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Presented for filing is a new continuation patent application of:

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Title: ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION

Enclosed are the following papers, including those required to receive a filing date under 37 CFR 1.53(b):

	Pages
Specification	29
Claims	3
Abstract	1
Declaration	6
Drawing(s)	38

Enclosures:

— Application Data Sheet, 12 pages.
— Power of Attorney, 2 pages.

The applicant claims small entity status under 37 CFR 1.27.

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Total Claims 20	over 20	**0 x $50**	$0
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Enclosures

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ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a Continuation-in-part Application of each of co-pending application Serial No. 13/210,150, filed on August 15, 2011, co-pending application Serial No. 13/210,157, filed on August 15, 2011, co-pending application Serial No. 13/210,162, filed on August 15, 2011, co-pending application Serial No. 13/210,168, filed on August 15, 2011, co-pending application Serial No. 13/741,361, filed on January 14, 2013, each of which is a Continuation Application of application Serial No. 13/084,543, filed on April 11, 2011, now U.S. Patent No. 8,353,913 issued on January 15, 2013, which is a Divisional Application of application Serial No. 11/842,855, filed on August 21, 2007, now U.S. Patent No. 7,942,903 issued on May 17, 2011, and a Continuation Application of application Serial No. 13/108,982, filed on May 16, 2011, which also is a Continuation Application of application Serial No. 11/842,855, filed on August 21, 2007, now U.S. Patent No. 7,942,903 issued on May 17, 2011, which is a Continuation-In-Part Application of application Serial No. 11/536,815, filed on September, 29, 2006, now U.S. Patent No. 7,846,188 issued on December 7, 2010, which is a Continuation-In-Part Application of application Serial No. 11/208,644, filed on August 23, 2005, now U.S. Patent No. 7,704,279 issued on April 27, 2010, for which priority is claimed under 35 U.S.C. §120; and this application also claims priority under 35 U.S.C. § 119(e) of U.S. provisional application No. 61/801,783, filed on March 15,

2013, U.S. provisional application No. 61/718,707, filed on October 25, 2012, and U.S. provisional application No. 60/670,231, filed on April 12, 2005; the entire contents of all the above identified patent applications are hereby incorporated by reference.

[0002] U.S. Patent Application Serial Nos. 13/084,543, filed on April 11, 2011 (Attorney Docket No. 3003/0105PUS2), 11/842,855, filed on August 21, 2007 (Attorney Docket No. 3003/0105PUS1), 11/536,815, filed on September 29, 2006 (Attorney Docket No. 3003/0104PUS2), and 11/208,644, filed on August 23, 2005 (Attorney Docket No. 3003/0104PUS1), each claim the benefit of priority under 35 U.S.C. § 119(e) of U.S. Provisional Application No. 60/670,231, filed on April 12, 2005 (Attorney Docket No. 3003/0102PR01), and this application hereby incorporates the claim of priority to this provisional application under 35 U.S.C. § 119(e) from the aforementioned intermediate applications (for which priority of each intermediate application is claimed under 35 U.S.C. § 120); and the entire contents of all of the above identified patent applications are hereby incorporated by reference in their entirety.

FIELD OF DISCLOSURE

[0003] The present invention relates to unique, universal Zero-Profile Expandable Intervertebral Spacer (ZP-EIS) devices for fusion and distraction throughout the entire spine which can be inserted via anterior, anterolateral, lateral, far lateral or posterior surgical approaches dependent on the need and preference. Multiple ZP-EIS embodiments each with unique mechanisms of calibrated expansion are presented. Two of these embodiments incorporate bi-directional fixating transvertebral (BDFT) screws

and five other embodiments do not incorporate BDFT screws. A universal tool for their intervertebral placement and device expansion is also described.

[0004] The ZP-EIS embodiments with incorporated BDFT screws can be used as stand-alone intervertebral devices. These exemplary embodiments combine the dual functions of intervertebral calibrated expandable distraction, and segmental vertebral body spinal fusion. These embodiments can include bone cavities which can be filled with bone fusion material(s) to promote segmental spinal fusion.

[0005] The calibrated ZP-EIS embodiments without incorporated BDFT screws can also be used as stand-alone devices for calibrated intervertebral expansion and segmental vertebral body fusion. The exemplary devices can include bone cavities which can be filled with bone fusion material. If desirable, the exemplary devices can be supplemented with other forms of screw stabilization.

[0006] The exemplary ZP-EIS embodiments, especially those with incorporated BDFT screws, may obviate the need for supplemental pedicle screw fixation in many situations. The exemplary embodiments allow nuanced, fine-tuned incremental and calibrated distraction of the disc space to allow nerve root decompression in a minimally invasive and safe manner, as well as promoting segmental spinal fusion.

[0007] In the related applications in the Cross-Reference to Related Applications, Applicants first introduced the terminology "zero-profile" relating to spinal fusion devices. Applicants also have described zero-profile non-expandable and expandable stand-alone intervertebral spinal fusion device embodiments with incorporated BDFT screws. As described in greater detail below, exemplary embodiments of advanced ZP-EIS devices with BDFT screws are provided which have an improved contoured body

with tapered edges to more precisely insert into and conform to the biconcave disc space. The present application also provides exemplary embodiments of more advanced ZP-EIS devices without accompanying BDFT screws each with very unique calibrated expandable mechanisms allowing minimally invasive intervertebral expansion, vertebral body distraction and segmental spinal fusion. An exemplary embodiment of a universal tool also is described that can be adapted to implant one or more (e.g., all) of the intervertebral device embodiments herein described into the intervertebral space, and mechanically expand them.

BACKGROUND

[0008] The history and evolution of instrumented spinal fusion in the entire human spine has been reviewed in Applicants' copending applications set forth in the Cross-Reference to Related Applications (for example in U.S. Serial No. 11/536,815, filed on September, 29, 2006, and Serial No. 11/208,644, filed on August 23, 2005). Currently, the majority of spinal fusion techniques are typically supplemented with posterior pedicle screw placement and/or anterior (or lateral) plating. Complications of pedicle screw placement in the spine may include duration of procedure, significant tissue dissection and muscle retraction, misplaced screws with neural and/or vascular injury, excessive blood loss, need for transfusions, prolonged recovery, incomplete return to work, and excess rigidity leading to adjacent segmental disease requiring further fusions and re-operations. Recent advances in pedicle screw fixation including minimally invasive and image-guided technology, and the development of flexible rods, imperfectly may address some but not all of these issues.

[0009] Anterior/and or lateral plating because of the plates' elevated profiles can be complicated by esophageal, or major vascular injury. The zero-profile devices described herein with reference to the exemplary embodiments avoid these complications.

[0010] Current non-expandable intervertebral spacers must be manufactured with different heights, and the most appropriate sized spacer is selected for insertion. In these situations, the vertebral bodies are forcefully distracted to allow placement of an imperfectly fitting spacer. These are most often supplemented with pedicle screw and/or or plate fixation.

SUMMARY

[0011] The exemplary embodiments described herein can allow a more precisely tailored complimentary fit between spacer and disc space, allowing the spacer to expand gradually in a calibrated manner, and to incrementally achieve the precise fit and degree of distraction desirable. Thus, the process according to the present invention can be more individualized for every patient and apply less forceful disruption to the intervertebral space thereby improving safety and enhancing effectiveness of the placement of intervertebral spacers. The exemplary embodiments are zero-profile, and thus, do not damage or indent overlying soft tissue or vascular structures further decreasing morbidity.

[0012] Herein described are exemplary embodiments of multiple ZP-EIS devices which combine in a single construct the dual functions of calibrated expandable

intervertebral spacer distraction maintaining disc space height, and simultaneous segmental vertebral body spinal fusion.

[0013] To achieve safe, effective zero-profile and minimally invasive segmental spinal fusion, the exemplary embodiments of the present invention use of novel zero-profile calibrated expandable spacer (ZP-EIS) devices with or without BDFT screws which can be strategically inserted into the intervertebral disc space via anterior, anterio-lateral, lateral, far lateral or posterior surgical approaches.

[0014] In Applicants' applications set forth in the Cross-Reference to Related Applications, exemplary embodiments are directed to expanding intervertebral spacers which incorporated BDFT screws. One of these embodiments includes two sliding triangular bases to house two screws driven in two opposing directions which can be expanded in two simultaneous directions, height and depth, by turning a built-in screw adjuster. This was facilitated by a combined external drill/screw guide/cage expander to further enhance trajectory precision and to simultaneously expand the screw box in height and depth to custom-fit the individual disc space height. Applicants' copending applications set forth in the Cross-Reference to Related Applications further describe an exemplary embodiment of a universal tool and the adaptability of the tool, for example, to exemplary embodiments of sliding boxes, as well as to the exemplary embodiments described herein, including those with and without BDFT screws.

[0015] The evolved zero-profile expandable intervertebral spacer (ZP-EIS) embodiments with incorporated BDFT screws presented herein are more finely tapered and contoured to more easily allow insertion and conformation to the biconcave disc space.

[0016] The exemplary embodiments of ZP-EIS devices without incorporated BDFT screws described herein have the ability to incrementally and uniformly separate and distract the vertebral bodies. Each embodiment has a very unique mechanically designed mechanism of incremental expansion. The devices are all designed with cavities for bone fusion giving the surgeon the option to use these as stand-alone fusion/spacer devices or as supplemental devices if other screw fixation is deemed necessary. These innovations represent a continued evolution of our concept of zero-profile calibrated expandable intervertebral distraction/fusion spacers described in Applicants' applications, for example, as set forth in the Cross-Reference to Related Applications.

[0017] In the exemplary ZP-EIS embodiments with incorporated BDFT screws, a rostral-directed screw is passed through one built-in screw guide of the device which then is inserted and screwed into the superior vertebral body. Next, a caudally directed screw is passed through an adjacent built-in screw guide, which then is inserted and screwed into the inferior vertebral body. One of many novels features of this design is the built-in prescribed angles of the integral screw guides which allow the transvertebral penetration into the vertebral bodies. This is a truly amazing feat accomplished particularly in the posterior or lateral/far lateral lumbar spine considering the small anatomically restricted work zone within which to work, which is very narrowly prescribed by obtuse angulations between screw and intervertebral bone surfaces, and by nerve root, facet joint and pedicle. Applicants' applications set forth in the Cross-Reference to Related Applications included an angled screw driver specifically designed to fit these devices if

a straight screw driver impedes screw placement. Hence, these external tools can provide the means in any circumstance to accomplish precision screw trajectory.

[0018] The exemplary zero-profile embodiments of the present invention can provide enhanced individualized intervertebral conformation, and multiple methods of finely calibrating intervertebral expansion, and vertebral body distraction further reducing morbidity and enabling more minimally invasive surgical methods of vertebral body distraction and segmental fusion compared to Applicants' applications set forth in the Cross-Reference to Related Applications.

[0019] The exemplary embodiments of box casings can include perforations to allow bone packing for fusion. These exemplary devices can prevent subsidence. In an exemplary embodiment, both the inside of the denuded intervertebral space, and the devices can be packed with autologous or allograft bone, BMP, DBX or similar osteoconductive material.

