

1) Family number: 79123009 (US2020163678A)

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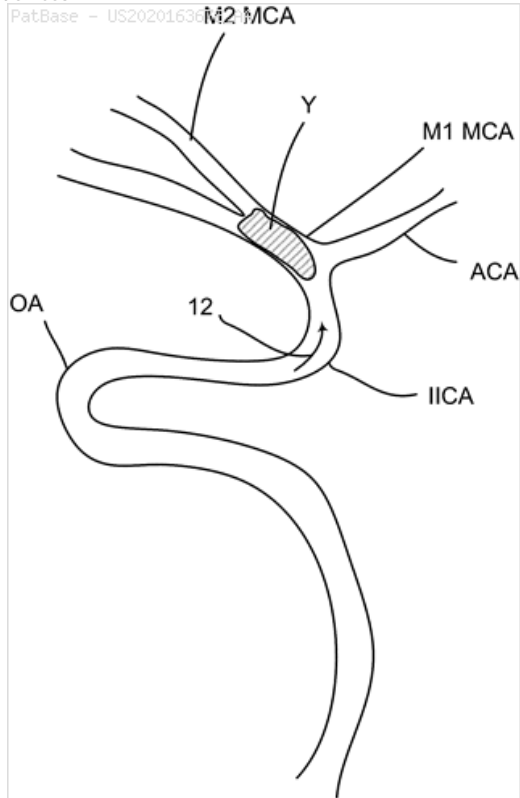
Title: PRELOADED CATHETER AND CLOT RETRIEVAL SYSTEMS AND METHODS FOR TREATMENT OF ISCHEMIC STROKE

Abstract: The invention describes systems and methods for retrieving blood clots (thrombi) from patients undergoing endovascular/neurointervention procedures following ischemic stroke. More specifically, a preloaded catheter and clot retrieval system (PCS) effective in positioning a clot retrieval system (CRS) or stent adjacent a clot and ensnaring and removing the clot are described as well as methods of utilizing these devices.

Classifications:

International (IPC 8-9): A61B17/12 A61M25/00
A61M25/01 (Advanced/Invention)

CPC: A61B17/12118 A61B17/221 A61B2017/2215 A61B2017/00477
A61B2017/22042 A61B2017/22049 A61M25/0067 A61M25/0125
A61M2025/0293 A61M2025/09008 A61M2025/09125



Family:

Publication number	Publication date	Application number	Application date
US2020163678 AA	20200528	US20190698158	20191127

Priority:

US20180771971P 20181127 US20190698158 20191127

Probable Assignee: MG STROKE ANALYTICS INC

Assignee(s): (std): MG STROKE ANALYTICS INC

Inventor(s): (std): GOYAL MAYANK

2) Family number: 69818013 (US2018140314A)

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Title: OBSTRUCTION REMOVAL SYSTEM

Abstract: An obstruction removal device is described, having one or more engaging members which can engage portions of the clot. The one or more engaging members have a collapsed, delivery state, and an expanded, deployed state which in some embodiments can be locked to maintain its fixed configuration.

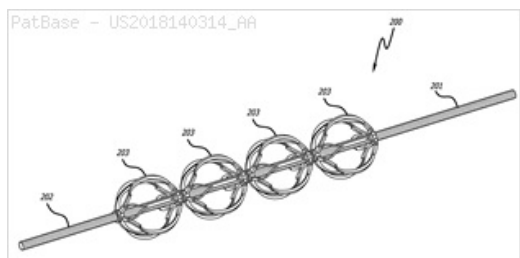
Classifications:

International (IPC 8-9): A61B17/22 A61B17/221 A61B17/3207
A61M29/00 (Advanced/Invention);

A61B17/22 A61B17/3207 (Advanced/Non-invention)

CPC: A61B17/22031 A61B17/221 A61B17/320725 A61B2017/22034
A61B2017/22042 A61B2017/22049 A61B2017/2212

US: 1/1 606/159



Family:

Publication number	Publication date	Application number	Application date
CN110573095 A	20191213	CN201780084363	20171117
EP3544528 A1	20191002	EP20170873636	20171117
EP3544528 A4	20200701	EP20170873636	20171117
JP2019536552 T2	20191219	JP20190527834T	20171117
US2018140314 AA	20180524	US20170817076	20171117
US10729455 BB	20200804	US20170817076	20171117
WO18098045 A1	20180531	WO2017US62413	20171117

Priority:

US20160426106P 20161123 US20170817076 20171117 WO2017US62413 20171117

Probable Assignee: MICROVENTION INC

Assignee(s): (std): MICROVENTION INC

Inventor(s): (std): SHIMIZU JARED ; LAM KIET ; GOYAL MAYANK ; BOWMAN HEATH

Agent(s): INVENT HORIZON IP; INSKEEP IP GROUP INC; FREDERICKS CHARLES E

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

3) Family number: 67316018 (US2017303939A)

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Title: METHODS FOR ADVANCING INVERTING MECHANICAL THROMBECTOMY APPARATUSES IN THE VASCULATURE

Abstract: Mechanical thrombectomy apparatuses (devices, systems, etc.) and methods for positioning them within a vessel and using them to remove a thrombus, e.g., clot, from within a vessel. In particular, described herein are methods of advancing an inverting tractor thrombectomy apparatus having a tractor comprising a flexible tube of material that inverts over itself as it rolls over a distal end opening of an elongate inversion support by extending the tractor region and/or a puller coupled to the tractor distally beyond the end of the catheter. Also described herein are power-driven mechanical thrombectomy apparatuses.

Classifications:

International (IPC 8-9): A61B17/22 A61B17/221 A61B17/24

A61B17/3205 A61B17/3207 A61F2/90 A61L29/08 A61L29/14

A61M25/01 A61M29/00 A61M39/06 (Advanced/Invention);

A61B17/00 A61B17/22 A61B17/221 A61B17/30 A61B17/34

A61B90/00 A61F2/82 (Advanced/Non-invention)

CPC: A61F2230/0056 A61B2017/00778 A61B2017/00867 A61F2/90

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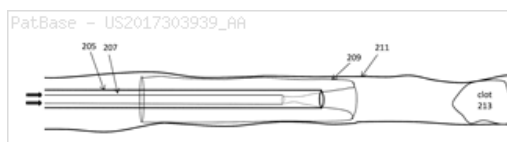
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US: 1/1 606/114 606/127 606/159 606/200



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CN110913778 A	20200324	CN201880046302	20180705
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WO17210487 A1	20171207	WO2017US35543	20170601
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WO19010318 A1	20190110	WO2018US40937	20180705

Priority:

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US20160393460P	20160912	EP20170721036	20170425	EP20170722290	20170425
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Probable Assignee: STRYKER CORP

Assignee(s): (std): STRYKER CORP

Assignee(s): STRYKER CORP FREMONT ; GW MEDICAL LLC

Inventor(s): (std): GARABEDIAN ROBERT ; GARABEDIAN ROBERT J ; GREENHALGH E SKOTT ; GREENHALGH SKOTT ; WALLACE GAVIN ; WALLACE GAVIN P ; WALLACE MICHAEL ; WALLACE MICHAEL P ; GREENHALGH SKOTT E

Inventor(s): WALLACE MICHAEL P PLEASANTON ; GREENHALGH E SKOTT GLADWYNE ; GREENHALGH E

Agent(s): HAUCK PATENTANWALTSPARTNERSCHAFT MBB; LECOMTE AND PARTNERS; KITA AOYAMA INT PATENT BUREAU; VISTA IP LAW GROUP LLP; BURSE DAVID T ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

4) Family number: 32289023 (US2007208370A)

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Title: VASCULAR FILTER DEVICE

Abstract: A vascular filter for capturing and breaking apart particles in the blood. The vascular filter includes a filter body and an agitation member disposed within the filter body. Movement of the agitation member acts on particles trapped within the filter body for enhancing the dissolution of the particles, thereby reducing the likelihood of filter occlusion and improving the flow of blood through the vessel. The vascular filter is preferably collapsible for percutaneous delivery to a treatment site. The agitation member is preferably rotatably coupled to the filter body and a flow receiving member is provided for causing the agitation member to rotate. A clutch mechanism may be provided such that the agitation member only rotates when a particle, such as a blood clot, is trapped within the filter body.

