

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
24 January 2008 (24.01.2008)

PCT

(10) International Publication Number
WO 2008/010150 A3

(51) International Patent Classification:

A61B 18/14 (2006.01) A61B 17/42 (2006.01)

(21) International Application Number:

PCT/IB2007/052735

(22) International Filing Date: 10 July 2007 (10.07.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

PA 2006 00953 10 July 2006 (10.07.2006) DK

(71) Applicant (for all designated States except US): **LINA MEDICAL APS** [DK/DK]; Formervangen 5, DK-2600 Glostrup (DK).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KORNERUP, Niels** [DK/DK]; Boholtvej 8, Tårup, DK-5871 Frørup (DK). **BUSCH-MADSEN, Patrick** [DK/DK]; Pilevang 4, Burresø, DK-3550 Slangerup (DK).

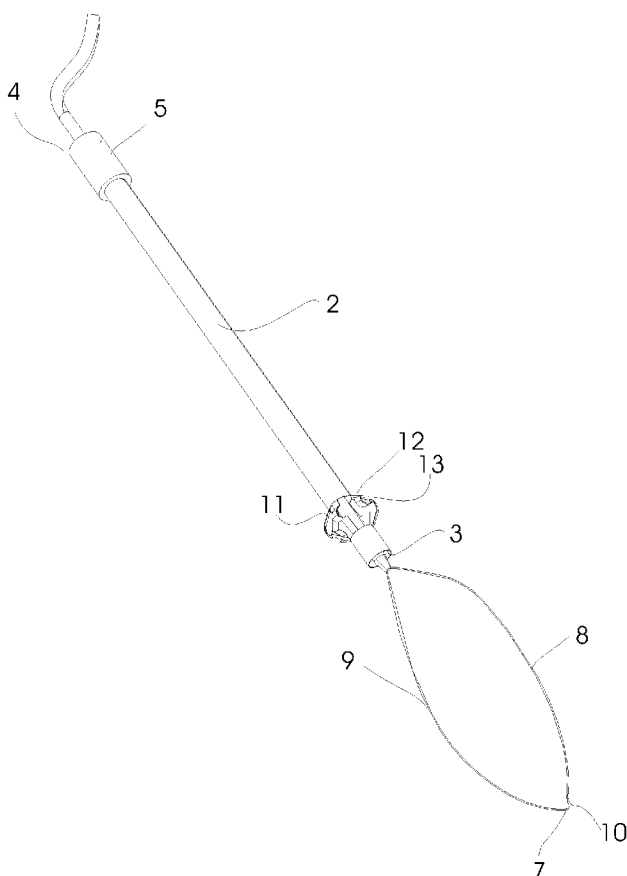
(74) Agent: **HOLME PATENT A/S**; Vesterbrogade 20, DK-1620 Copenhagen (DK).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, 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).

[Continued on next page]

(54) Title: AN ELECTROSURGICAL INSTRUMENT



(57) Abstract: The present invention relates to an electrosurgical instrument, more particularly to an electrosurgical instrument for laparoscopic hysterectomy. The instrument further comprises an expandable and contractible loop positioned to controllably emerge from the distal end of the shaft; said loop defines a first electrode. The instrument further comprises at least one second electrode which in a first position are positioned within the shaft, and in a second position are expanded from the shaft. The instrument according to the invention is extremely simple to operate and the instrument therefore provides an improvement over prior art monopolar and bipolar treatment methods, both in decreasing treatment time, and simplifying control of the treatment.

WO 2008/010150 A3



Declaration under Rule 4.17:

— *of inventorship (Rule 4.17(iv))*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

Published:

— *with international search report*

(88) Date of publication of the international search report:

14 August 2008

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2007/052735

A. CLASSIFICATION OF SUBJECT MATTER

INV. A61B18/14
ADD. A61B17/42

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)
A61B

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 practical, 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.
A	WO 96/24296 A (ENABLE MEDICAL CORP [US]) 15 August 1996 (1996-08-15) figure 6b page 15, line 19 - line 37 -----	1-13
X	US 6 537 273 B1 (SOSIAK ALEXANDER K D [US] ET AL) 25 March 2003 (2003-03-25) figures 3A-E column 4, line 12 - line 23 column 6, line 30 - column 8, line 31 column 8, line 31 - column 14, line 43	1-5,8,9
Y	----- -/--	6,7, 10-13

☒ 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 document 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.
- *G* document member of the same patent family

Date of the actual completion of the international search

22 February 2008

Date of mailing of the international search report

09/06/2008

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Ließmann, Frank

INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2007/052735

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 5 318 564 A (EGGERS PHILIP E [US]) 7 June 1994 (1994-06-07) figures 4-6 column 5, lines 1-33 column 6, line 7 - line 20 column 6, line 61 - column 7, line 63 -----	1,2,5
X,P	WO 2007/024386 A (BOSTON SCIENT SCIMED INC [US]) 1 March 2007 (2007-03-01) figure 4 paragraph [0034] - paragraph [0038] -----	1,3,5
Y	WO 2004/002350 A (ETHICON INC [US]) 8 January 2004 (2004-01-08) figures 9-11 page 11, line 12 - page 14, line 11 -----	6,7
Y	EP 1 004 277 A (MEDSYS S A [BE]) 31 May 2000 (2000-05-31) figures 1,9 paragraph [0010] paragraph [0032] - paragraph [0038] -----	10,11,13
Y	US 5 437 665 A (MUNRO MALCOLM G [US]) 1 August 1995 (1995-08-01) figures 1,2,9,10 column 4, line 47 - column 6, line 14 column 6, line 36 - column 7, line 35 -----	12

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2007/052735

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 additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable 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.:

see annex

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: 1-13

An electrosurgical instrument comprising a shaft and an expandable loop positioned to controllably emerge from the distal end of the shaft and a second electrode expandable from the shaft.

2. claim: 14

A loop for an electrosurgical instrument comprising at least a first and a second electrode twisted around each other in the longitudinal direction.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2007/052735

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9624296	A	15-08-1996	CA 2212768 A1 EP 0808131 A1 US 5814044 A US 5957884 A US 6036681 A US 6007512 A	15-08-1996 26-11-1997 29-09-1998 28-09-1999 14-03-2000 28-12-1999
US 6537273	B1	25-03-2003	NONE	
US 5318564	A	07-06-1994	AT 190479 T AU 677782 B2 AU 4369093 A CA 2134899 A1 DE 69328122 D1 DE 69328122 T2 EP 0684791 A1 JP 3280978 B2 JP 8500024 T WO 9321845 A1	15-04-2000 08-05-1997 29-11-1993 11-11-1993 20-04-2000 12-10-2000 06-12-1995 13-05-2002 09-01-1996 11-11-1993
WO 2007024386	A	01-03-2007	US 2007060920 A1	15-03-2007
WO 2004002350	A	08-01-2004	AU 2003245581 A1	19-01-2004
EP 1004277	A	31-05-2000	AT 271356 T DE 69918776 D1	15-08-2004 26-08-2004
US 5437665	A	01-08-1995	NONE	