[0020] The zero-profile EIS embodiments, in particular those with incorporated BDFT screws, can provide as strong or stronger segmental fusion as pedicle screws without the complications arising from pedicle screw placement which include screw misplacement with potential nerve and/or vascular injury, violation of healthy facets, possible pedicle destruction, blood loss, and overly rigid fusions. In the case of the posterior Lumbar spine by placing screws across the intervertebral space from vertebral body to vertebral body, engaging anterior and middle spinal columns, and not the vertebral bodies via the transpediclar route, the healthy facet joints, if they exist, are preserved. Because the exemplary techniques accomplish both anterior and middle column fusion, without rigidly fixating the posterior column, the exemplary embodiments

in essence create a flexible fusion. This exemplary devices therefore can provide a flexible fusion device because the preserved posterior facet joints retain their function achieving at least a modicum of mobility and hence a less rigid (i.e. a flexible) fusion.

[0021] The very advantage of transpedicular screws which facilitate a strong solid fusion by rigidly engaging all three spinal columns is the same mechanical mechanism whereby complete inflexibility of all columns is incurred thereby leading to increasing rostral and caudal segmental stress which leads to an increased rate of re-operation.

[0022] Transvertebral fusion also leads to far less muscle retraction, blood loss, and significant reduction in operating room (O.R.) time. Thus, the complication of pedicular screw pull-out and hence high re-operation rate associated with the conventional flexible fusion pedicle screws/rods is obviated.

[0023] Although the exemplary embodiments can be supplemented with transpedicular screws, there would be no absolute need for supplemental pedicle screw fixation with these operative techniques. The expandable spacers without BDFT screws can be supplemented with other screw stabilization if desired.

[0024] Because the exemplary embodiments are zero-profile, these devices also obviate the morbidity involved with profiled anterior or lateral plating. Multi-level fusions can be performed with all of the exemplary embodiments described herein.

[0025] Currently failed anterior lumbar arthroplasties are salvaged by combined anterior and posterior fusions. The exemplary ZP-EIS embodiments with incorporated BDFT screws could be utilized as a one-step salvage operation for failed/extruded anteriorly placed lumbar artificial discs obviating the above salvage procedure which has far greater morbidity.

BRIEF DESCRIPTION OF DRAWINGS

[0026] These and other aspects and features of embodiments of the present invention will be better understood after a reading of the following detailed description, together with the attached drawings, wherein:

[0027] FIGS. 1A-1B illustrate an exemplary embodiment (Embodiment I) of a non-tapered sliding base ZP-EIS device with incorporated BDFT screws in sagittal-oblique (FIG. 1A), and exploded (FIG. 1B) views.

[0028] FIGS. 2A-2D illustrate an exemplary embodiment (Embodiment II) of a tapered sliding base ZP-EIS device with incorporated BDFT screws in closed (FIG. 2A), semi-expanded (FIG. 2B), and fully expanded (FIG. 2C) positions, and in an exploded view (FIG. 2D).

[0029] FIGS. 3A-3D illustrate an exemplary embodiment (Embodiment III) of a scissors jack driven ZP-EIS device without incorporated BDFT screws in closed (FIG. 3A), semi- expanded (FIG. 3B), and fully expanded (FIG.3C) positions, and in exploded view (FIG. 3D).

[0030] FIGS. 4A-4C illustrate an exemplary embodiment (Embodiment IV) of a tapered thread driven ZP-EIS device without incorporated BDFT screws in closed (FIG. 4A), semi-expanded/fully expanded positions (FIG. 4B), and in cross-sectional view (FIG. 4C).

[0031] FIGS. 5A-5D illustrate an exemplary embodiment (Embodiment V) of a dry anchor driven ZP-EIS device without incorporated BDFT screws in closed (FIG. 5A),

semi- expanded (FIG. 5B), and fully expanded (FIG. 5C) positions, and in an exploded view (FIG. 5D).

[0032] FIGS. 6A-6D illustrate an exemplary embodiment (Embodiment VI) of a modified wedge driven ZP-EIS device without incorporated BDFT screws in closed (FIG. 6A), semi-expanded (FIG. 6B), and fully expanded (FIG. 6C) positions, and in an exploded view (FIG. 6D).

[0033] FIGS. 7A-7D illustrate an exemplary embodiment (Embodiment VII) of a worm drive ZP-EIS device without incorporated BDFT screws in closed (FIG. 7A), semi-expanded (FIG. 7B), and fully expanded (FIG. 7C) positions, and in an exploded view (FIG. 7D).

[0034] FIGS. 7C(i) and 7C(ii) illustrate top, perspective views of an intervertebral cage construct according to an exemplary embodiment of the invention.

[0035] FIGS. 7D illustrates a top, perspective, exploded view of a positioning tool/screw guide/box expander according to an exemplary embodiment.

[0036] FIG. 7E illustrates a superior oblique perspective view of the positioning tool/drill guide/box expander component according to an exemplary embodiment.

[0037] FIG. 8A-8C illustrate a positioning tool/screw guide/box expander in oblique perspective (FIG. 8A), lateral (FIG. 8B), and exploded (FIG. 8C) views according to an exemplary embodiment, which is shown coupled to the exemplary non-tapered sliding base ZP-EIS device illustrated in FIGS. 1A-1B.

[0038] FIG. 8D(i) and 8D(ii) illustrate superior oblique perspective views of the positioning tool/drill guide/box expander component, according to an exemplary

embodiment, which may be optionally used for the exemplary embodiments illustrated in FIGS. 1A-1B and 2A-2D.

[0039] FIGS. 8E-8G illustrate sequential steps (I-III: Step I (FIG. 8E), step II (FIG. 8F), and step III (FIG. 8G)) of the positioning tool/screw guide/box expander assembly according to an exemplary embodiment.

[0040] FIGS. 8H-8I illustrate three-dimensional views of positioning tools, according to exemplary embodiments, for impaction and placement of two transvertebral screws, for example, of the exemplary embodiments illustrated in FIGS. 1A-1B and 2A-2D.

[0041] FIGS. 8J-8K illustrate the insertion of expandable Lumbar bi-directional screw box with two BDFT screws into the Lumbar spine in oblique (FIG. 8J) and lateral (FIG. 8K) views.

DETAILED DESCRIPTION OF THE INVENTION

[0042] The present invention now is described more fully hereinafter with reference to the accompanying drawings, in which embodiments of the invention are shown. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein; rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art.

1. THE MEDICAL DEVICE

[0043] Referring now to the drawings, Figures 1A-8K illustrate exemplary embodiments of ZP-EIS devices that can solve the above described problems and others

in the spine by insertion of the ZP-EIS devices into the denuded intervertebral disc space according to the features illustrated in the exemplary embodiments (I-VII).

[0044] FIGS. 1A-1B illustrate three-dimensional views of a ZP-EIS device 100 according to embodiment I, with two BDFT screws 101, 102.

[0045] The expandable ZP-EIS device 100 includes of top and bottom triangular sliding bases 103, 104 (FIGS. 1A-1B). The superior and inferior segments of the height/depth adjusting screw 105 are integrated and connected to the two separate top and bottom triangular bases 103, 104, respectively. By turning this adjusting (rotation) screw 105 back and forth, i.e. clock-wise, and counter clockwise, the sliding rails 106 of the top triangular base 103 (FIGS. 1A-1B) slide up and down the rail inserts 107 on the bottom triangular base 104 (FIGS. 1A-1B). This action will simultaneously alter the intervertebral height and depth of the device 100 allowing individualized custom fitting of the ZPEIS device 100 conforming to the dimensions of the disc space.

[0046] A transvertebral screw 101 penetrates the top base 103, and a transvertebral screw 102 traverses the bottom base 104 of the screw box (device 100). The two screws 101, 102 traverse the screw box 100 in opposing directions, bi-directionally. The external edges of the triangular bases 103, 104 in contact with vertebral body surfaces can include ridges 107, which facilitates the ZP-EIS device 100 incorporation into and fusion with the superior and inferior vertebral bodies (FIGS. 1A-1B). Both top and bottom ZP-EIS bases 103, 104 can be perforated with holes 108 to allow bone placement for fusion. In an exemplary embodiment, the entire construct, furthermore, can be hollow to allow filling with bone filling material. Hence, the

exemplary device functions as both an intervertebral bone fusion spacer and bi-directional transvertebral screw fusion device.

[0047] FIGS. 2A-D illustrate a ZP-EIS device 200 according to exemplary embodiment II. This exemplary device 200 incorporates BDFT screws and employs a fusion wedge mechanism of expansion.

[0048] The device 200 includes a contoured top 208 and bottom 206 housing which have tapered edges and are coupled to each other by a diagonal dovetail interface 204 which constrains the components 208, 206 to translate linearly relative to each other. The linear translation causes a vertical separation of the top 208 and bottom 206 housing surfaces which are parallel to each other. The position is secured and adjusted by a threaded rotation screw 220 coupled to a nut 224 and a retaining ring 222 and passed through the top 208 and bottom 206 housing pieces. As the threaded rotation screw 220 is rotated further into the nut 224, the housing pieces 208, 206 expand vertically.

[0049] By turning this adjusting (rotation) screw 220 back and forth i.e. clock-wise, and counter clockwise, the sliding rails 210 of the top housing piece 208 slide up and down the rail inserts 212 on the bottom housing piece 206. This action will simultaneously alter the intervertebral height and depth of the device 200 allowing individualized custom fitting of the ZP-EIS conforming to the dimensions of the disc space. A transvertebral screw 101 penetrates the top housing piece 208, and a transvertebral screw 102 traverses the bottom housing piece 206 of the device 200. The two screws 101, 102 traverse the device 200 in opposing directions, bi-directionally. The external edges of the housing pieces in contact with vertebral body surfaces include ridges 216. This facilitates the ZP-EIS device 200 incorporation into and fusion with the

superior and inferior vertebral bodies (FIGS. 2A-D). Both top and bottom ZP-EIS housing bases 208, 206 are perforated with holes 214 to allow bone placement for fusion. The entire device 200, furthermore, can be hollow to allow bone filling. Hence, the exemplary device 200 functions as both an intervertebral bone fusion spacer and bi-directional transvertebral screw fusion device.

[0050] The device 200 can include a tapered edge 226 (shown for example in FIGS. 2A-2B), which allows easier introduction and insertion of the device 200 into the disc space.

[0051] FIGS. 3A-3D illustrate a ZP-EIS device 300 according to exemplary embodiment III, which employs a scissor jack expansion mechanism.