Classifications:

International (IPC 8-9): A61B17/22 A61B17/221 A61B17/225

A61B17/3207 A61F2/01 A61M29/00 (Advanced/Invention);

A61B17/22 (Advanced/Non-invention);

A61B17/22 A61F2/01 A61M29/00 (Core/Invention)

International (IPC 1-7): A61M29/00

CPC: A61B17/221 A61B17/225 A61B17/320758 A61B2017/22001

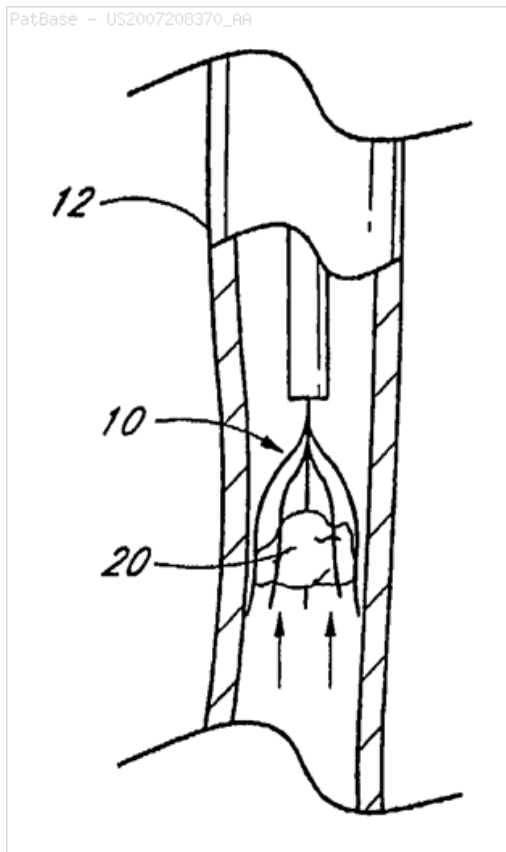
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A61F2230/006 A61F2230/0067 A61F2230/008 A61F2230/0093

European: A61F2/01 A61F2/01D

US: 1/1 128/898 606/128 606/128P 606/159 606/200 606/200S

**Family:**

Publication number	Publication date	Application number	Application date
US2007208370 AA	20070906	US20050594198	20050325
US2010185210 AA	20100722	US20100749233	20100329
US2013053881 AA	20130228	US20120597118	20120828
US2015157443 AA	20150611	US20150623425	20150216
US2018104041 AA	20180419	US20170834869	20171207
US2018325647 AA	20181115	US20180030622	20180709
US2020129282 AA	20200430	US20190726651	20191224
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US10695159 BB	20200630	US20190726651	20191224
WO05094283 A2	20051013	WO2005US10160	20050325
WO05094283 A3	20060420	WO2005US10160	20050325

Priority:

US20040556152P	20040325	US20050594198	20050325	WO2005US10160	20050325
WO2005US10160	20051013	US20060594198	20060925	US20100749233	20100329
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Probable Assignee: HAUSER DAVID L**Assignee(s):** (std): HAUSER DAVID L ; HO PUI TONG ; HO PUI T**Inventor(s):** (std): HAUSER DAVID L ; HO PUI TONG ; HO PUI T**Inventor(s):** HO PUI ; HAUSER DAVID**Agent(s):** PUI TONG HO; DAVID L HAUSER

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NA NE NI NL NO NZ OM PG PH PL PT RO RU SC SD SE SG SI SK SL SM SN SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

5) Family number: 43179026 (US2009105722A)

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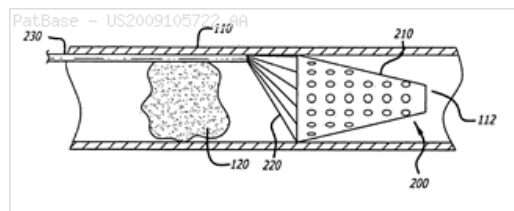
Title: DEVICES AND METHODS FOR EMBOLUS REMOVAL DURING ACUTE ISCHEMIC STROKE

Abstract: Devices, methods, and systems facilitate and enable treatment of ischemic stroke. More specifically, a tethered basket-like system operates in conjunction with a microcatheter system, to provide arterial support and capture emboli.

Classifications:

International (IPC 8-9): A61B A61B17/00 A61B17/12 A61B17/22 A61B17/221 A61B17/24 A61B17/3207 A61D1/02 A61F2/01 A61F2/06 A61F2/82 A61F2/84 A61F2/89 A61F2/91 A61F2/95 A61F2/958 A61F2/966 A61L A61L27/54 A61L29/00 A61M25/00 A61M25/01 A61M25/06 A61M25/08 A61M25/088 A61M25/09 A61M25/098

A61M25/10 A61M25/18 A61M29/00 A61M29/02
B23P17/04 (Advanced/Invention);
A61B17/00 A61B17/22 A61B17/3207 A61B17/3209 A61F2/01
A61F2/82 A61F2/90 A61F2/91 A61F2/915 A61M25/00 A61M25/06
A61M25/09 A61M25/10 (Advanced/Non-invention);
A61B17/22 A61M25/00 A61M25/01 A61M25/08 A61M25/088
A61M25/09 A61M25/16 A61M29/02 B23P17/00 (Core/Invention)
CPC: A61M25/0009 A61M25/0021 A61M2210/0693 A61M25/1027
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Family:

Publication number	Publication date	Application number	Application date
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Priority:

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US20150611564	20150202	AU20150218421	20150825	JP20160007627	20160119
US20160137317	20160425	AU20170251717	20171024	US20180148224	20181001
US20190561915	20190905				

Probable Assignee: COVIDIEN LP

Assignee(s): (std): BENJAMIN JOSHUA ; COVIDIEN LP ; CRAGG ANDREW H ; FERRERA DAVID A ; FULKERSON JOHN ; INTERSECT PARTNERS LLC ; LUCE FORWARD HAMILTON 7 SCRIPP ; SOSNOWSKI STEPHEN A ; SOSNOWSKI STEPHEN ; RIZK ISA ; FERRERA DAVID ; CRAGG ANDREW ; FERRERE DAVID ; MINDFRAME INC

Assignee(s): MINDFRAME LLC ; LUCE FORWARD HAMILTON 7 SCRIPPS LLP ; COVIDIEN LP MANSFIELD ; COVIDIEN LP NDGESDSTAATES DELAWARE MANSFIELD

Inventor(s): (std): ANDREW H CRAGG ; JOSHUA BENJAMINN ; RIZK ISA ; SOSNOWSKI STEPHEN A ; SOSNOWSKI STEPHEN ; JOHN FULKERSON ; FERRERA DAVID A ; FERRERA DAVID ; DAVID A FERRERA ; FULKERSON JOHN ; FERRERE DAVID ; CRAGG ANDREW ; BENJAMIN JOSHUA ; CRAGG ANDREW H

Inventor(s): ANDREW CRAGG ; BENJAMIN JOSHUA ALISO VIEJO ; FERRERA DAVID A REDONDO BEACH ; CRAGG ANDREW H EDINA ; GRAGG ANDREW ; FULKERSON JOHN RANCHO SANTA MARGARITA

Agent(s): PETER MAXWELL AND ASSOCIATES; SPRUSON AND FERGUSON; SMART AND BIGGAR; PATENTANWALTSSKANZLEI MEYER; HERNANDEZ YORCK DIPL ING; KEHOE LAURA ELLEN; CREASE DEVANAND JOHN; ELSY DAVID; DE ELZABURU ALBERTO; LAZCANO JESUS; SONIA DEL VALLE VALIENTE; ORIENTAL INTELLECTUAL PROPERTY SERVICES CO; GREENBERG TRAURIG LLP; GREENBERG TRAURIG LLP (LA); LUCE FORWARD HAMILTON AND SCRIPPS LLP; KNOBBE MARTENS OLSON AND BEAR LLP; MARK J; FORTEM IP LLP; MARY; FOX MARY; GLUCK PETER J; BENTLEY MARK I; BENTLEY MARK I ET AL; CHRISTENSEN MICHAEL R

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

6) Family number: 67016034 (WO17161204A8)

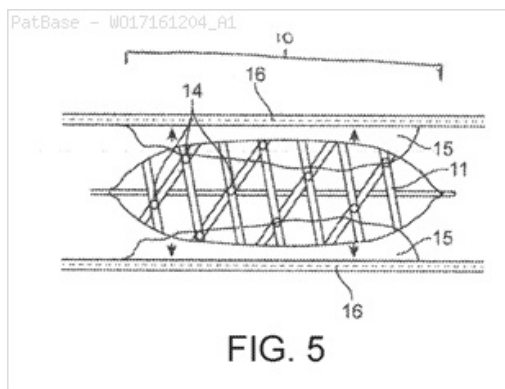
© PatBase

Title: DEVICE AND METHOD OF THROMBUS RETRIEVAL

Abstract: Disclosed herein are devices, systems and methods for removal of a thrombus or embolus from a vascular channel of the body. A device comprising at least one actively expandable scaffold is inserted into the vascular channel and positioned at the thrombus or embolus in a collapsed configuration. A lytic agent is delivered by a delivery member fluidly coupled to a source of lytic agent and an infusion pump to the thrombus or embolus. The scaffold is expanded through the thrombus or embolus to an expanded configuration while the lytic agent is being infused in order to urge the thrombus or embolus into the scaffold. The scaffold is then collapsed around the thrombus or embolus and removed from the patient with the thrombus or embolus captured therein.

