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(81) Designated States (*unless otherwise indicated, for every
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AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP,
KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ,
OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA,
SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN,
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kind of regional protection available*): ARIPO (BW, GH,

(54) Title: DELIVERY SLEEVE

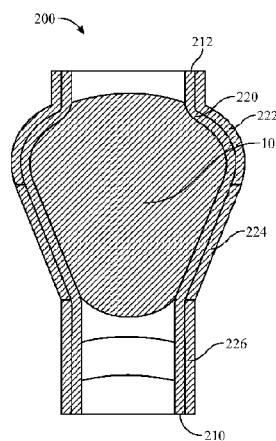


FIG. 3B

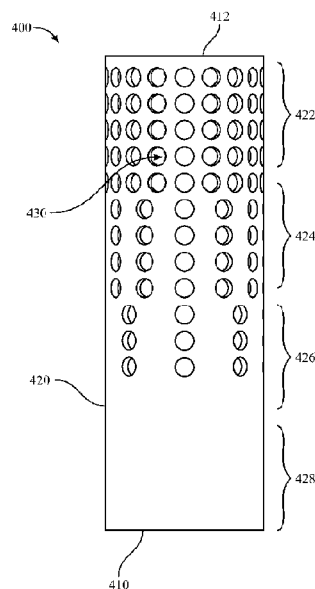


FIG. 5

(57) Abstract: An implant delivery sleeve is disclosed. The sleeve may comprise a first tube including a first segment, a second segment, and a third segment. The first segment may have a first stiffness, the second segment may have a second stiffness, and the third segment may have a third stiffness. The third stiffness may be greater than the second stiffness and the second stiffness may be greater than the first stiffness. The implant-delivery sleeve may be used to deliver a breast implant to a subject. The implant may be deformed within the sleeve, to advance it within the sleeve and extrude it from the distal end of the sleeve.



GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

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INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2019/051819

A. CLASSIFICATION OF SUBJECT MATTER

INV. A61F2/12 A61B17/34 A61M25/00
ADD.

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)

A61F A61B A61M

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)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2009/030400 A1 (BOSE ARANI [US] ET AL) 29 January 2009 (2009-01-29) paragraphs [0018], [0020]; claims; figures	1-4,9,10
X	US 2014/148901 A1 (ANDERSON ROBERT G [US] ET AL) 29 May 2014 (2014-05-29) paragraphs [0016], [0020], [0026]; claims; figures	1,2
X	EP 2 630 927 A2 (COVIDIEN LP [US]) 28 August 2013 (2013-08-28) paragraphs [0027], [0028], [0042] - [0044]; figures	1
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☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* 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

28 June 2019

Date of mailing of the international search report

11/09/2019

Name and mailing address of the ISA/

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Douskas, K

INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2019/051819

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2014/249510 A1 (KOBLISH JOSEF V [US] ET AL) 4 September 2014 (2014-09-04) paragraphs [0053] - [0063]; claims; figures -----	1-4,9,10
X	US 2005/080430 A1 (WRIGHT JOHN A [US] ET AL) 14 April 2005 (2005-04-14) paragraph [0037]; claims; figures -----	1,2,9,10

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2019/051819

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.: 11-17
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery
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 additional 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 an 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.:
1-4, 9, 10

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.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-4, 9, 10

An implant-delivery sleeve, comprising:
a first tube including a first segment, a second segment,
and a third segment, the first segment having a first
stiffness, the second segment having a second stiffness, and
the third segment having a third stiffness,
wherein the third stiffness is greater than the second
stiffness and the second stiffness is greater than the first
stiffness
wherein the first segment includes a second tube disposed
about the first tube, the second segment includes a third
tube disposed about the first tube, and the third segment
includes a fourth tube disposed about the first tube.

2. claims: 1, 5-7

An implant-delivery sleeve, comprising:
a first tube including a first segment, a second segment,
and a third segment, the first segment having a first
stiffness, the second segment having a second stiffness, and
the third segment having a third stiffness,
wherein the third stiffness is greater than the second
stiffness and the second stiffness is greater than the first
stiffness.
further including perforations disposed through the first
tube.

3. claims: 1, 8

An implant-delivery sleeve, comprising:
a first tube including a first segment, a second segment,
and a third segment, the first segment having a first
stiffness, the second segment having a second stiffness, and
the third segment having a third stiffness,
wherein the third stiffness is greater than the second
stiffness and the second stiffness is greater than the first
stiffness.
wherein the first tube has a frustoconical configuration.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2019/051819

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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