[0052] In this embodiment the top 302 and bottom 304 housing are attached by one internal linkage arm 310, and two external linkage arms 308. The device 300 can include indentations 306 on each lateral side close to the top of the device 300 to mate with the prongs of the universal tool (for example, as described in FIGS. 8A-8I) to assist in grasping, inserting and impacting the device 300. A lead screw or rotation screw 314 is mounted in the bottom housing 304 and secured in place with a retaining ring 316. When the lead (rotation) screw 314 is rotated by an external tool (for example, as described in FIGS. 8A-8I), the screw 314 causes the linear displacement of the separation block 318 which is hinged to the internal linkage 310. The horizontal motion of the separation block causes the top 302 and bottom 304 housing pieces to separate vertically. The separation distance depends on the amount of rotation of the lead (rotation) screw 314, and is limited by the freedom of the separation block 318 to move within the bottom housing 304. The exemplary embodiment can include a plurality of pins, such as eight

pins 320, 322, 324, to secure the external linkage arms 308 to the top 302 and bottom 304 housing units and to the separation block 318. The top housing 302 and bottom housing 304 can include one or more cavities 312 for bone incorporation/fusion.

[0053] FIGS. 4A-4C illustrate a ZP-EIS device 400 according to exemplary embodiment IV, which employs a tapered thread mechanism of expansion.

[0054] The exemplary device 400 can include a top housing 402 and bottom housing 404, which can be attached by one or more pins, such as two pins 412, which allow rotation of the top housing 402 and bottom housing 404 relative to each other about the axis of the pins 412. The top housing 402 and/o bottom housing 404 can include indentations 406 on their lateral sides close to the top of the device 400 to mate with the prongs of a tool or universal tool (e.g., prongs 806 in FIGS. 8A-8I) to assist in grasping, inserting and impacting the device 400. The bottom housing 404 can include a mount for the rotation screw 410 (FIG. 4C), which can control the relative angular orientation of the two housing pieces 402, 404. When the screw 410 is rotated by an external tool (e.g. as shown in FIGS. 8A-8I), the screw 410 engages the internal teeth/ridges 414 of the top housing 402 and acts as a wedge to rotate the top housing 402 away from the bottom housing 404. More particularly, the device 400 can include a sloped ridge 414, as exemplary illustrated in FIG. 4C. When the rotating screw 410 advances, the top housing 402 rotates further and further away from the bottom housing 404. The device 400 can include one or more bone cavities in the top housing 402 and bottom housing 404 for bone fusion.

[0055] FIGS. 5A-5D illustrate exemplary embodiments of a ZP-EIS device according to embodiment V, which employs an anchor mechanism of expansion.

[0056] The top housing 502 and bottom housing 504 can be coupled or attached by one or more pins, such as two pins 512, which allow rotation of the top housing 502 and bottom housing 504 relative to each other about the axis of the pins 512. The top housing 502 and/or the bottom housing 504 can include indentations 506 on their lateral sides close to the top of the device 500 to mate with the prongs of a tool or universal tool (e.g. see FIGS. 8A-8I) to assist in grasping, inserting and impacting the device 500. The bottom housing 504 can include, for example, a mount for the lead (rotation) screw 510, which can control the relative angular orientation of the two housing pieces 502, 504. The lead (rotation) screw 510 can be secured with one or more retaining rings, such as two retaining rings 518. When the screw 510 is rotated by an external tool (not illustrated)(e.g., such as the tool shown in FIGS. 8A-8I), the screw 510 causes lateral motion of a translation nut 516, which is attached to two linkage bars 514 to a second nut 516 fixed to the bottom housing. A plurality of pins, such as six pins 512, can secure the linkage bars or arms 514 to each other and to translation nuts 516. When the translation nuts 516 move, the linkage bars or arms 514 extend outside of the bottom housing 504, pushing against the top housing 502. Alternatively, in other embodiments, the linkage bars or arms 514 can be replaced by a solid material such as spring steel which can bend to produce the same effect. The device 500 can include one or more bone cavities that can be incorporated into the top housing 502 and the bottom housing 504 for bone fusion.

[0057] FIGS. 6A-6D illustrate exemplary embodiments of a ZP-EIS device 600 according to embodiment VI which employs a modified wedge expansion mechanism.

[0058] The device 600 includes a top housing 602 and a bottom housing 604 that can be attached or coupled by one or more pins, such as two pins 612, which allow

rotation of the top housing 602 and the bottom housing 604 relative to each other about the axis of the pins 612. The top housing 602 and/or the bottom housing 604 can include indentations 606 on their lateral sides close to the top of the device 600 to mate with the prongs of a tool, such as prongs 806 of the universal tool shown in FIGS. 8A-8I, to assist in grasping, inserting and impacting the device 600. The bottom housing 604 can include a mount for the lead (rotation) screw 610, which can control the relative angular orientation of the two housing pieces 602, 604. The lead (rotation) screw 610 can be secured with one or more retaining rings, such as two retaining rings 618. When the screw 610 is rotated by an external tool (e.g., the tool shown in FIGS. 8A-8I), the screw 610 causes lateral motion of a wedge-shaped translation nut 616. The nut 616 engages an inner tapered surface of the top housing 602 and forces the top housing piece 602 to rotate away from the bottom housing 604. The device 600 can include one or more bone cavities 608 incorporated into the top housing 602 and/or bottom housing 604 for bone fusion.

[0059] FIGS. 7A-7D illustrate exemplary embodiments of a ZP-EIS device 700 according to embodiment VII, which employs a worm drive (gear) mechanism.

[0060] According to the invention, the device 700 includes a worm drive design that allows a user to rotate a worm gear/drive 712 with an external tool (FIG. 8) to control the translation of the top housing 702 relative to the bottom housing 704a, 704b. The worm gear drive 712 engages a spur gear mount 714 which has internal threading for engaging a corresponding part, such as a threaded stud of bolt 720, to couple the spur gear mount 714 to the top housing 702. The top housing 702 can include a plurality of pins, such as four pins 712, which extend into the bottom housing 704a, 704b. These

pins 712 prevent the top housing 702 from rotating with the spur gear 714, and constrain the spur gear 714 to translate linearly. The bottom housing 704 can include two halves 704a, 704b to secure the worm drive 710 and spur mount 714 in place. A worm retaining ring and a spur retaining ring 716 also can be used to secure the worm gear drive 710 and the spur gear mount 714. The device 700 can include one or more bone cavities 708 that are incorporated into the top housing 702 and/or bottom housing 704a, 704b for bone fusion. The top housing 702 and/or bottom housing 704a, 704b can include one or more indentations 706 on its lateral sides close to the top of the device 700 to mate with prongs of a tool, such as prongs 806 of the universal tool 800 in FIGS. 8A-8I, to assist in grasping, inserting and impacting the device 700.

[0061] FIGS. 8A-8C illustrate three-dimensional views of exemplary embodiments of the external drill/screw guide-box expander universal tool 800 which can be used to assist in both screw trajectory and box expansion of an expandible device, such as the exemplary embodiments of devices illustrated in embodiments I and II, and for device expansion of the devices illustrated in embodiments III - VII. The same universal tool 800 can be utilized for all the exemplary embodiments illustrated in embodiments I-VII. In some embodiments, the external drill/screw guide 850 may not be needed or used for embodiments II-VII. The prongs 806 can be inserted into the indentations (e.g., 202, 306, 406, 506, 606, 706) of the sides of the devices (e.g., 100, 200, 300, 400, 500, 600, 700) according to one or all of the exemplary embodiments illustrated in embodiments I-VII, and implant the device into the intervertebral space. Once implanted and impacted, an Allen key (e.g., as shown in FIG. 8) can be used to

expand the device (e.g., 100, 200, 300, 400, 500, 600, 700) by turning the adjustment (rotation) screw (e.g., 105, 220, 314, 410, 510, 610, 710).

[0062] The exemplary tool can include, among other things, an Allen key 801, a spring 802, a handle 803, a griper 804 and a screw guide 805. The Allen key 801, when inserted in the insertion 814 and turned, can turn the rotation screws (e.g., 105, 220, 314, 410, 510, 610, 710) of one or all of the exemplary embodiments I-VII. The griper 804 includes griper prongs 806, which insert into grooves 509 of the screw guide 805 and the screw box indentations (e.g., 202) in the exemplary embodiment illustrated in embodiment I (as shown in FIGS 8A-8D), as well as in similar indentations (e.g., 306, 406, 506, 606, 706) of devices (e.g., 100, 200, 300, 400, 500, 600, 700) illustrated in embodiments II-VII (not shown).

[0063] As shown in FIG. 8C, each longitudinal end of the screw box 100 can include a slot or indentation 108 formed adjacent to an edge of an upper surface of the screw box 100 for engaging a protuberant extension of a tool, such as the protuberant extension 807 of the tool 800.

[0064] FIG. 8D illustrates a superior oblique view of the screw guide 805 demonstrating insertions 809 for griper prong 086, built-in trajectory guides 811, 812 for insertion of screws 101 and 102, and the Allen key 801. This exemplary embodiment can be limited, for example, to use with the devices of embodiments I and II, which includes BDFT screws.

[0065] FIGS. 8E-8G illustrate three-dimensional views of the sequential steps necessary for the external guide assembly. FIG. 8E illustrates the insertion of the Allen key 801 into the handle 803. FIG. 5F illustrates the insertion of the handle 803 through

the spring 802 and griper 804. FIG. 8G illustrates insertion of the griper 804 into the screw guide 805. The griper prongs 806 can include medially oriented male protuberant extensions 807 that engage the slot or indentation of a device, such as indentation 108 of device 100, thereby perfectly aligning the prongs 805 of the tool 800 with the device (e.g., 100, 200, 300, 400, 500, 600, 700). This exemplary embodiment can be limited, for example, to use with the devices of embodiments I and II.

[0066] FIG. 8H illustrates a three-dimensional view of another exemplary embodiment of a positioning tool 800 for impaction and placement of two transvertebral screws 201, 202 for example, for use with the exemplary embodiments I and II.

[0067] With reference again to FIGS. 8A-8K, the screw guide 805 can include insertions 809 for receiving the griper prong 806, built-in trajectory guides 811, 812 for insertion of screws 101 and 102, and the Allen key 801.

[0068] The driver assembly 850 can include a screw driver 851, a flexible shaft 852 and a square recess bit 853. This exemplary device can facilitate turning the screws 101, 102 into the bone. The flexible shaft 852 can facilitate the avoidance of spinous processes which might hinder the screw driving if the shaft 852 were straight. The positioning tool 800 can have a rectangular handle, as shown for example in Embodiment I, or a circular handle, as exemplary shown in Embodiment II. This exemplary embodiment can serve to position a screw box within the intervertebral space, and screws 101, 102 within the screw box or device. Once positioned, the screw box or device (e.g., 100, 200, 300, 400, 500, 600, 700) can be impacted by tapping the handle 803 with a mallet (not shown). The griper handle 803 inserts into the screw guide and the screw box or device (e.g., 100, 200, 300, 400, 500, 600, 700), which maintains alignment.

2. THE SURGICAL METHOD

[0069] Exemplary embodiments of a surgical method for utilizing the exemplary devices described herein, will now be described. The procedures can be performed open, microscopic, closed tubular or endoscopic. Fluoroscopic guidance can be used with any of these procedures.

[0070] An exemplary embodiment of a ZP-EIS device, as illustrated in embodiments (I-VII), can be inserted into the intervertebral space (for example as shown in FIGS. 8J and 8K) after an adequate discectomy is performed in any disc space throughout the entire spine upon their exposure anteriorly, anterio-laterally, laterally, far laterally or posteriorly.