Classifications:

International (IPC 8-9): A61F2/06 A61F2/07 A61F2/82 A61F2/86 A61L27/54 A61L29/14 A61L31/14 A61L31/16 A61M31/00 (Advanced/Invention)
CPC: A61L31/16 A61B17/221 A61B17/22012 A61B2017/22034 A61B2017/22084 A61B2017/2212 A61L31/14 A61F2002/016 A61F2250/0067



Family:

Publication number	Publication date	Application number	Application date
WO17161204 A1	20170921	WO2017US22837	20170316
WO17161204 A8	20171026	WO2017US22837	20170316

Priority:

US20160309056P 20160316

Probable Assignee: CULTURE VASCULAR INC

Assignee(s): (std): CULTURE VASCULAR INC ; CAPTURE VASCULAR INC

Inventor(s): (std): NING KELVIN ; CALL AARON ; FULTON RICHARD E III ; FULTON III RICHARD E

Agent(s): CHAN DARBY J ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

7) Family number: 31773036 (US2005065483A)

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Title: MEDICAL INSTRUMENT FOR FLUID INJECTION AND RELATED METHOD

Abstract: A medical instrument for fluid injection includes a tubular member and a plurality of hollow needle elements connected to one end of the tubular member. Generally, the tubular member has a lumen and all the needle elements communicate with the lumen to enable a distribution of a diagnostic or therapeutic fluid to various points in a predetermined region. The tubular member is provided with a fluid introduction port at an end of the tubular member opposite the needle elements, the fluid introduction port communicating with the lumen. The needle elements are disposed in a predetermined configuration adapted to carry out a desired function. The needle elements are at least partially made of resilient material with a memory so that the needle elements are biased by their internal stresses towards a predetermined rest configuration and are alternately disposable in the rest configuration and at least one stressed or loaded configuration.

Classifications:

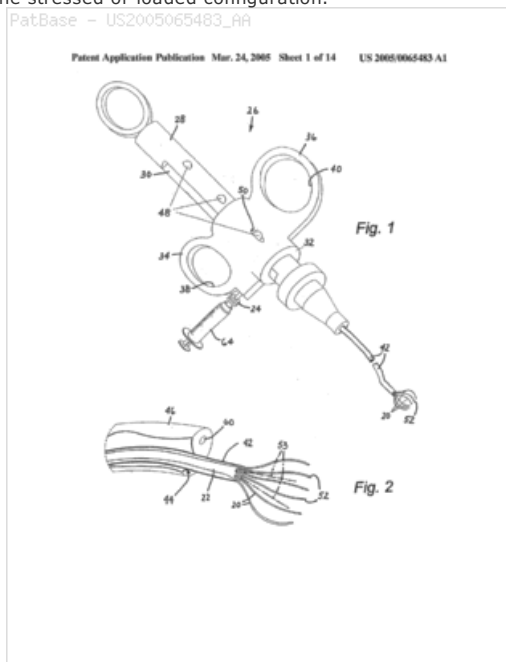
International (IPC 8-9): A61B17/22 A61B17/32 A61B17/34 A61M25/00 A61M5/00 A61M5/18 (Advanced/Invention); A61B17/20 (Advanced/Non-invention); A61B17/22 A61B17/32 A61B17/34 A61M25/00 A61M5/00 (Core/Invention); A61B17/20 (Core/Non-invention)

International (IPC 1-7): A61M5/00

CPC: A61B17/205 A61B17/221 A61B17/32056 A61B17/3478 A61B2017/00827 A61B2017/2215 A61M25/0084

European: A61B17/221 A61B17/3205S A61B17/34Q A61M25/00T40A A61M25/00T5 K61B17/00R14R K61B17/20B K61B17/221P

US: 604/164.01 604/164.11 604/264 604/264P



Family:

Publication number	Publication date	Application number	Application date
US 2005065483 AA	20050324	US20030670106	20030924
US 758557 BB	20090915	US20030670106	20030924

Priority:

US20030670106 20030924

Probable Assignee: GRANIT MEDICAL INNOVATION INC

Assignee(s): (std): GRANIT MEDICAL INNOVATION INC ; GRANIT MEDICAL INNOVATIONS LLC

Assignee(s): GRANIT MEDICAL INNOVATION LLC

Inventor(s): (std): NAKAO NAOMI L

Inventor(s): NAKAO NAOMI

Agent(s): R NEIL SUDOL; R NEIL; HENRY D; WILLIAM J

8) Family number: 63729044 (US2017086864A)

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Title: MECHANICAL THROMBECTOMY APPARATUSES AND METHODS

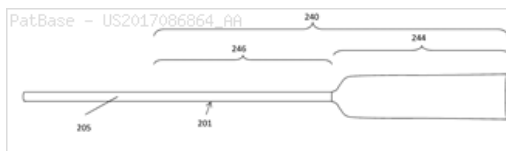
Abstract: Methods and apparatuses for mechanically removing objects from a body. In particular, described herein are thrombectomy methods and mechanical thrombectomy apparatuses for removal of blood clots from within a lumen of a blood vessel.

Classifications:

International (IPC 8-9): A61B17/00 A61B17/22 A61B17/221 A61B17/3207 A61F2/01 (Advanced/Invention); A61B17/30 A61B17/34 (Advanced/Non-invention)

CPC: A61B17/22 A61B17/22031 A61B17/221 A61B2017/22044 A61B2017/22079 A61B2017/2215 A61B2017/306 A61B2017/3435 A61B2217/005 A61B17/00234 A61B2017/00292 A61B2017/00358 A61B2017/00778 A61B2017/00862 A61B2017/00867 A61B2017/22038

US: 1/1 606/159



Family:

Publication number	Publication date	Application number	Application date
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EP3406208 A1	20181128	EP20180174891	20160215
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Priority:

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US20190397089	20190429				

Probable Assignee: STRYKER CORP

Assignee(s): (std):	GREENHALGH E SKOTT ; STRYKER CORP ; WALLACE MICHAEL P ; GW MEDICAL LLC
Assignee(s):	STRYKER CORP FREMONT
Inventor(s): (std):	WALLACE MICHAEL P ; GREENHALGH E SKOTT
Inventor(s):	GREENHALGH E ; WALLACE MICHAEL P PLEASANTON ; GREENHALGH E SKOTT PLEASANTON
Agent(s):	LECOMTE AND PARTNERS; KITA AOYAMA INT PATENT BUREAU; SHAY GLENN LLP; VISTA IP LAW GROUP LLP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

9) Family number: 64856057 (US2017035445A)

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Title: AXIAL LENGTHENING THROMBUS CAPTURE SYSTEM

Abstract: Disclosed herein are systems and methods to remove material of interest, including blood clots, from a body region, including but not limited to the circulatory system for the treatment of pulmonary embolism (PE), deep vein thrombosis (DVT), cerebrovascular embolism, and other vascular occlusions.

