald P Grelsamer



Place: Geneva
Date: July 21 2004

Abila Medical Research Foundation





US006620199B2

(12) **United States Patent**
Grelsamer

(10) Patent No.: **US 6,620,199 B2**

(45) Date of Patent: **Sep. 16, 2003**

(54) **DEVICE FOR REINFORCING BONE IN PARTIAL KNEE REPLACEMENT SURGERY**

(76) Inventor: **Ronald P. Grelsamer, 35 E. 85th St., New York, NY (US) 10028**

(*) Notice: **Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.**

(21) Appl. No.: **09/905,062**

(22) Filed: **Jul. 13, 2001**

(65) **Prior Publication Data**

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(51) Int. Cl.⁷ **A61F 2/38**

(52) U.S. Cl. **623/20.32**

(58) Field of Search **623/18.11, 20.32, 623/20.21, 20.28, 20.3, 20.34; 606/72; A61F 2/38**

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* cited by examiner

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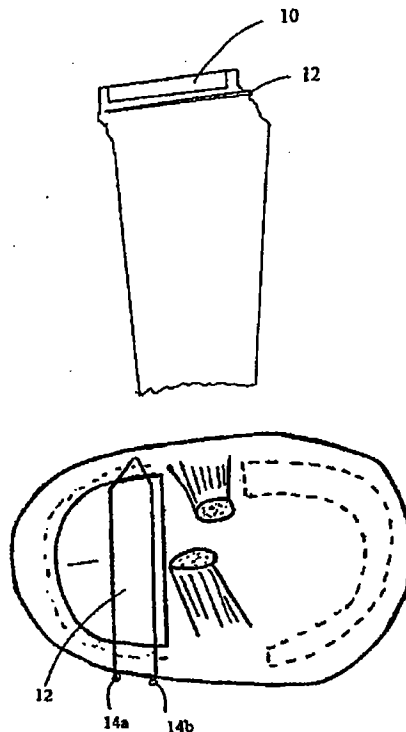
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(57) **ABSTRACT**

A partial knee replacement device comprises a reinforcing spike which spans the tibia and supports a tibial inset. The spike has a pointed tip, shaft and head. The spike when driven across the cross-section of the tibia has its tip engaging the peripheral edge of the tibial hard bone, and its head supported by the opposite peripheral edge of the tibial hard bone.