[0071] For exemplary embodiments I-II of the ZP-EIS devices can be inserted into the disc space by a tool or universal tool, such as the universal tool 800 in FIGS. 8A-8I. In operation, the grab prongs of tool 800 can attach to the insets or indentations (e.g., 202, 306, 406, 506, 606, 706) on the side of the devices. Once in the disc space, the rotation screw (e.g., 105, 220, 314, 410, 510, 610, 710) of each embodiment is turned by rotating the Allen key 801 of the tool 800 to expand the device (e.g., 100, 200, 300, 400, 500, 600, 700) to the desirable disc height achieving the desirable intervertebral distraction deemed necessary for the individual patient and disc space. Once this is achieved, BDFT screws 101, 102 are inserted and screwed into the vertebral body above and below securing the device (e.g., 100, 200, 300, 400, 500, 600, 700) to the vertebral bodies with screws 101, 102. Prior to implantation of the device (e.g., 100, 200, 300, 400,

500, 600, 700), the bone cavities of each device can be filled with any type of bone fusion material.

[0072] For the exemplary embodiments III-VII, the ZP-EIS device (e.g., 100, 200, 300, 400, 500, 600, 700) can be inserted into the disc space by the same universal tool, such as tool 800. The grabs prongs 806 of the tool 800 attach to the insets or indentations (e.g., 202, 306, 406, 506, 606, 706) on the side of the devices (e.g., 100, 200, 300, 400, 500, 600, 700) on the side of the devices (e.g., 100, 200, 300, 400, 500, 600, 700). Once in the disc space, the rotation screw (e.g., 105, 220, 314, 410, 510, 610, 710) is turned by rotating the Allen key 801 of the tool 800 expanding the device (e.g., 100, 200, 300, 400, 500, 600, 700) to the desirable disc height achieving the desirable intervertebral distraction deemed necessary for the individual patient and disc space. Prior to implantation of the device (e.g., 100, 200, 300, 400, 500, 600, 700)the bone cavities of each device (e.g., 100, 200, 300, 400, 500, 600, 700) can be filled with any type of bone fusion material.

[0073] The exemplary embodiments of the present invention may provide effective and safe techniques that overcome the problems associated with current transpedicular and/or plated fusion technology employed for many degenerative stable and unstable spine diseases. These exemplary embodiments may replace much pedicle screw-based and plated based instrumentation in many but not all degenerative spine conditions.

[0074] The speed and simplicity of the surgical implantation of the exemplary embodiments of the ZP-EIS devices far exceeds that of conventional pedicle screw technology. Furthermore, the exemplary embodiments of zero-profile devices can

provide markedly significantly decreased risk of misguided screw placement, and hence decreased risk of neural and vascular injury, and blood loss. The exemplary embodiments can provide decreased recovery and back to work time. The exemplary embodiments of devices may lead to similar if not equal fusion with significantly less morbidity, and hence overall make the exemplary devices a major advance in the evolution of spinal instrumented technology leading to advances in the care of the spinal patient.

[0075] According to the exemplary embodiments, such as the embodiments in embodiments I and II, an intervertebral fusion device is provided that uses a threaded rod mechanism located at the peripheral of the box to control expansion of the device. The device can include a cavity within the walls for placement of bone material for fusion.

[0076] In another embodiment, an intervertebral fusion device can include a threaded rod which can obstruct (inhibit) expansion of the device when it is not being turned. The threaded rod can be disposed at the front anterior part of the box or device.

[0077] In yet another embodiment, an intervertebral fusion device can include a threaded rod, which exerts a clamping force to expand the device until the device properly accommodates the dimensions of the intervertebral disc space and distracts the space based on individual anatomy and surgical judgment. The device can include a cavity for bone in-between the walls of the box.

[0078] In another embodiment, an expandable intervertebral fusion device can includes indentations on its sides to accommodate a placement tool.

[0079] In another embodiment, an expandable intervertebral fusion device can be adjusted by using a threaded rod as a wedge to pivot components within the device. The threaded rod can be accessible from the front anterior of the box or device.

[0080] In another embodiment, an expandable fusion device can include a threaded rod to expand a spacer. The threaded rod can be used as a wedge to mechanically separate the pieces. The threaded rod can be accessible from the front anterior of the box or device.

[0081] In another embodiment, an expandable fusion device can include wedge components which translate relative to each other along a contact. The degree of expansion can be determined by an adjustment rod located at the peripheral of the box or device.

[0082] In another embodiment, an expandable fusion device includes components which are mechanically linked together. The expansion of the device is controlled by the user via an adjustment rod coupled to a mechanical transmission that causes mechanical components within the device to separate. The threaded rod is accessible from the front anterior of the box or device.

[0083] In another embodiment, an expandable fusion device can be provide wherein the position of the device is secured and adjusted by a threaded rod that is mechanically linked to housing pieces. When the threaded rod is rotated, the threaded rod forces the pieces to separate.

[0084] In another embodiment, an intervertebral fusion device is provide wherein the two internal screw guides are in the top housing unit.

[0085] In another embodiment, an intervertebral fusion expansile device is provided wherein the center of the two internal screw guides could be in quadrants I and III or II and IV.

[0086] In another embodiment, an expandable fusion device can be provided that uses a threaded rod (rotation screw) to expand the device using a metal driver as the wedge to mechanically separate the pieces.

[0087] In another embodiment, an expandable fusion device can be adjusted by using a threaded rod (rotation screw) as a wedge to offset the opposing cages.

[0088] In another embodiment, an expandable intervertebral fusion device can be provided wherein its position is secured and adjusted by a threaded rod (rotation screw) coupled to a nut and passed through the top and bottom housing pieces. As the threaded rod is rotated further into the nut, the pieces separate.

[0089] In another embodiment, an expandable intervertebral fusion device can include a tapered edge to allow contoured insertion into the disc space.

[0090] In another embodiment, an intervertebral fusion device can be provided wherein the internal screw guides for screw insertion within the device are diagonal to each other within the xyz plane.

[0091] In another embodiment, an intervertebral fusion device wherein the internal screw guides can be adjacent and somewhat diagonal to each other within the xyz plane.

[0092] In another embodiment, an intervertebral fusion device can be provided wherein the majority each of the 2 screw holes can be in quadrant I and III or II and IV within the xyz plane.

[0093] In another embodiment, an intervertebral fusion device can be provided wherein the screw guides can have approximately the same xy coordinates and have different z coordinates or vice versa.

[0094] In another embodiment, an intervertebral fusion device can be provided wherein the center of the two internal screw guides could be in quadrants I and III or II and IV within the xyz plane.

[0095] In another embodiment, an intervertebral fusion device can be provided wherein one screw guide is in the top housing unit, and another screw guide is in the bottom housing unit.

[0096] In another embodiment, an intervertebral fusion device can be provided that uses a threaded rod (rotation screw) to engage a moveable component which engages a linkage to expand the device.

[0097] In another embodiment, an intervertebral fusion device can be provided that uses a threaded rod (rotation screw) to engage a wedge which engages its attaching linkages to expand the device.

[0098] In another embodiment, an expandable fusion device can be provided that can be adjusted using a threaded rod (rotation screw) coupled to a scissor-jack linkage.

[0099] In another embodiment, an expandable fusion device can be held together with fastener (s). These fasteners constrain the box to one degree of freedom. Part of the mechanism contains a mount for the rotation screw, which can control the movement of the pieces. As the screw is turned, it engages the teeth of the mechanism and acts as a wedge to rotate the pieces away from each other.

[00100] In another embodiment, an expandable fusion device adjusted by using a threaded rod (rotation screw) can be used as a wedge to offset the opposing cage surfaces.

[00101] In another embodiment, an expandable fusion device can be provided that uses a threaded rod (rotation screw) to expand the device using a metal driver as the wedge to mechanically separate the pieces.

[00102] In another embodiment, an expandable fusion device can be provided that can be adjusted by a threaded rod (rotation screw) coupled to a nut which translates to deform an elastomeric material used to force the expansion of the device.

[00103] In another embodiment, an expandable fusion device can be provided that has a threaded rod (rotation screw) that engages a wedge to control the expansion of the device.

[00104] In another embodiment, an expandable fusion device can be provided that can be contained by fasteners and retaining rings.

[00105] In another embodiment, an expandable fusion device can be provided that can be adjusted by a threaded rod (rotation screw) coupled to a wedge that can move the opposing cage surfaces.

[00106] In another embodiment, an expandable fusion device can be provided that uses a worm drive to turn a gear that acts as a wedge to expand the device.

[00107] In another embodiment, an expandable fusion device can be provided that includes fasteners and retaining rings containing and constraining the device pieces.

[00108] In another embodiment, an expandable fusion device can be provided that can be adjusted by a worm gear coupled to an internally threaded spur gear which, upon rotation, linearly advances a threaded component.

[00109] In another embodiment, a tool includes a handle, a gripper cooperating with the handle and having a plurality of prongs, a screw guide held in place the plurality of prongs, for controlling the direction of self-drilling screws that are screwed into the vertebral bodies, and an Allen key which expands expandable intervertebral devices.

[00110] The present invention has been described herein in terms of several preferred embodiments. However, modifications and additions to these embodiments will become apparent to those of ordinary skill in the art upon a reading of the foregoing description. It is intended that all such modifications and additions comprise a part of the present invention to the extent that they fall within the scope of the several claims appended hereto.

We claim:

1. An expandible intervertebral fusion device comprising:

a first movable portion;

a second movable portion; and

a mechanism that moves the first movable portion and the second movable portion with respect to each other to expand a dimension of the expandible intervertebral fusion device.

2. The device of claim 1, wherein the first movable portion slides with respect to the second movable portion.

3. The device of claim 1, wherein the first movable portion pivots with respect to the second movable portion.

4. The device of claim 1, wherein the first movable portion translates linearly away from the second movable portion.

5. The device of claim 1, wherein the first movable portion slides at an angle with respect to the second movable portion.

6. The device of claim 1, wherein mechanism includes a threaded rod mechanism.

7. The device of claim 1, wherein one of the first movable portion and the second movable portion includes a cavity for placement of bone material for fusion.

8. The device of claim 1, wherein one of the first movable portion and the second movable portion includes an indentation to accommodate a component of a placement tool.

9. The device of claim 1, wherein the first movable portion and the second movable portion can be adjusted by using a threaded rod as a wedge to pivot components within the device.

10. The device of claim 1, wherein the first movable portion and the second movable portion can be adjusted using a wedge device.

11. The device of claim 1, wherein the mechanism separates the first movable portion from the second movable portion.

12. The device of claim 1, wherein one of the first movable portion and the second movable portion includes an internal screw guides.

13. The device of claim 1, wherein one of the first movable portion and the second movable portion includes a tapered edge to allow contoured insertion into the disc space.

14. The device of claim 1, wherein the first movable portion and the second movable portion can be adjusted using a threaded rod (rotation screw) coupled to a scissor-jack linkage.