Classifications:

International (IPC 8-9): A61B17/00 A61B17/22 A61B17/221 A61B17/32 A61B17/3207 A61F2/00 A61F2/01 A61M1/00 A61M25/00 A61M25/10 A61M29/00 (Advanced/Invention);

A61B17/00 A61B17/22 A61B17/32 A61F2/01 (Advanced/Non-invention)

CPC: A61B2017/2215 A61F2002/018 A61F2230/0091 A61F2250/0003

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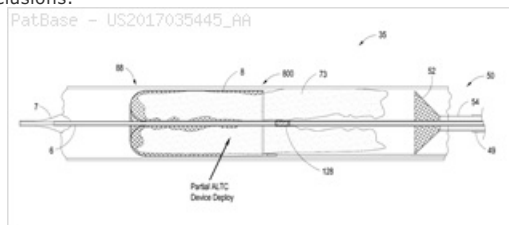
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US: 1/1 606/110 606/115 606/159



Family:

Publication number	Publication date	Application number	Application date
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Priority:

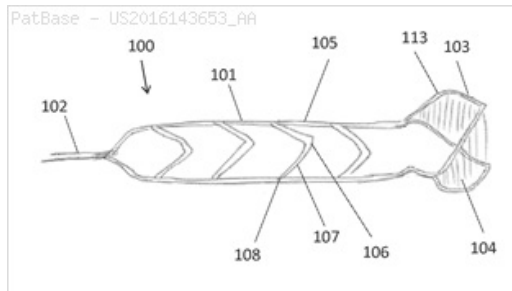
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US20190655821	20191017	US20190717345	20191217		

Probable Assignee: KP MEDCURE INC**Assignee(s):** (std): KP MEDCURE INC**Assignee(s):** KP MEDCURE INC ANAHEIM**Inventor(s):** (std): NGO TUNG ; NGO TUNG H ; NGUYEN THANH ; NGUYEN THANH VAN ; NGUYEN DUY ; NGO TUNG HOANG**Inventor(s):** NGUYEN THANH VAN ANAHEIM ; NGUYEN DUY ANAHEIM ; NGO TUNG H ANAHEIM**Agent(s):** GILL JENNINGS AND EVERY LLP; KNOBBE MARTENS OLSON AND BEAR LLP; ALTMAN DANIEL E**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**10) Family number: 62457057 (US2016143653A)**

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Title: CLOT RETRIEVAL DEVICE FOR REMOVING OCCLUSIVE CLOT FROM A BLOOD VESSEL

Abstract: A clot retrieval device for removal of occlusive clot from a blood vessel comprises a clot engaging element 700 having a constrained delivery configuration and an expanded deployed configuration. In the expanded configuration peripheral portions are laterally spaced-apart and the clot engaging section 700 extends between the peripheral portions. The device 700 may have two superimposed wave patterns provided by a large amplitude curve 723 and shorter pitch sinusoidal patterns 721, 722. A wave shape varies the contact pressure between a clot and the device along the length of the device, reducing the compression of the clot by the device at some locations. The device can elongate when placed under tension which aids elongation of the clot during dislodgement.

Classifications:**International (IPC 8-9):** A61B A61B17/22 A61B17/221 A61B17/3207 A61B90/00 A61F A61F2/01 (Advanced/Invention); A61B17/00 A61B17/22 A61B17/3207 (Advanced/Non-invention); A61B A61F (Subclass/Invention)**CPC:** A61B90/39 A61B2090/3966 A61B2017/22079 A61B2017/00867 A61B2017/22072 A61B2017/22094 A61B17/221 A61B17/320725 A61B2017/22034 A61B2017/2215 A61B2017/2217 A61F2/013 A61F2002/016 A61F2230/008 A61F2230/0091 A61B17/3207**US:** 1/1 606/114 606/200**Family:**

Publication number	Publication date	Application number	Application date
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Priority:

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Probable Assignee: NEURAVI LTD

Assignee(s): (std): NEURAVI LTD

Assignee(s): O GORMAN JACQUELINE ; VALE DAVID ; CASEY BRENDAN ; FAHY BRIAN ; GILVARRY MICHAEL ; KING DANIEL ; MCARDLE KEVIN

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Agent(s): FISHER ADAMS KELLY CALLINANS; SPRUSON AND FERGUSON; NORTON ROSE FULBRIGHT CANADA LLP SENCRL SRL; MUELLER BORE AND PARTNER PATENTANWAELTE PARTG MBB; O BRIEN JOHN AUGUSTINE; CARPMAELS AND RANSFORD LLP; SMALL GARY JAMES; DEACONS; ONO SHINJIRO; YAMAMOTO OSAMU; MIYAMAE TORU; NAKANISHI MOTOHARU; KATO MASANOBU; TROUTMAN SANDERS LLP; OBRIEN JOHN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KW KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

11) Family number: 32253061 (US2005234474A)

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Title: SMALL-DIAMETER SNARE

Abstract: This invention provides a small diameter snare device consisting of a hollow, elongate, thin-walled polymer outer sheath. A single central core wire extends through the entire length of the sheath. The outer diameter of the core wire is sized close to the inner diameter of the sheath while allowing for axial sliding, in order to maximize the support to the body portion of the snare device. The distal end of the core wire has a tapered section of reduced diameter or cross section to provide a "guidewire-like" flexibility to the distal portion of the device. A second wire of about fifty percent of the inner diameter of the sheath is shaped to form a snare loop and the two ends are attached to the distal most portion of the central core wire via welding, soldering, or brazing. After assembly of the core and sheath, a second short, hollow tube is fitted over the proximal end of the central core and attached thereto to provide an actuating handle to slideably move the central core within the sheath, thus exposing and retracting the snare loop from the open distal end of the sheath. The loop is typically circular or oval shaped and can also be multiplanar (for example, a twisted, figure eight shape) so as to increase the ability to ensnare and capture objects. The loop attachment to the core wire is facilitated and strengthened by a wrapped coupling coil formed typically of 0.001-inch platinum wire applied to secure the loop prior to soldering (brazing or other metal-flowing joining techniques), and through which solder flows to permanently secure the loop to the core wire.

Classifications:

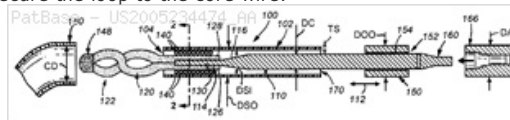
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International (IPC 1-7): A61B17/22 A61B17/24 A61B17/32

CPC: A61B2017/2217 A61B90/39 A61B2017/22042 A61B2017/22045 A61B2017/2924 A61B17/221 A61B17/32056 A61B2017/00867 A61B2017/22034 A61B2017/22035 A61B2017/22094 A61B2017/2212

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US: 606/113 606/113P 606/159



Family:

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Priority:

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Probable Assignee: VASCULAR SOLUTIONS INC

Assignee(s): (std): BURKHARDT JON ; DEMELLO RICHARD M ; FINLAYSON MAUREEN A ; FLIGHT BRUCE W ; RADIUS MEDICAL TECHNOLOGIES IN ; RADIUS MEDICAL TECHNOLOGIES INC ; PARKER CRAIG ; HEUSER RICHARD R ; DEMELLO JONATHAN R

Assignee(s): VASCULAR SOLUTIONS INC

Inventor(s): (std): BURKHARDT JON ; DEMELLO RICHARD ; DEMELLO RICHARD M ; FINLAYSON MAUREEN ; FINLAYSON MAUREEN A ; FLIGHT BRUCE ; FLIGHT BRUCE W ; PARKER CRAIG ; HEUSER RICHARD R ; DEMELLO JONATHAN R

Agent(s): RUPPRECHT KAY; CESARI AND MCKENNA LLP; MCKENNA JOHN F ET AL

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

12) Family number: 77998076 (WO20055908A1)

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Title: INVERTING THROMBECTOMY APPARATUSES AND METHODS OF USE

Abstract: Described herein are mechanical inverting tube apparatuses that may be used to remove clot (e.g., thrombectomy), the apparatuses including an inversion support catheter having an expandable funnel-shaped distal end, and

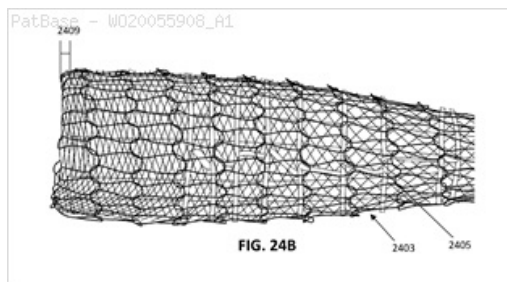
a flexible tube that can be continuously rolled over the funnel-shaped distal end and invert into the inner lumen of the inversion support catheter.