18 Claims, 2 Drawing Sheets



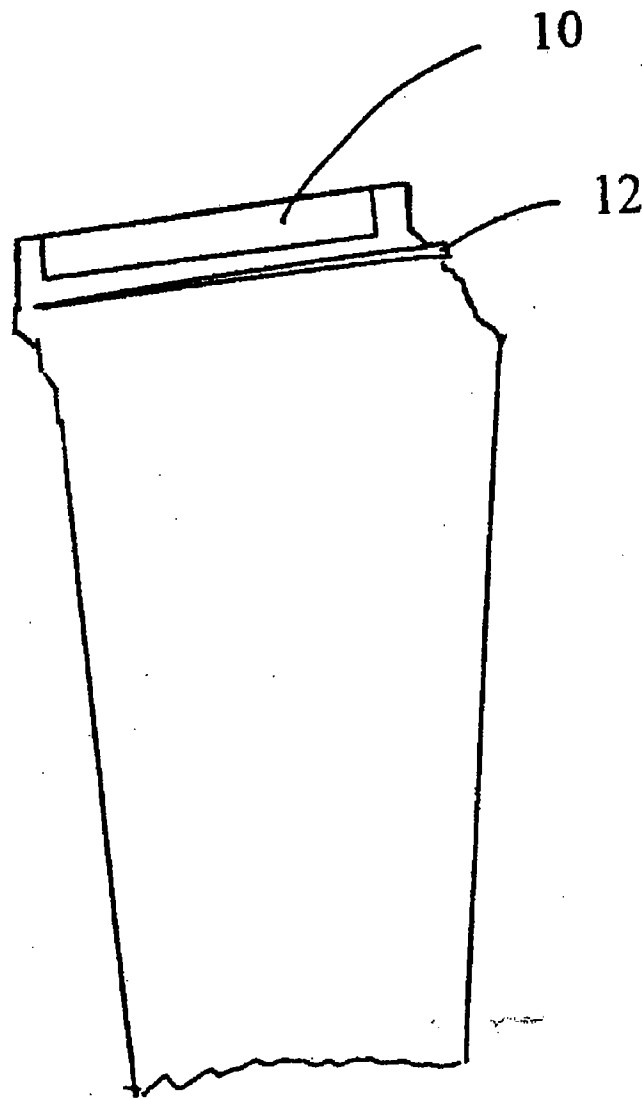
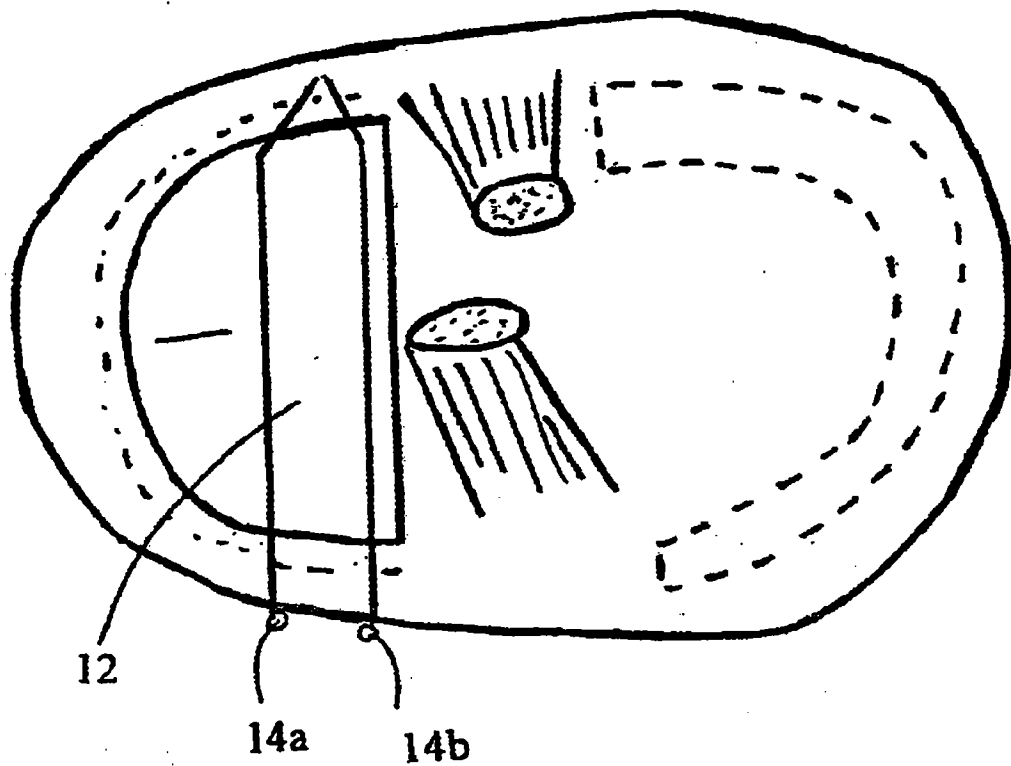


Figure 1

FIGURE 2



DEVICE FOR REINFORCING BONE IN PARTIAL KNEE REPLACEMENT SURGERY

BACKGROUND OF THE INVENTION

The present invention relates to knee replacement devices, and more particularly to partial knee replacement devices.

Knee replacements generally fall into two categories, total or partial. Partial knee replacement are also referred to as unicompartmental. Both total and partial knee replacements address arthritis and related conditions of the knee.

Partial or unicompartmental replacements fall into two categories, those that cover the tibial (shin) bone, and those that are inset within it.

The inset type comprises an inset which is implanted within the top of the tibia within the core of the bone with the result that the implant rests on potentially soft bone, because the core of the bone is softer than its periphery. An advantage of this type of implant is that it can be inserted through a relatively small incision thus speeding a patient's recovery time. However, one of the disadvantages of the implant is that the implant may sink into the soft bone core over time through use.

SUMMARY OF THE INVENTION

In accordance with the present invention, a reinforcement for a partial knee implant device is provided.

According to one aspect of the invention, a partial knee replacement device is provided, comprising a tibial inset adapted to be inserted into the soft bone area in the top of the tibia, and a reinforcing member which is adapted to span the tibia and support the tibial inset.

According to another aspect of the invention, a partial knee replacement device is provided, comprising a tibial inset adapted to be inserted in the soft bone area in the top of the tibial, and a reinforcing spike having a pointed tip, shaft and head which spans the tibia and supports the tibial inset.

According to another aspect of the invention, a reinforcement device for a partial knee replacement inset is provided, comprising a reinforcing member which is adapted to span the tibia from side to side and support a tibial inset.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side view, in cross section, of a tibia and the reinforced knee inset according to the invention; and

FIG. 2 is a top plan view of a tibia showing the reinforcing member and reinforced knee inset according to the invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

According to one aspect of the invention, a partial knee replacement device is provided, comprising an inset adapted to be inserted into the soft bone area in the top of the tibia, and a reinforcing member which is adapted to span the tibia and support the inset.

The reinforcing member is preferably broad and flat in cross-section.

The reinforcing member is preferably a spike having a tip, a shaft and a head. The spike tip is preferably pointed.