15. The device of claim 1, wherein the first movable portion and the second movable portion can be held together by fasteners.

16. The device of claim 1, wherein mechanism includes a worm drive or a worm gear.

17. The device of claim 1, wherein mechanism includes a worm drive that turns a gear that acts as a wedge to expand the device.

18. The device of claim 1, further comprising fasteners and retaining rings containing and constraining the device pieces.

19. The device of claim 1, wherein mechanism includes a worm drive to turn a gear that acts as a wedge to expand the device.

20. The device of claim 1, wherein the first movable portion and the second movable portion can be adjusted by a worm gear coupled to an internally threaded spur gear which, upon rotation, linearly advances a threaded component.

ABSTRACT

A unique, universal Zero-Profile Expandable Intervertebral Spacer (ZP-EIS) device for fusion and distraction throughout the entire spine is provided which can be inserted via anterior, anterolateral, lateral, far lateral or posterior surgical approaches dependent on the need and preference. Multiple ZP-EIS embodiments each with unique mechanisms of calibrated expansion are provided. Two of these embodiments incorporate bi-directional fixating transvertebral (BDFT) screws and five other embodiments do not incorporate BDFT screws. A tool for implantation into the intervertebral device and calibrated device expansion is also disclosed.

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Electronic Acknowledgement Receipt	
EFS ID:	43566182
Application Number:	17408068
International Application Number:	
Confirmation Number:	4713
Title of Invention:	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
First Named Inventor/Applicant Name:	Ahmnon D. Moskowitz
Customer Number:	26191
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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	POA.pdf	757533 4a0fabe0acd8dfdd828de1be0af8f70efaf10ef7	no	2
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2	Application Data Sheet	ADS.pdf	1257561 c0076aa649ee465835aca76ae63ba70ffbd9405c	no	12
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Application Number	
Filing Date	
First Named Inventor	Ahmnon D. Moskowitz
Title	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
Art Unit	
Examiner Name	
Attorney Docket Number	46440-0020005

SIGNATURE of Applicant or Patent Practitioner

Signature	/Stuart A. Nelson/	Date (Optional)	8/20/2021
Name	Stuart A. Nelson	Registration Number	63,947
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	46440-0020005
	Application Number	
Title of Invention	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	46440-0020005
	Application Number	
Title of Invention	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION	

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	46440-0020005
	Application Number	
Title of Invention	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION	

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Attorney Docket Number	46440-0020005	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	38	**Suggested Figure for Publication (if any)**	

Filing By Reference:

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country i

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	46440-0020005
	Application Number	
Title of Invention	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION	

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	● Customer Number	US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	26191		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim information in the Application Data Sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.
When referring to the current application, please leave the "Application Number" field blank.

Prior Application Status	Pending				Remove
Application Number	Continuity Type		Prior Application Number		Filing or 371(c) Date (YYYY-MM-DD)
	Continuation of		16/587993		2019-09-30
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16/587993	Continuation of	16/025667	2018-07-02	10426633	2019-10-01
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16/025667	Continuation of	15820232	2017-11-21	10016284	2018-07-10
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15820232	Continuation of	14063197	2013-10-25	9848993	2017-12-26
Prior Application Status	Expired				Remove
Application Number	Continuity Type		Prior Application Number		Filing or 371(c) Date (YYYY-MM-DD)
14063197	Claims benefit of provisional		61801783		2013-03-15

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	46440-0020005
	Application Number	
Title of Invention	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION	

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
14063197	Claims benefit of provisional	61718707	2012-10-25

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14063197	Continuation in part of	13210150	2011-08-15	9867719	2018-01-16

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14063197	Continuation in part of	13210157	2011-08-15	9889022	2018-02-13

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14063197	Continuation in part of	13210162	2011-08-15	9895238	2018-02-20

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14063197	Continuation in part of	13210168	2011-08-15	9907674	2018-03-06

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14063197	Continuation in part of	13741361	2013-01-14	9301854	2016-04-05

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13210150	Continuation of	13084543	2011-04-11	8353913	2013-01-15

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13210150	Continuation of	13108982	2011-05-16	9005293	2015-04-14

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13210157	Continuation of	13084543	2011-04-11	8353913	2013-01-15

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13210157	Continuation of	13108982	2011-05-16	9005293	2015-04-14

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	46440-0020005
	Application Number	
Title of Invention	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION	

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13210162	Continuation of	13084543	2011-04-11	8353913	2013-01-15
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13210162	Continuation of	13108982	2011-05-16	9005293	2015-04-14
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13210168	Continuation of	13084543	2011-04-11	8353913	2013-01-15
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13210168	Continuation of	13108982	2011-05-16	9005293	2015-04-14
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13741361	Continuation of	13084543	2011-04-11	8353913	2013-01-15
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13741361	Continuation of	13108982	2011-05-16	9005293	2015-04-14
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13084543	Continuation of	11842855	2007-08-21	7942903	2011-05-17
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13108982	Continuation of	11842855	2007-08-21	7942903	2011-05-17
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
11842855	Continuation in part of	11536815	2006-09-29	7846188	2010-12-07
Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
11536815	Continuation in part of	11208644	2005-08-23	7704279	2010-04-27

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	46440-0020005
	Application Number	
Title of Invention	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION	

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
11208644	Claims benefit of provisional	60670231	2005-04-12
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.			Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

			Remove
Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.			Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	46440-0020005
	Application Number	
Title of Invention	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

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	Application Number	
Title of Invention	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1 — Remove

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

● Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	Moskowitz Family LLC		
Mailing Address Information For Applicant:			
Address 1	212 North Adams Street		
Address 2			
City	Rockville	**State/Province**	MD
Country	US	Postal Code	20850
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button. Add

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

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Title of Invention	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION	

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

Remove

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. Add

Signature:

Remove

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Stuart A. Nelson/			Date (YYYY-MM-DD)	2021-08-20
First Name	Stuart A.	Last Name	Nelson	Registration Number	63,947

Additional Signature may be generated within this form by selecting the Add button. Add

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This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent CooperationTreaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