Classifications:

International (IPC 8-9): A61B17/22 A61B17/221

A61B17/3207 (Advanced/Invention)

CPC: A61B17/22031 A61B17/221 A61B17/320725 A61B2017/2215
A61B2017/320008 A61B2017/3435



Family:

Publication number	Publication date	Application number	Application date
WO20055908 A1	20200319	WO2019US0467	20190910

Priority:

US20180729276P 20180910

Probable Assignee: STRYKER CORP

Assignee(s): (std): STRYKER CORP

Inventor(s): (std): VAN CLIFFORD ; LEGUIDLEGUID ROY ; TANG WINNIE ; WALLACE MICHAEL ; GREENHALGH E

Inventor(s): GREENHALGH E SKOTT ; WALLACE MICHAEL P

Agent(s): BURSE DAVID T ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

13) Family number: 32022077 (US2005137686A)

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Title: EXTERNALLY EXPANDABLE HEART VALVE ANCHOR AND METHOD

Abstract: The invention includes methods of and apparatus for endovascularly replacing a heart valve of a patient. One aspect of the invention provides a method including the steps of endovascularly delivering a replacement valve and an expandable anchor to a vicinity of the heart valve in an unexpanded configuration; and applying an external non-hydraulic or non-pneumatic actuation force on the anchor to change the shape of the anchor, such as by applying proximally and/or distally directed force on the anchor using a releasable deployment tool to expand and contract the anchor or parts of the anchor.

Classifications:

International (IPC 8-9): A61B17/00 A61B17/064 A61B17/068

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A61F2/90 A61F2/966 A61M25/00 A61M25/04 A61M25/088

A61M29/00 (Advanced/Invention);

A61B17/00 A61B17/22 A61B17/221 A61F2/00 A61F2/01 A61F2/06

A61F2/24 A61F2/848 A61F2/86 A61F2/88 A61F2/90 A61F2/95

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A61B17/00 A61F2/01 A61F2/06 A61F2/24

A61M29/00 (Core/Invention);

A61F2/06 A61F2/82 (Core/Non-invention)

International (IPC 1-7): A61F2/06 A61F2/24

CPC: A61F2/848 A61F2250/0036 A61F2220/0033 A61F2/86

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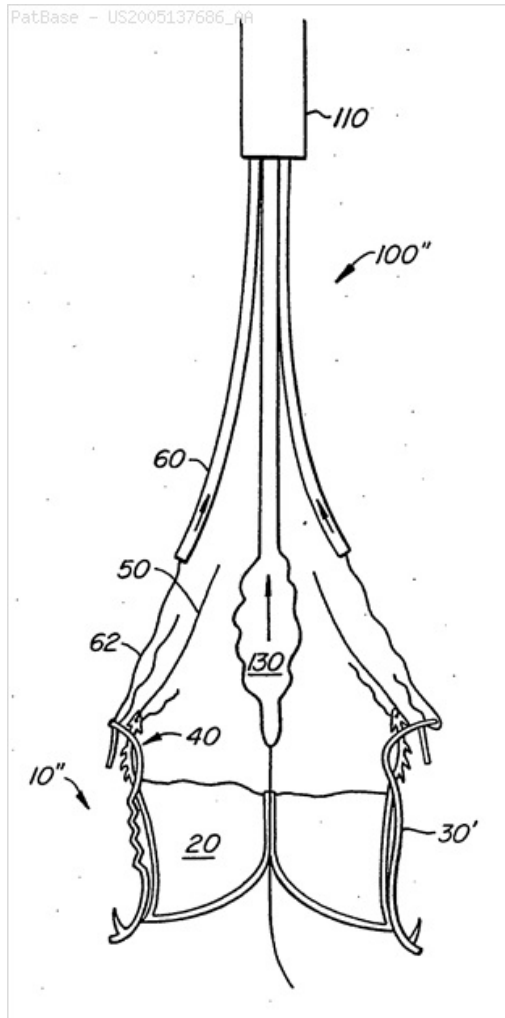
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Assignee(s): (std): SADRA MEDICL INC ; SUTTON BENJAMIN ; VALENCIA HANS R ; HILDEBRANT DANIEL ; VALENCIA HANS F ; VALENCIA HANS ; SAUL TOM ; SALAHIEH AMR ; SADRA MEDICAL A DELAWARE CORP ;

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Agent(s): PHILLIPS ORMONDE FITZPATRICK ; SMART AND BIGGAR ; PIASETZKI NENNIGER KVAS LLP ; VOSSIUS AND PARTNER PATENTANWALTE RECHTSANWALTE MBB ; PETERREINS SCHLEY PATENT U RECHTSANWALTE ; PETERREINS FRANK DR ING ; PETERREINS FRANK DR ; PETERREINS SCHLEY PATENT U RECHTSANWALTE PARTG MBB ; PETERREINS FRANK ; DEE IAN MARK ; VOSSIUS AND PARTNER ; PETERREINS SCHLEY ; COEHN MARKUS ; CARVAJAL Y ISABEL ; DE ELZABURU ALBERTO ; PEREZ ELIANA ; LEHMANN MARIA ISABEL ; MARIA ISABEL LEHMANN NOVO ; MARIA ISABEL LEHMANN LEHMANN ; MASUI CHUJI ; ONO SHINJIRO ; SHAMOTO ICHIO ; KOBAYASHI YASUSHI ; TOMITA HIROYUKI ; CHIBA AKIO ; WILSON SONSINI GOODRICH AND ROSATI ; SHAY LAW GROUP LLP ; SHAY GLENN LLP ; VIDAS ARRETT AND STEINKRAUS ; VIDAS ARRETT AND STEINKRAUS PA ; SEAGER TUFTE AND WICKHEM LLC ; VIDAS ARRETT AND STEINKRUS PA ; SEAGER TUFTE AND WICKHEM LLP ; ZLOGAR THOMAS M ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

14) Family number: 57409093 (US2014371779A) © PatBase

Title: CLOT RETRIEVAL DEVICE FOR REMOVING OCCLUSIVE CLOT FROM A BLOOD VESSEL

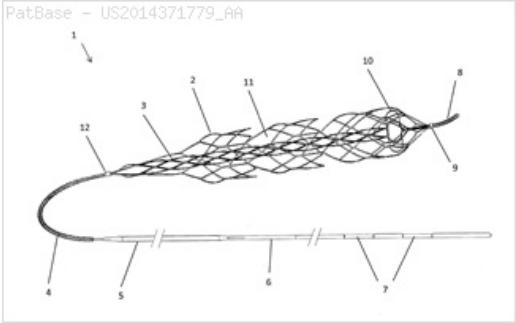
Abstract: A clot retrieval device may include an elongate member and an expandable clot engaging element configured to extend across the clot in its expanded state. The expandable clot engaging element may include a first monolithic structure and a second monolithic structure. The first monolithic structure may encircle the second monolithic structure over at least a portion of its length. The second monolithic structure may include a proximal section, an intermediate section, and a distal section. The distal section may include an expansion.

Classifications:

International (IPC 8-9): A61B17/00 A61B17/12 A61B17/22 A61B17/221 A61B17/3207 A61F2/01 A61F2/82 A61F2/90 A61M25/00 A61M29/00 (Advanced/Invention); A61B17/00 A61B17/22 A61F2/01 (Advanced/Non-invention); A61B17/00 A61F2/00 (Core/Invention)

CPC: A61B2017/2215 A61B17/221 A61B2017/22034 A61B2017/2212 A61B17/12109 A61M29/00 A61B2017/00358 A61B2017/00778 A61F2002/016 A61B17/12118 A61B17/1214 A61F2/013 A61B2017/22038 A61B17/320725 A61B2017/22001 A61B2017/22039 A61B2017/22079 A61B2017/32096 A61B2090/3966 A61F2/82

US: 1/1 606/127 606/159 606/200



Family:

Publication number	Publication date	Application number	Application date
CN105208950 A	20151230	CN201480028407	20140305
CN109157304 A	20190108	CN201810594736	20140305
CN110916743 A	20200327	CN201910870154	20190916
EP2967610 A1	20160120	EP20140708025	20140305
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Priority:

US20130785213P	20130314	CN201480028407	20140305	EP20140708025	20140305
JP20150562023T	20140305	JP20150562023TT	20140305	WO2014EP54251	20140305
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US20190376652	20190405	US20190844502P	20190507	US20190510652	20190712
US20190569637	20190912	US20190569625	20190912	US20190659624	20191022

Probable Assignee: NEURAVI LTD

Assignee(s): (std): NEURAVI LTD

Inventor(s): (std): BRADY EAMON ; BRENDAN CASEY ; CASEY BRENDAN ; DAVID HARDIMAN ; DAVID VALE ; EAMON BRADY ; GILVARRY MICHAEL ; HARDIMAN DAVID ; KEVIN MCARDLE ; MAHMOOD RAZAVI ; MCARDLE KEVIN ; MICHAEL GILVARRY ; RAZAVI MAHMOOD ; VALE DAVID ; MCNAMARA JASON ; GRIFFIN PATRICK ; CLAFFEY MARISIL ; CLAFFEY MAIRSIL

Agent(s): OBRIEN JOHN AUGUSTINE; CARPMAELS AND RANSFORD LLP; SMALL GARY JAMES; IZQUIERDO MARIA ALICIA; YAMAMOTO OSAMU; TAKEUCHI SHIGEO; ONO SHINJIRO; KOBAYASHI YASUSHI; MIYAMAE TORU; NAKANISHI MOTOHARU; FULYA SUEMERALP; BOOKOFF MCANDREWS PLLC; TROUTMAN SANDERS LLP; OBRIEN JOHN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

15) Family number: 75911095 (US2019298396A)

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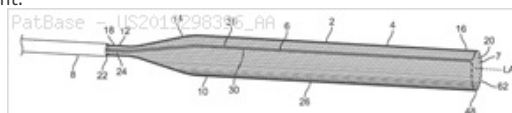
Title: DEVICES AND METHODS FOR REMOVING MATERIAL FROM A PATIENT

Abstract: A containing element is used to capture material in a blood vessel for removal. The containing element is positioned within a constraining catheter while it is advanced through the blood vessel. A filament is coupled to the containing element which assists in opening and/or closing the containing element.