The spike head preferably has at least one protrusion, and preferably two, each protrusion having a ring shape.

According to another aspect of the invention, a partial knee replacement device is provided, comprising a tibial inset adapted to be inserted in the soft bone area in the top of the tibia, and a reinforcing spike having a pointed tip, shaft and head for spanning the tibia and supporting the inset.

According to another aspect of the invention, a reinforcement device for a partial knee replacement inset is provided, comprising a reinforcing member which is adapted to span the tibia from side to side and support a tibial inset.

As shown in FIGS. 1 and 2, the preferred embodiment according to the invention comprises an inset 10 and a reinforcing member 12. The reinforcing member is in the form of a spike which spans the soft bone of the tibia, and is anchored on the near side and far side into the stronger harder peripheral tibial bone. The spike is preferably pointed at its tip, and may be either tapered or of substantially uniform cross section along its length. The spike may be broad and flat in cross-section. The head of the spike preferably has two protrusions 14a and 14b in the shape of small rings, which aid in gripping the spike should it need to be later extracted.

The implant and spike are made of biocompatible material which are available in the art. The spike may be made of stainless steel carbon or similar material.

As shown in FIG. 2, the tip of the spike pierces and engages the peripheral portion of the tibia, shown roughly in dotted lines. More than one spike may be provided. The shape of the spike or spikes may differ from that shown in the preferred embodiment.

Although one embodiment has been shown and described, numerous variations and modifications will readily occur to those skilled in the art. The scope of the invention is defined only by way of the appended claims.

I claim:

1. A partial knee replacement device, consisting essentially of an inset adapted to be inserted into and across substantially the entire soft bone area in the top of the tibia such that the top of the inset is generally level with the top of the hard peripheral bone and does not extend above the top of the hard peripheral bone, and a reinforcing member which is adapted to span the tibia and support the inset.

2. The device according to claim 1, wherein the reinforcing member is relatively broad and flat in cross-section.

3. The device according to claim 1, wherein the reinforcing member is a spike having a tip, a shaft and a head.

4. The device according to claim 3, wherein the spike tip is pointed.

5. The device according to claim 3, wherein the spike head has at least one protrusion.

6. The device according to claim 5, wherein the protrusion has a ring shape.

7. The device according to claim 5, wherein the spike head has two protrusions.

8. A partial knee replacement device consisting essentially of an inset adapted to be inserted into and across substantially the entire soft bone area in the top of the tibia such that the top of the inset is generally level with the top of the hard peripheral bone and does not extend above the top of the hard peripheral bone, and a reinforcing spike having a pointed tip, shaft and head for spanning the tibia and supporting the inset.

9. The device according to claim 8, wherein the protrusion has a ring shape.

10. The device according to claim 9, wherein the protrusion has a ring shape.

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11. The device according to claim 9, wherein the spike head has two protrusions.

12. A bone joint replacement device comprising an inset adapted to be inserted into and across substantially the entire soft bone area in the end of a bone such that the inset is substantially totally received in the soft bone area and enclosed on its perimeter by hard peripheral bone and does not extend above the top of the hard peripheral bone, and a reinforcing member which is adapted to span the bone from side to side and support the inset.

13. The device according to claim 12, wherein the reinforcing member is relatively broad and flat in cross-section.

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14. The device according to claim 12, wherein the reinforcing member is a spike having a tip, a shaft and a head.

15. The device according to claim 14, wherein the spike tip is pointed.

16. The device according to claim 14, wherein the spike head has at least one protrusion.

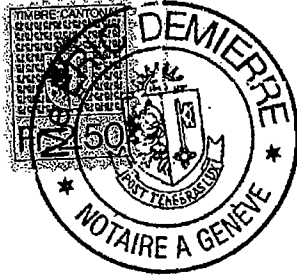
17. The device according to claim 16, wherein the protrusion has a ring shape.

18. The device according to claim 16, wherein the spike head has two protrusions.



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Seen by the undersigned, Me Eric DEMIERRE, a duly authorised Notary Public in Geneva, Switzerland, for legalisation exclusively on the other side signature of Mr. Miguel Aaulfo SANCHIZ-LOPEZ. Geneva, this 27th day of August, 2004



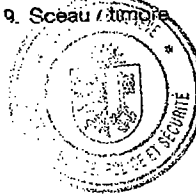
APOSTILLE

(Convention de la Haye du 5 octobre 1961)

1. Pays: Suisse
Le présent acte public
2. a été signé par Me E. DEMIERRE
3. agissant en qualité de NOTAIRE
4. est revêtu du sceau/timbre de

Attesté 27 AOUT 2004

5. à Genève 6. le
7.
République et Canton de Genève
8. sous N° 7774
9. Sceau / timbre 10. Signature



Patrick MULLER
commissaire administratif