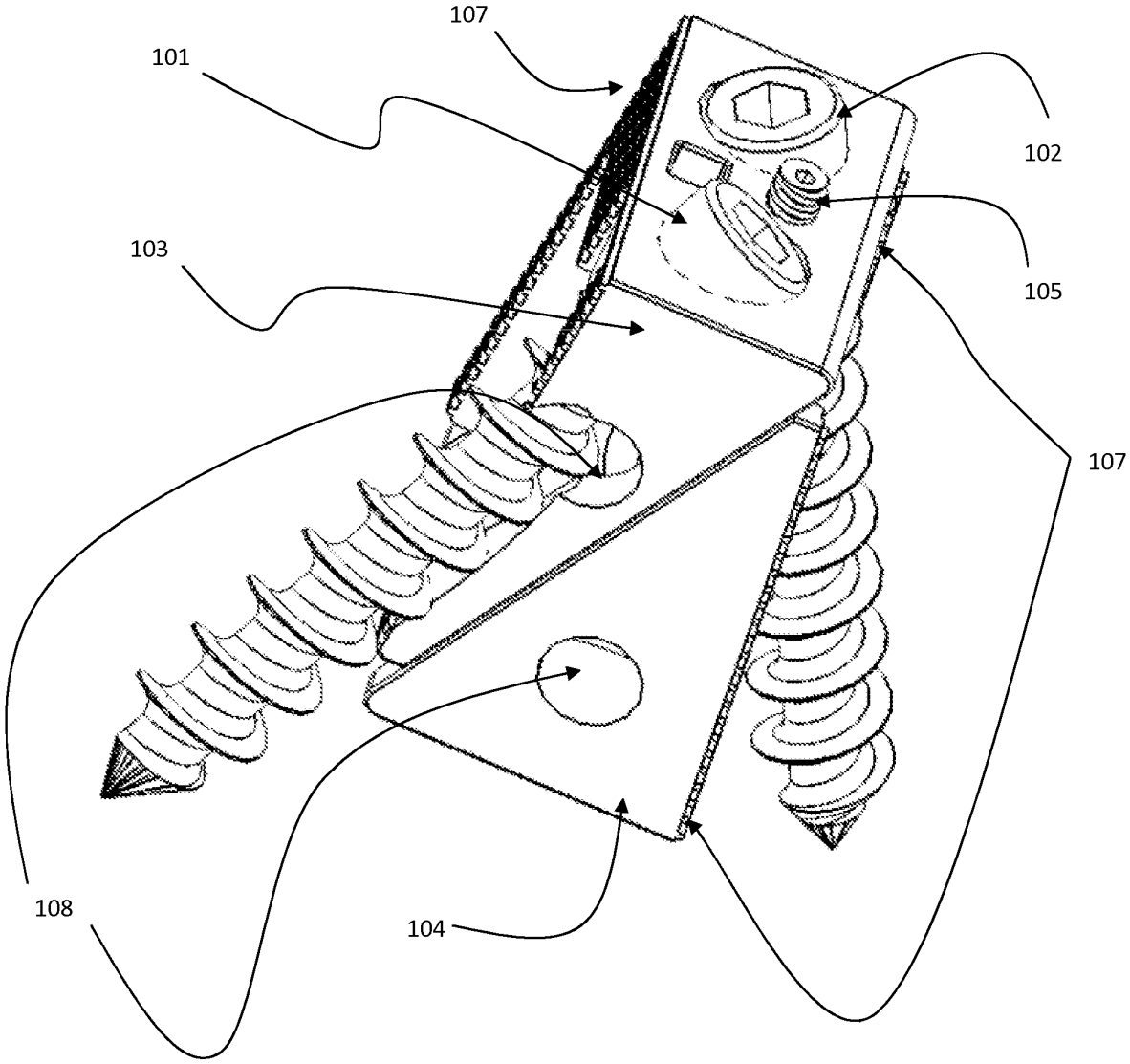


Fig. 1A

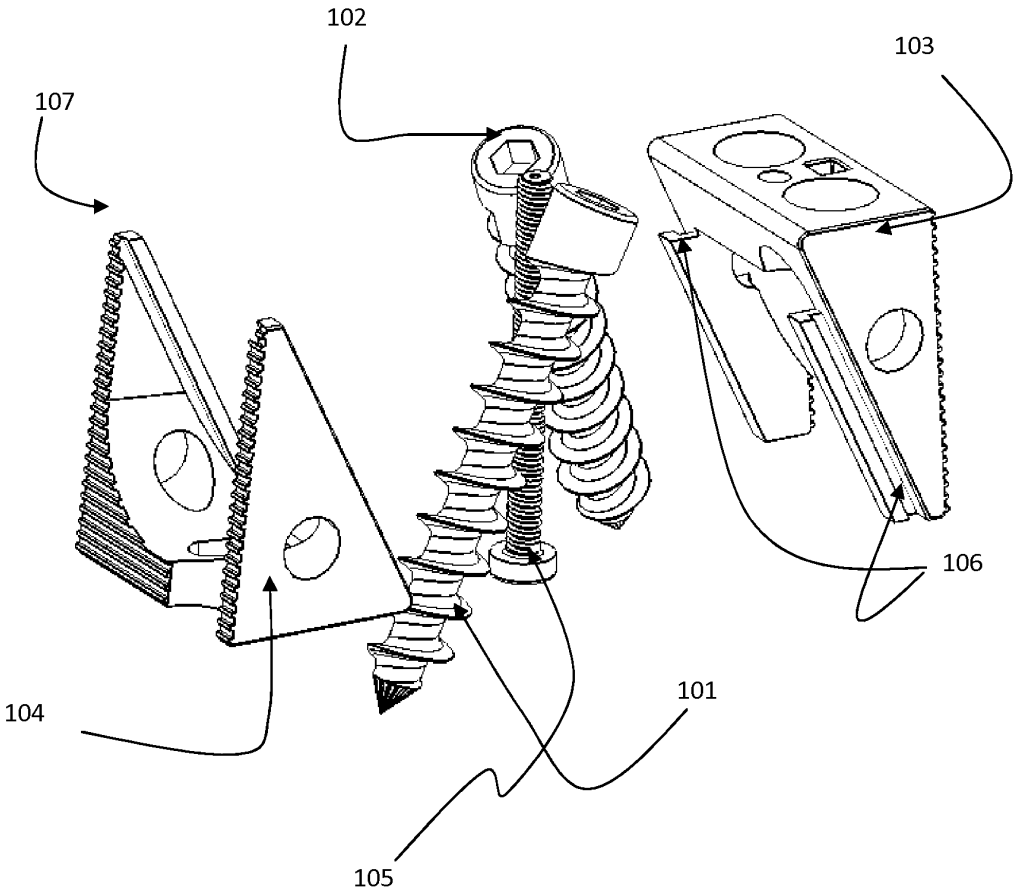


Fig. 1B

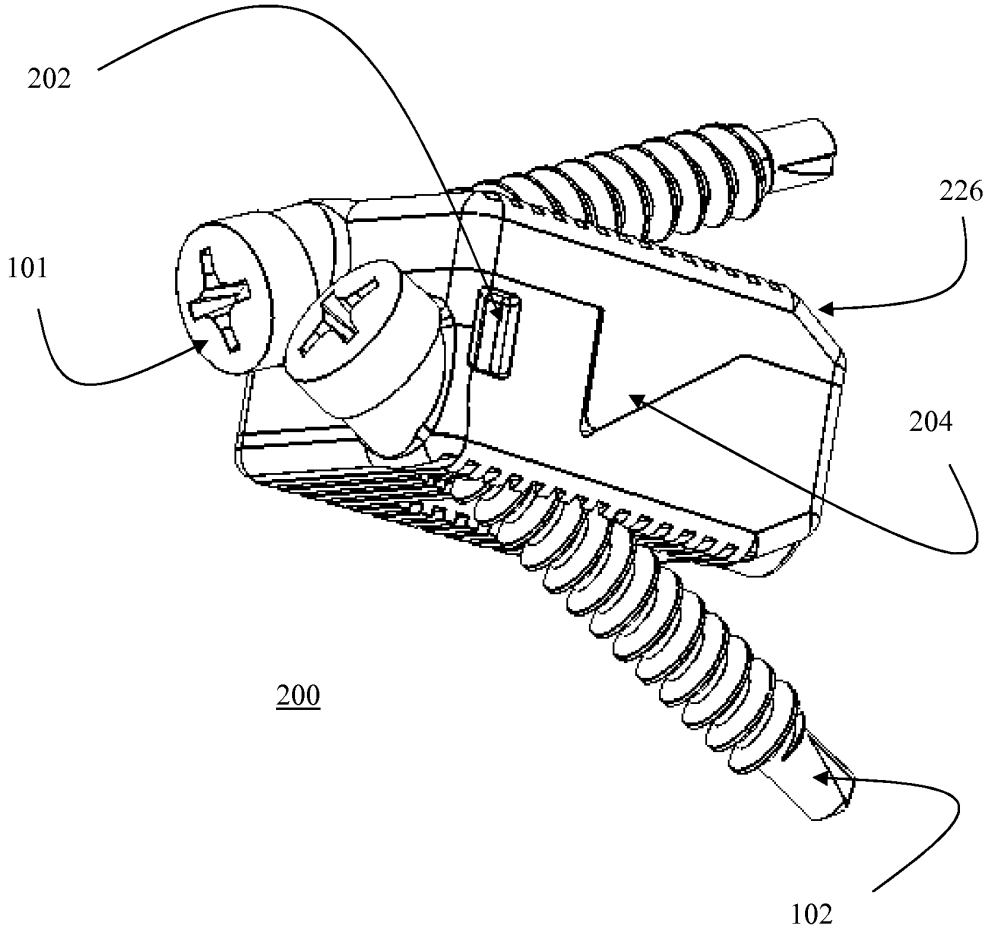


Fig. 2A

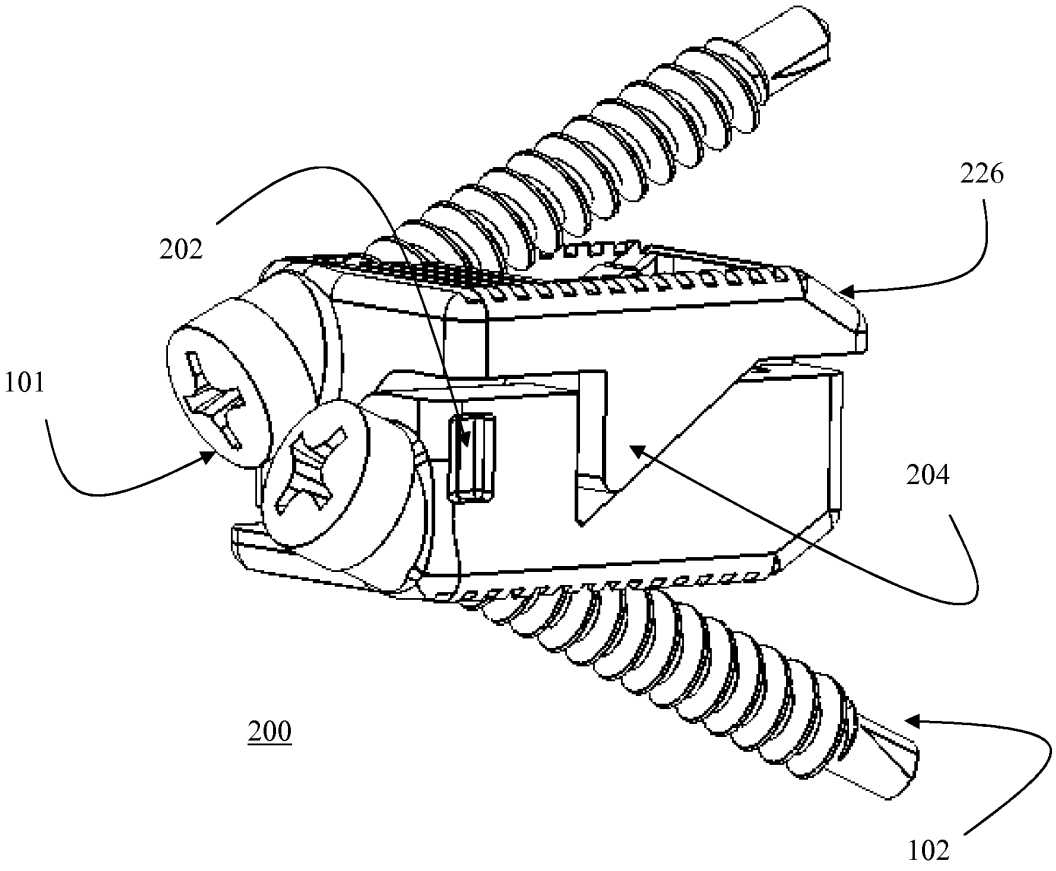


Fig. 2B

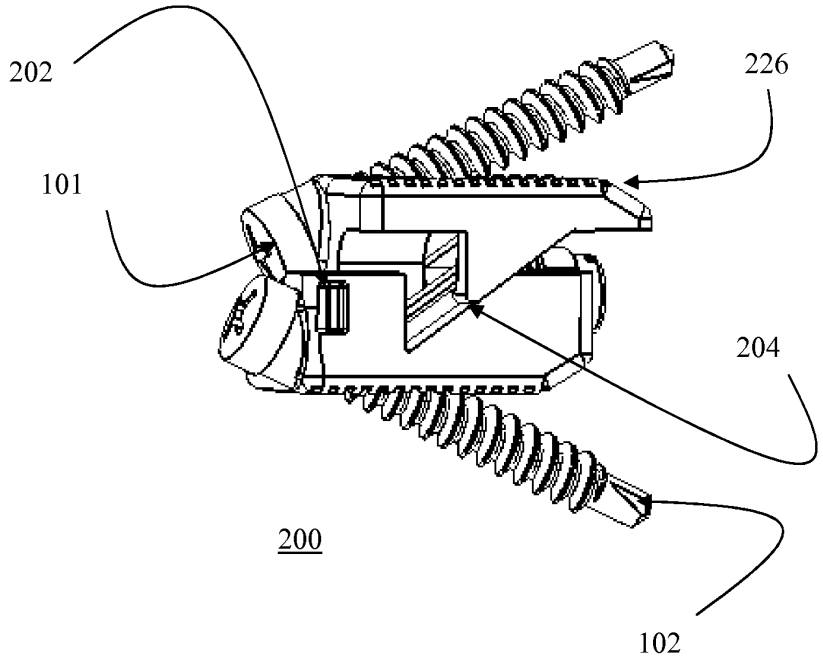