Classifications:

International (IPC 8-9): A61B17/12 A61B17/22 A61B17/221 A61B17/3205 A61M25/00 A61M25/04 (Advanced/Invention)

CPC: A61B17/221 A61B2017/2215 A61B2017/00358 A61B2017/22034



Family:

Publication number	Publication date	Application number	Application date
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Priority:

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Probable Assignee: XTRACT MEDICAL INC

Assignee(s): (std): XTRACT MEDICAL ; XTRACT MEDICAL INC
Inventor(s): (std): SCHALLER MICHAEL ; SAUVAGEAU ERIC ; GAMBA JORGE
Agent(s): POLSINELLI PC; HOEKENDIJK JENS
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

16) Family number: 44232108 (US2010010492A)

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Title: MINIATURE SHREDDING TOOL FOR USE IN MEDICAL APPLICATIONS AND METHODS FOR MAKING

Abstract: The present invention relates generally to the field of micro-scale or millimeter scale devices and to the use of multi-layer multi-material electrochemical fabrication methods for producing such devices with particular embodiments relate to shredding devices and more particularly to shredding devices for use in medical applications. In some embodiments, tissue removal devices are used in procedures to removal spinal tissue and in other embodiments, similar devices are used to remove thrombus from blood vessel.

Classifications:

International (IPC 8-9): A61B10/00 A61B17/00 A61B17/14 A61B17/16 A61B17/22 A61B17/221 A61B17/32 A61B17/3205 A61B17/3207 A61B17/50 A61B17/56 A61B17/58 A61B19/00 A61B90/00 A61M1/00 F16H55/06 F16H55/18 (Advanced/Invention); A61B10/02 A61B17/00 A61B17/22 A61B17/29 A61B17/32 A61B17/3207 A61B19/00 A61B90/00 B33Y80/00 (Advanced/Non-invention);

A61B17/00 A61B17/32 A61B17/58 (Core/Invention)

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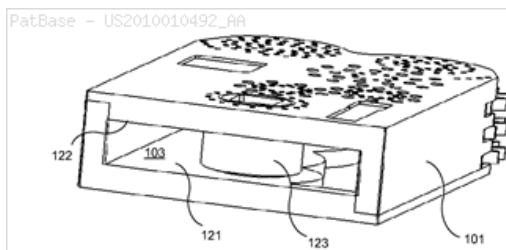
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K61B17/32H2 K61B19/52D

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Family:

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Priority:

US20080075006P 20080623	US20080075007P 20080624	US20090164864P 20090330
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Probable Assignee: CHILDREN S HOSPITAL BOSTON

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Inventor(s): (std): ARGENIO GREGORY B ; CHEN RICHARD T ; CHEN RICHARD T ; COHEN ADAM L ; DEL NIDO PEDRO J ; DUPONT PIERRE E ; FRODIS URI ; FRODIS UR ; LEGUDLEGUD RONALD ; LOCKARD MICHAEL S ; LOCKARD MICHAEL S ; MILLER ERIC C ; MILLER ERIC C ; PEREA JUAN DIEGO ; SCHMITZ GREGORY P ; SCHMITZ GREGORY P ; VASILYEV NIKOLAY V ; VEERAMANI ARUN S ; VEERAMANI ARUN S ; WU MING TING ; WU MING TING ; WU MING T ; VEERAMANI ARUN S ; PEREA JUAN DIEGO ; LOCKHARD MICHAEL S ; LEGUIDLEGUID RONALD ; COHEN ADAM ; ARGENIO GREGORY B

Inventor(s): LEGUIDLEGUID RONALD VAN NUYS ; SCHMITZ GREGORY P VAN NUYS ; WU MING TING VAN NUYS ; PEREA JUAN DIEGO VAN NUYS ; ARGENIO GREGORY B VAN NUYS

Agent(s): MEISSNER BOLTE PATENTANWALTE RECHTSANWALTE PARTNERSCHAFT MBB ; DEE IAN MARK ; POTTER CLARKSON LLP ; POTTER CLARKSON ; MICROFABRICA INC ATT DENNIS R SMALLEY ; SHAY GLENN LLP ; DENNIS R ; DOUGLAS C ; SMALLEY DENNIS R ; SMALLEY DENNIS ; LIMBACH DOUGLAS C ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT HW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

17) Family number: 30114109 (US2001044598A)

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Title: APPARATUS AND METHODS FOR REDUCING EMBOLIZATION DURING TREATMENT OF CAROTID ARTERY DISEASE

Abstract: Methods and apparatus are provided for removing emboli during an angioplasty, stenting or surgical procedure comprising a catheter having an occlusion element, an aspiration lumen, and a blood outlet port in communication with the lumen, a guide wire having a balloon, a venous return catheter with a blood inlet port, and tubing that couples the blood outlet port to the blood inlet port. Apparatus is also provided for occluding the external carotid artery to prevent reversal of flow into the internal carotid artery. The pressure differential between the artery and the vein provides reverse flow through the artery, thereby flushing emboli. A blood filter may optionally be included in-line with the tubing to filter emboli from blood reperfused into the patient.

Classifications:

International (IPC 8-9): A61B A61B17/00 A61B17/12 A61B17/22 A61B17/221 A61F2/00 A61F2/01 A61F2/06 A61F2/82 A61F2/84 A61F2/95 A61F2/958 A61M A61M1/00 A61M25/00 A61M25/04 A61M25/06 A61M25/10 A61M25/12 A61M25/14 A61M29/00 A61M29/02 (Advanced/Invention); A61B17/00 A61B17/22 A61B17/34 A61B19/00 A61F2/82 A61F2/958 A61M1/00 A61M25/00 A61M25/04 A61M29/02 (Advanced/Non-invention); A61B17/00 A61B17/12 A61B17/22 A61F2/01 A61F2/06 A61M25/14 A61M29/00 (Core/Invention); A61B17/00 A61B17/22 A61B19/00 A61M1/00 (Core/Non-invention)

International (IPC 1-7): A61B1/00 A61B17/12

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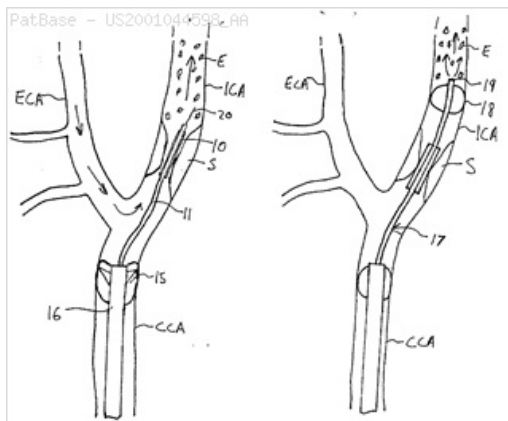
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European: A61B17/12 A61B17/12P A61B17/12P1T2 A61B17/12P4 A61B17/12P5B A61B17/12P7 A61B17/12P7B A61B17/12P7W1 A61B17/22 A61B17/221 A61B17/22E A61F2/01 A61F2/01D A61F2/06S2B A61F2/958 A61M25/00T A61M25/00T10 A61M25/06H A61M25/10 A61M25/10A A61M25/10G A61M25/10P K61B17/00B K61B17/00E1C K61B17/00E3 K61B17/00E3G K61B17/00E3G6P K61B17/00E3S K61B17/00R4 K61B17/00S12 K61B17/00S12P K61B17/221 K61B17/221C K61B17/221P K61B17/22A K61B17/22H2 K61B17/22H7 K61B17/22H7F K61B17/22L K61B17/3207D K61B17/34G4 K61B19/30 K61B19/30F2 K61B19/48H8 K61B217/00Q16 K61B8/06 K61F2/01B K61F2/01D K61M1/00T K61M205/75 K61M25/00A1 K61M25/00R1M6H K61M25/00S2 K61M25/00T10C K61M25/01H K61M25/04 K61M25/06H2 K61M25/10A K61M25/10D K61M25/10D2 K61M25/10G1 K61M25/10G1A K61M25/10G2 K61M25/10P K61M25/10Z10 K61M25/10Z11 K61M25/10Z15 K61M25/10Z17 K61M25/10Z18 K61M25/10Z21 K61M25/10Z22 K61M25/10Z23 K61M25/10Z24 K61M25/10Z4

