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DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
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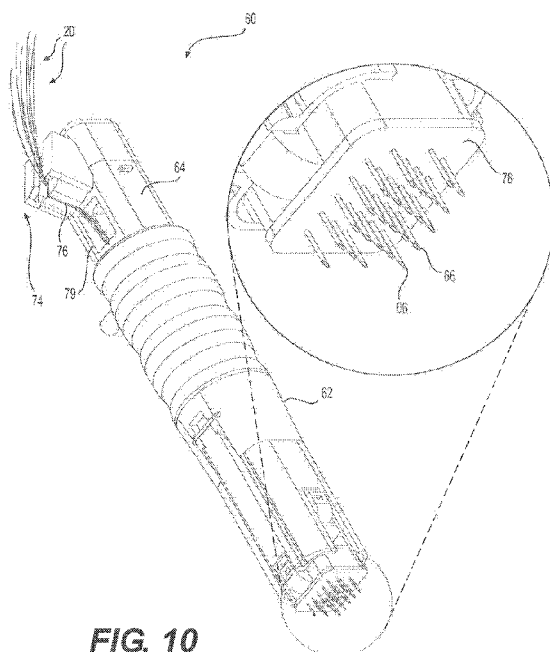


FIG. 10

(57) Abstract: A hair implantation' assembly according to some embodiments of the present disclosure may include a plurality of hair strands and a plurality of hair anchors, each hair anchor retaining a single hair strand and having at least one resilient member associated therewith. The hair implantation assembly may further include a plurality of lumens, each lumen containing a single hair anchor in a manner that compresses an associated at least one resilient member toward an insertion axis of each lumen. The hair implantation assembly may further include a plurality of pushers, each pusher associated with one of the plurality of lumens, and configured to simultaneously expel the plurality of hair anchors into target tissue, wherein the plurality of lumens and the plurality of pushers are configured to cooperate to cause the plurality of resilient members to simultaneously move away from the insertion axis of each lumen when expelled into the target tissue.



INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB 15/01780

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61F 2/10 (2016.01)

CPC - A61F 2/10

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)
IPC (8): A61F 2/10 (2016.01)
CPC: A61F 2/10

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC: A61B 2017/00752, A61B 17/3468;
UC: 606/187

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PatBase, Google Patent, Google Scholar
Search terms used: Hair implantation assembly grips plunger slit grip multiple anchor* lumen* needle* hair*

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2012/0245612 A1 (Keren et al.) 27 September 2012 (27.09.2012), Entire document	1-6, 10-18
A		7-9
A	US 4,216,777 A (Pridemore) 12 August 1980 (12.08.1980), Abstract, col 4	7-9
A	US 5,417,683 A (Shiao) 23 May 1995 (23.05.1995), Entire document	1-19
A	US 6,461,369 B1 (Kim) 08 October 2002 (08.10.2002), Entire document	1-19
A	US 2013/0226214 A1 (Okuda) 29 August 2013 (29.08.2013), Entire document	1-19
A	US 2014/0188150 A1 (Oc et al.) 03 July 2014 (03.07.2014), Entire document	1-19
A,P	WO 2014/136119 A1 (Vasa) 12 September 2014 (12.09.2014), Entire document	1-19

☐ Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"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)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"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

"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

"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

"&" document member of the same patent family

Date of the actual completion of the international search

26 January 2016

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB 15/01780

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.:
because they relate to subject matter not required to be searched by this Authority, namely:

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:
 --See Extra Sheet--

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 additional fees, this Authority did not invite payment of additional fees.
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.:
1-19

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB 15/01780

Continuation of:

Box No. III: Observations where unity of invention is lacking

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This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I: Claims 1-19 directed to a hair implantation assembly comprising at least one resilient member

Group II: Claims 20, 22-23 directed to a hair implantation assembly comprising a contact surface.

Group III: Claim 21 directed to a hair implantation assembly comprising a plunger.

Group IV: Claims 22-24 directed to a hair implantation assembly comprising a support having openings.

Note: Claims 22-23 are generic to Groups II and IV.

The inventions listed as Groups I-IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

SPECIAL TECHNICAL FEATURES

The invention of Group I includes the special technical features of at least one resilient member, and a plurality of lumens that compress the resilient member towards an insertion axis of each lumen, not required by the claims of Groups II-IV.

The invention of Group II includes the special technical features of contact surface configured to engage with skin covering the target tissue, not required by the claims of Group I or III-IV.

The invention of Group III includes the special technical features of a plunger configured to convey an expulsion force, and an opening in a side of the plunger, not required by the claims of Groups I-II or IV.

The invention of Group IV includes the special technical features of a support having openings through which the needles are configured to pass, not required by the claims of Groups I-III.

SHARED TECHNICAL FEATURES

The invention of Groups I and II-IV share the common technical features of a hair implantation assembly, a plurality of hair strands, a plurality of hair anchors, and a plurality of pushers. However, these shared technical features fail to make a contribution over prior art as being anticipated by US 2012/0245612 A1 to Keren et al. (hereinafter Keren). Keren teaches a hair implantation assembly (abstract), a plurality of hair strands (50, fig 9; at least one hair - para [0100]), a plurality of hair anchors (inside each needle is anchor 100 - para [0101]; anchor 100 shown in more detail in figs 1-2), and a plurality of pushers (220, figs 8-9; multiple pushers - para [0101]).

The invention of Groups II and I, III and IV share the common technical features of a hair implantation assembly, a plurality of hollow needles, a plurality of hollow needle tips, a plurality of hair strands, a plurality of hair anchors, and a plurality of pushers. However, these shared technical features fail to make a contribution over prior art as being anticipated by Keren. Keren teaches a hair implantation assembly (abstract), a plurality of hollow needles (210, fig 9), a plurality of hollow needle tips (see tip of 210, figs 3-5; para [0094]), a plurality of hair strands (50, fig 9; at least one hair - para [0100]), a plurality of hair anchors (inside each needle is anchor 100 - para [0101]; anchor 100 shown in more detail in figs 1-2), and a plurality of pushers (220, figs 8-9; multiple pushers - para [0101]).

The inventions of Groups III and I, II, and IV share the common technical features of a hair implantation assembly, a plurality of hair strands, a plurality of hollow needles, and an anchor. However, these shared technical features fail to make a contribution over prior art as being anticipated by Keren. Keren teaches a hair implantation assembly (abstract), a plurality of hair strands (50, fig 9; at least one hair - para [0100]), a plurality of hollow needles (210, fig 9), and an anchor (inside each needle is anchor 100 - para [0101]; anchor 100 shown in more detail in figs 1-2).

The invention of Groups IV and I-III share the common technical features of a hair implantation assembly, a plurality of hollow needles, a plurality of hollow needle tips, a plurality of hair anchors, a plurality of hair strands, and a plurality of pushers. However, these shared technical features fail to make a contribution over prior art as being anticipated by Keren. Keren teaches a hair implantation assembly (abstract), a plurality of hollow needles (210, fig 9), a plurality of hollow needle tips (see tip of 210, figs 3-5; para [0094]), a plurality of hair anchors (inside each needle is anchor 100 - para [0101]; anchor 100 shown in more detail in figs 1-2), a plurality of hair strands (50, fig 9; at least one hair - para [0100]), and a plurality of pushers (220, figs 8-9; multiple pushers - para [0101]).

As the common features were known in the art at the time of the invention, they cannot be considered special technical features that would otherwise unify the groups.

Therefore, Groups I-IV lack unity under PCT Rule 13 because they do not share a same or corresponding special technical feature.