Fig. 2C

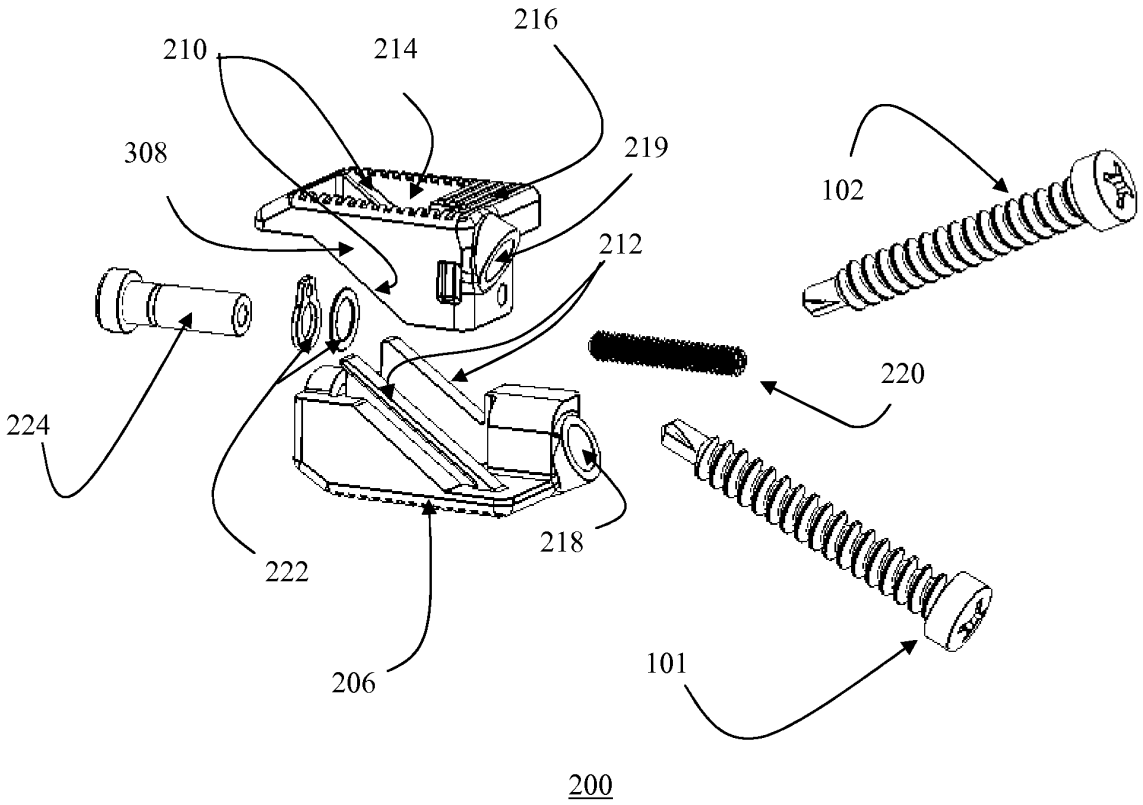


Fig. 2D

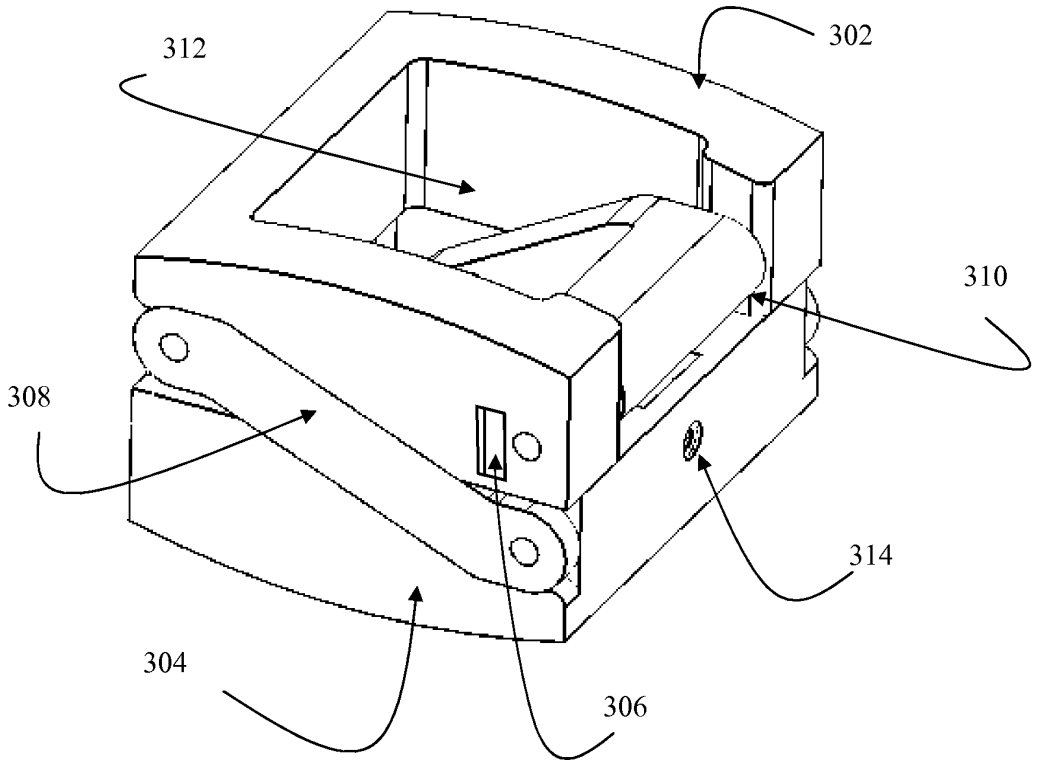


Fig. 3A

300

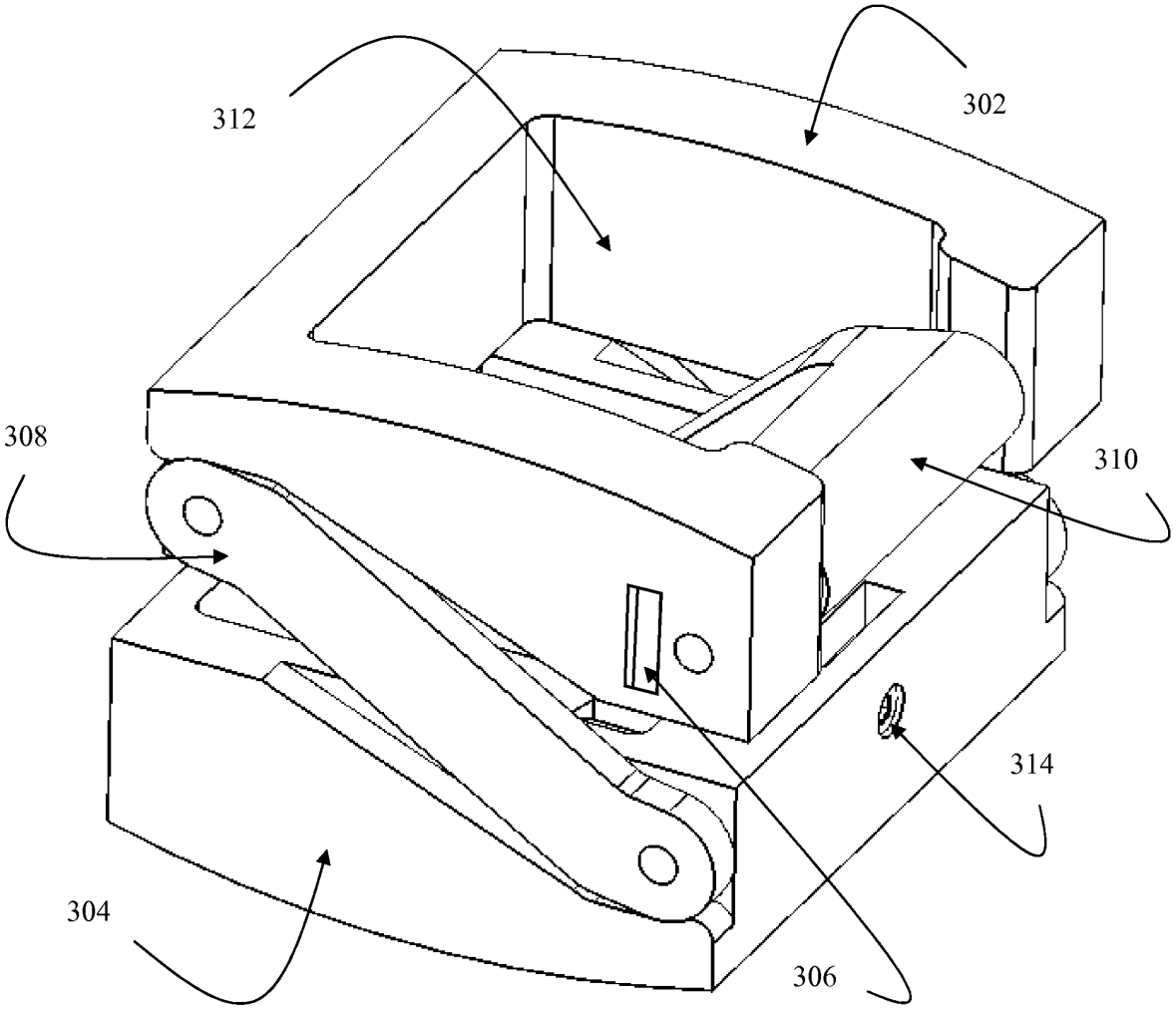


Fig. 3B

300

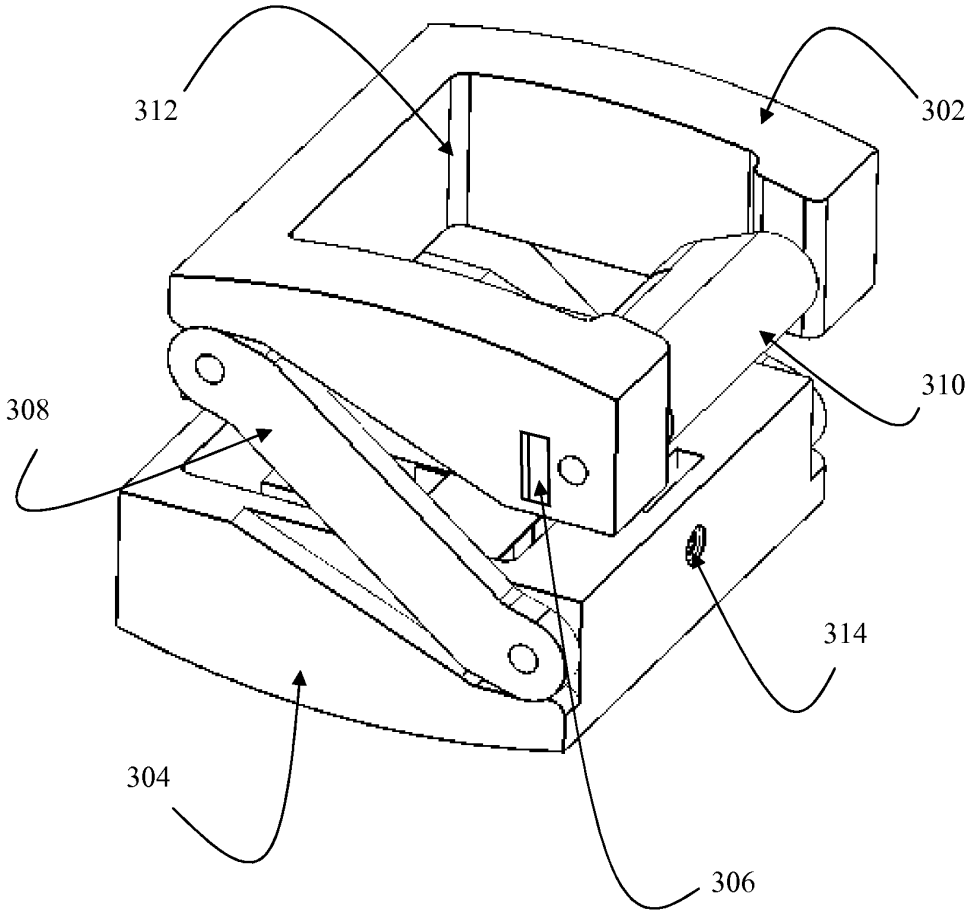