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Family:

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ES2340559 T3	20100604	ES19990912477T	19990312
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US19980078263	19980305	AR19980001146	19980313	AR1998P101146	19980313
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Probable Assignee: W L GORE AND ASSOCIATES INC

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Inventor(s): (std): BATES MARK C ; BETELIA RAINIER ; BOUCHER RYAN P ; HORZEWSKI MICHAEL J ; HUNG VAN VO ; JUAN CARLOS PARODI ; MARK C BATES ; MICHAEL HOGENDIJK ; OHKI TAKAO ; PARODI JUAN C ; PARODI JUAN CARLOS ; RANIER BETELIA ; TAKAO OHKI ; VO HUNG VAN ; VO HUNG V ; VAN VO HUNG ; HUNG VO VAN ; BETELIA RANIER ; PARODI JUAN ; CARLOS PARODI JUAN ; HOGENDIJK MICHAEL ; OKI TAKAO

Inventor(s): BATES MARK ; HOGENDIJK MICHAEL PALO ALTO ; MICHAEL J HORZEWSKI ; RYAN P BOUCHER ; PARODI JUAN CARLOSAR ; OHKI TAKAOUS ; OHKI TAKAO MEDICAL ARTS PAVILION ; VO HUNG ; OHKI TAKAO NEW YORK ; BOUCHER RYAN P SAN FRANCISCO ; BATES MARK C CHARLESTON

Agent(s): GRIFFITH HACK; CULLENS PATENT AND TRADE MARK ATTORNEYS; CULLENS PTY LTD; SPRUSON AND FERGUSON; GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP; MARKS AND CLERK LUXEMBOURG LLP; SHANKS ANDREW; CARPINTERO MARIO; MARKS AND CLERK; AOKI ATSUSHI; ISHIDA TAKASHI; KOGA TETSUJI; KEVIN J BOLAND ESQUIRE W L GORE AND ASSOCIATES INC; GORE ENTERPRISE HOLDINGS INC; NICOLA A PISANO FISH AND NEAVE; NICOLA A PISANO; LUCE FORWARD HAMILTON AND SCRIPPS; BOLAND KEVIN J; KEVIN J; LUCE FORWARD HAMILTON AND SCRIPPS LLP; PISANO ESQ NICOLA A; NICOLA A; KATHERINE L; PISANO NICOLA A

Designated states: AE AG AL AM AT AU AZ BA BB BE BF BG BJ BR BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DZ EC EE ES FI FR GA GB GD GE GH GM GN GQ GR GW HR HU ID IE IL IN IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MA MC MD MG MK ML MN MR MW MX MZ NE NI NL NO NZ OM PH PL PT RO RU SD SE SG SI SK SL SN SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

18) Family number: 56024119 (US2014260928A)

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Title: METHODS OF USING NON-CYLINDRICAL MANDRELS

Abstract: Methods of forming a structure for treating a vessel include providing a mandrel and braiding a plurality of filaments around the mandrel. The mandrel may include a strand having a longitudinal axis and a plurality of balls coupled to the strand along the longitudinal axis. Pairs of the plurality of balls may be spaced along the longitudinal axis. Braiding the

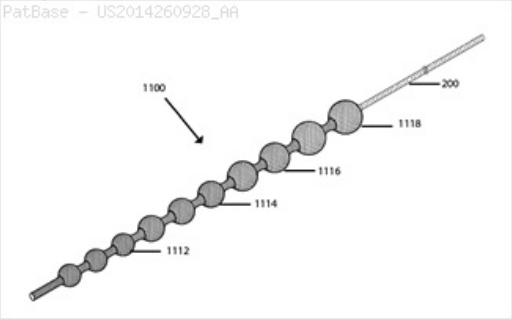
plurality of filaments around the mandrel may include, during braiding, forming a plurality of bulbs around the plurality of balls and forming necks between pairs of the plurality of balls. The methods may include, after braiding the plurality of filaments, heat treating (e.g., shape setting) the plurality of filaments on the mandrel. Portions of the braided plurality of filaments may be secured to the mandrel, for example using bangles, wire, and/or adhesive.

Classifications:

International (IPC 8-9): A61B17/00 A61B17/08 A61B17/12 A61B17/22 A61B17/221 A61B17/3205 A61B17/3207 A61B19/00 A61B90/00 A61F2/00 A61F2/01 A61F2/06 A61F2/07 A61F2/86 A61F2/90 A61M A61M1/00 A61M25/00 A61M25/10 A61M29/00 A61M39/00 B23B47/18 B23K101/04 B23K26/00 B23K26/02 B23K26/06 B23K26/08 B23K26/10 B23K26/14 B23K26/142 B23K26/146 B23K26/16 B23K26/20 B23K26/38 B23K31/02 B23K37/047 B23P11/02 B23P13/04 B26F3/00 C22C1/00 D04C1/00 D04C1/06 D04C1/12 D04C3/40 D04C3/48 E03B7/07 F27B9/06 F27D11/00 (Advanced/Invention); A61B17/00 A61B17/22 A61B19/00 A61B90/00 A61F2/01 A61M25/06 B23K101/04 C22F1/00 D06F75/00 (Advanced/Non-invention); A61M (Subclass/Invention)

CPC: Y10S623/92 Y10S623/921 A61B17/12118 A61B2017/12077 A61B2017/2217 A61B17/320725 Y10T83/0596 Y10T156/1062 A61M25/0021 A61M25/0043 A61M25/0015 A61B2017/00867 A61B2017/00955 A61B2017/22038 D10B2401/046 A61B17/0057 A61B17/12163 A61B2090/061 A61F2/07 A61F2/90 A61F2002/061 A61F2002/823 A61F2250/0023 A61F2210/0014 A61M2025/0681 A61F2002/016 A61B17/12109 A61B17/12113 A61B17/12122 A61B17/12172 A61B17/22 A61B17/22031 A61B17/22032 A61B17/221 A61B17/32056 A61B17/3207 A61B90/39 A61B2017/00526 A61B2017/00575 A61B2017/00592 A61B2017/00606 A61B2017/00641 A61B2017/00778 A61B2017/22001 A61B2017/22002 A61B2017/22034 A61B2017/22035 A61B2017/22067 A61B2090/3966 A61F2/01 A61F2/013 A61F2002/018 A61M1/0031 A61M1/008 A61M25/0023 A61M25/10 A61M29/00 A61M2025/0042 A61M2202/06 A61M2207/10 A61M2210/12 B26F3/004 B23K26/083 B23K26/14 B23K26/142 B23K26/146 B23K26/20 B23K26/38 D04C1/06 D04C3/48 D10B2509/06 D04C1/12 Y10T29/49913 Y10T29/49995 Y10T82/2521 Y10T137/8376 Y10T137/85954 Y10T156/10 B23K26/1435 A61B2017/00137 A61B2017/00181 A61B2017/00199 A61B2217/005 A61F2/011

US: 1/1 110/230 137/560 137/563 148/95 156/148 156/256 156/60 219/121.64 219/121.65 219/121.66 219/121.67 219/121.68 219/121.69 219/121.7 219/121.71 219/121.72 219/121.73 219/121.78 219/121.79 219/121.8 219/121.81 219/121.82 219/121.83 219/121.84 219/385 219/386 219/388 219/391 228/101 228/180.22 228/256 228/262.31 228/262.9 228/47.1 228/5.1 228/57 264/400 269/47 29/508 29/557 306/110 306/114 306/115 306/159 604/523 606/108 606/110 606/114 606/115 606/127 606/128 606/159 606/194 606/200 606/213 623/1.11 623/1.15 623/1.16 623/1.17 623/1.18 623/1.19 623/1.2 623/1.21 623/1.22 623/1.53 623/920 623/921 82/127 83/54 87/11 87/33 87/34 87/8 87/9



Family:

Publication number	Publication date	Application number	Application date
AU2014237360 AA	20150910	AU20140237360	20140310
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CA2901443 AA	20150814	CA20142901443	20140310
CN105228688 A	20160106	CN201480027806	20140310
CN105228688 B	20190219	CN201480027806	20140310
CN109730806 A	20190510	CN201910047118	20140310
EP2968872 A2	20160120	EP20140768577	20140310
EP2968872 A4	20161019	EP20140768577	20140310
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IL240620 A0	20151029	IL20140240620	20140310
JP2016511106 T2	20160414	JP20160501085T	20140310
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Probable Assignee: INSERA THERAPEUTICS INC

Assignee(s): (std): INSERA THERAPEUTICS INC

Assignee(s): JANARDHAN VALLABH ; JANARDHAN VIKRAM ; KNOBBE MARTENS OLSON AND BEAR LLP

Inventor(s): (std): VIKRAM JANARDHAN ; VALLABH JANARDHAN ; JANARDHAN VIKRAM ; JANARDHAN VALLABH

Agent(s): FB RICE; FB RICE PTY LTD; GOWLING LAFLEUR HENDERSON LLP; C6 PATENT GROUP INC OPERATING CARBON PATENT GROUP AS; CREASE DEVANAND JOHN; TACHIBANA KENJI; TANAKA JUNYA; JOYCE A TAN AND PARTNERS LLC; KNOBBE MARTENS OLSON AND BEAR LLP; CHRISTENSEN MICHAEL R

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: DEVICES AND METHODS FOR REMOVAL OF ACUTE BLOCKAGES FROM BLOOD VESSELS

Abstract: A rapid exchange (RX) catheter may provide a proximal seal against a guide catheter inner lumen so that aspiration may be applied through a guide catheter. The catheter may include an exit port that defines a transfer port for aspiration and may enable minimal frictional engagement with the guide catheter proximal to the exit port. Aspiration can be applied to the lumen of the guide catheter and may be directed to and effective at the tip of the RX aspiration catheter. A tip of the RX catheter may facilitate aspiration and retrieval of the clot by expanding under load and can also partially or fully occlude the vessel.

Classifications:

International (ipc 8-9): A61B17/00 A61B17/22 A61B17/22032

A61B17/221 A61M1/00 A61M1/008 A61M25/00 A61M25/06

A61M25/10 A61M29/00 (Advanced/Invention);

A61B17/00 A61B17/34 (Advanced/Non-invention)

International (ipc 1-7): A61B17/22 A61M1/00 A61M25/10

CPC: A61B17/22031 A61B17/29 A61B17/3421 A61B2017/22034

A61M1/0023 A61M25/008 A61M25/0108 A61M29/00

A61B2017/00831 A61B2017/22038 A61M2025/0024 A61M2025/0096

A61M25/0119 A61M2205/32 A61M25/10 A61B2017/22072

A61B2017/22082 A61B2017/2212 A61B2017/00349 A61B2017/00358

A61B2017/00845 A61B2017/320064 A61B2217/005 A61M25/0052

A61M25/0074 A61M25/0662 A61B17/22 A61B17/22032 A61B17/221

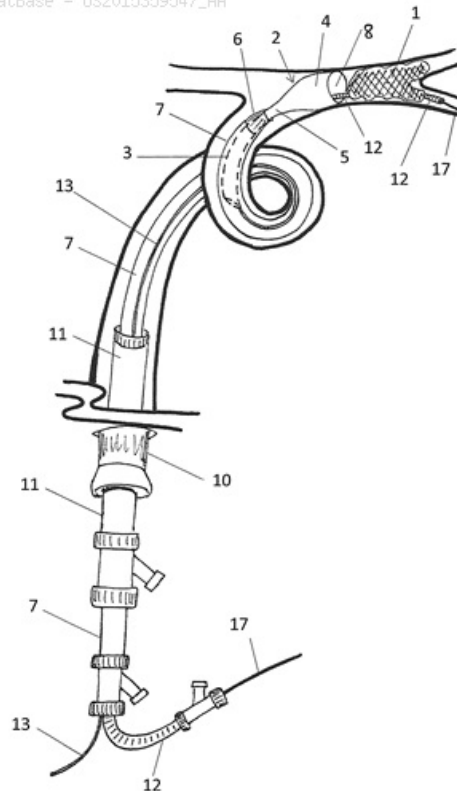
A61B2017/22067 A61B2017/22079 A61B2017/2215 A61B2017/3435

A61B2017/00778 A61B2017/22051 A61M1/0031 A61M1/008

A61M25/0082 A61M2210/12

US: 1/1 606/115 606/200

PatBase - US2015359547_AA



Family:

Publication number	Publication date	Application number	Application date
AU2017254847 AA	20180614	AU20170254847	20171031
BR102017025346 A2	20181030	BR20171025346	20171127
CA2986623 AA	20180528	CA20172986623	20171124
CN108113734 A	20180605	CN201711215349	20171128
EP3154452 A1	20170419	EP20150728524	20150611
EP3335647 A2	20180620	EP20170204015	20171128
EP3335647 A3	20181003	EP20170204015	20171128
IN201714039503 A	20180601	IN201714039503	20171106
JP2017517338 T2	20170629	JP20160572436T	20150611
JP2018086267 A2	20180607	JP20170226601	20171127
JP2020014873 A2	20200130	JP20190174318	20190925
JP2020014874 A2	20200130	JP20190174334	20150611
JP6595513 B2	20191023	JP20160572436T	20150611
KR20180061015 A	20180607	KR20170157382	20171123
US2015359547 AA	20151217	US20150737249	20150611
US2016256180 AA	20160908	US20160158384	20160518
US2017105743 AA	20170420	US20160362377	20161128
US2019328411 AA	20191031	US20190505808	20190709
US10441301 BB	20191015	US20150737249	20150611
US10682152 BB	20200616	US20160158384	20160518
WO15189354 A1	20151217	WO2015EP63104	20150611
WO17097616 A1	20170615	WO2016EP78973	20161128

Priority:

US20140011934P	20140613	US20140080724P	20141117	JP20160572436T	20150611
US20150737249	20150611	WO2015EP63104	20150611	US20150266344P	20151211
US20160158384	20160518	US20160362377	20161128	KR20170157382	20171123
US20190505808	20190709	JP20190174318	20190925	JP20190174334	20190925

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Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KW KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

20) Family number: 71078152 (US2020121335A)

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Title: SYSTEMS, DEVICES, AND METHODS FOR OBSTRUCTION RETRIEVAL AND TREATMENT

Abstract: Systems, devices, and methods for removing and/or treating obstructions in the vascular channels, such as blood clots, are provided. The systems may include a capture sock device including a shaft defining a lumen; and a mouth coupled to the shaft. The mouth includes a distal end portion defining a distal opening and is sized and configured to move between a collapsed configuration and an expanded configuration within a body channel. The mouth is formed of a mesh having porosity large enough to allow blood flow to pass through it but small enough to prevent an obstruction or a fragment of the obstruction from escaping from the mouth back into the body channel. In some embodiments, the mesh is folded to create at least two mesh layers at least at the distal opening to create a smooth atraumatic edge. In some embodiments, the system further includes a trap and/or retriever assembly.

Classifications:

International (IPC 8-9): A61B17/221 A61B34/32 (Advanced/Invention)

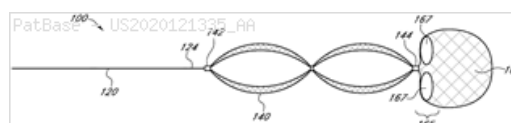
CPC: A61B17/221 A61B17/22022 A61B2017/22079 A61B2017/22094

A61B2017/22034 A61B2017/22084 A61B18/1492 A61B2018/0022

A61B2018/0025 A61B2018/00345 A61B2018/00386 A61B2018/0041

A61B34/32 A61B2017/00867 A61B2017/22038 A61B2017/22061

A61B2090/363 A61B2090/3966



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US2020121335 AA	20200423	US20180490528	20180302
WO18160935 A1	20180907	WO2018US20608	20180302

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US20170466799P 20170303 US20180490528 20180302 WO2018US20608 20180302

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