Fig. 3C

400

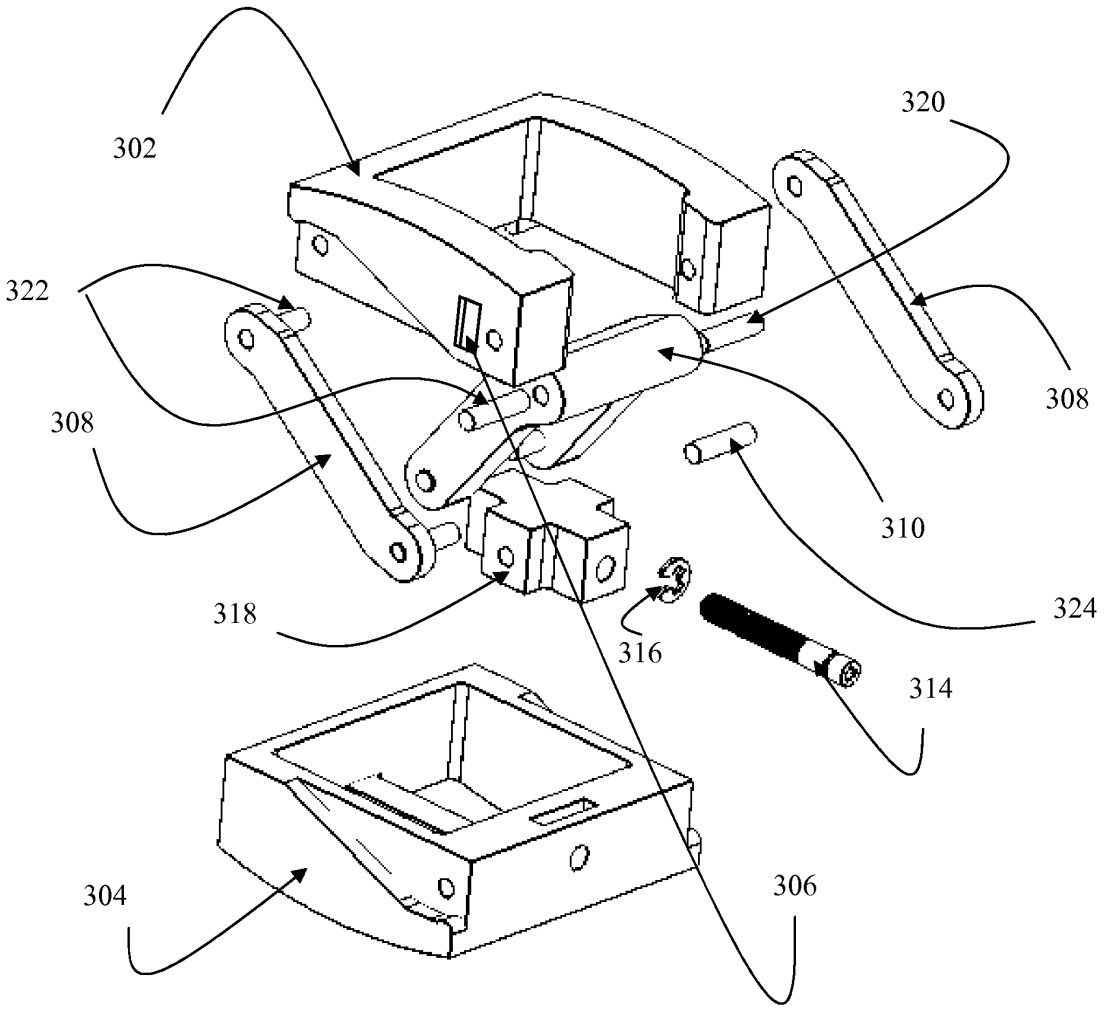


Fig. 3D

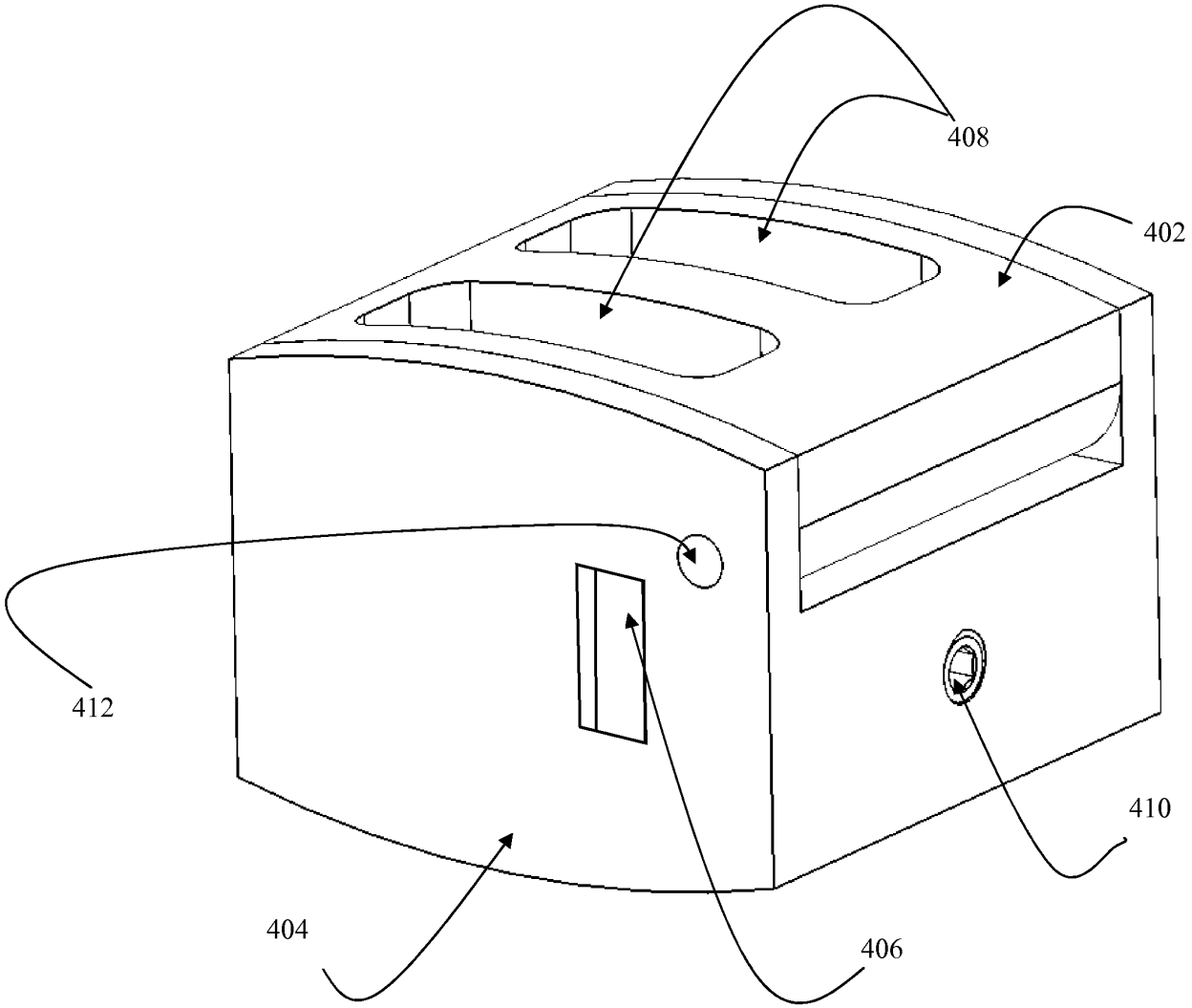


Fig. 4A

400

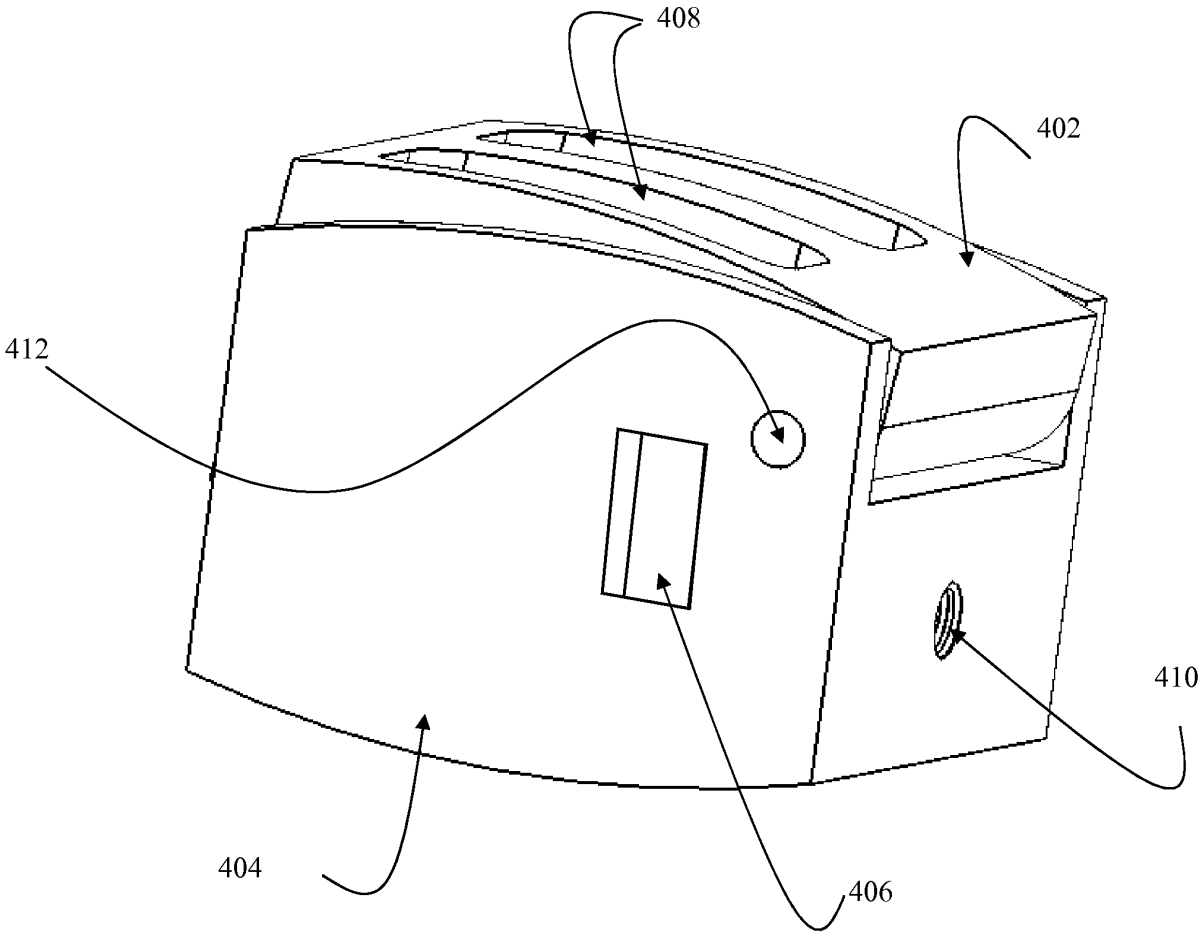


Fig. 4B

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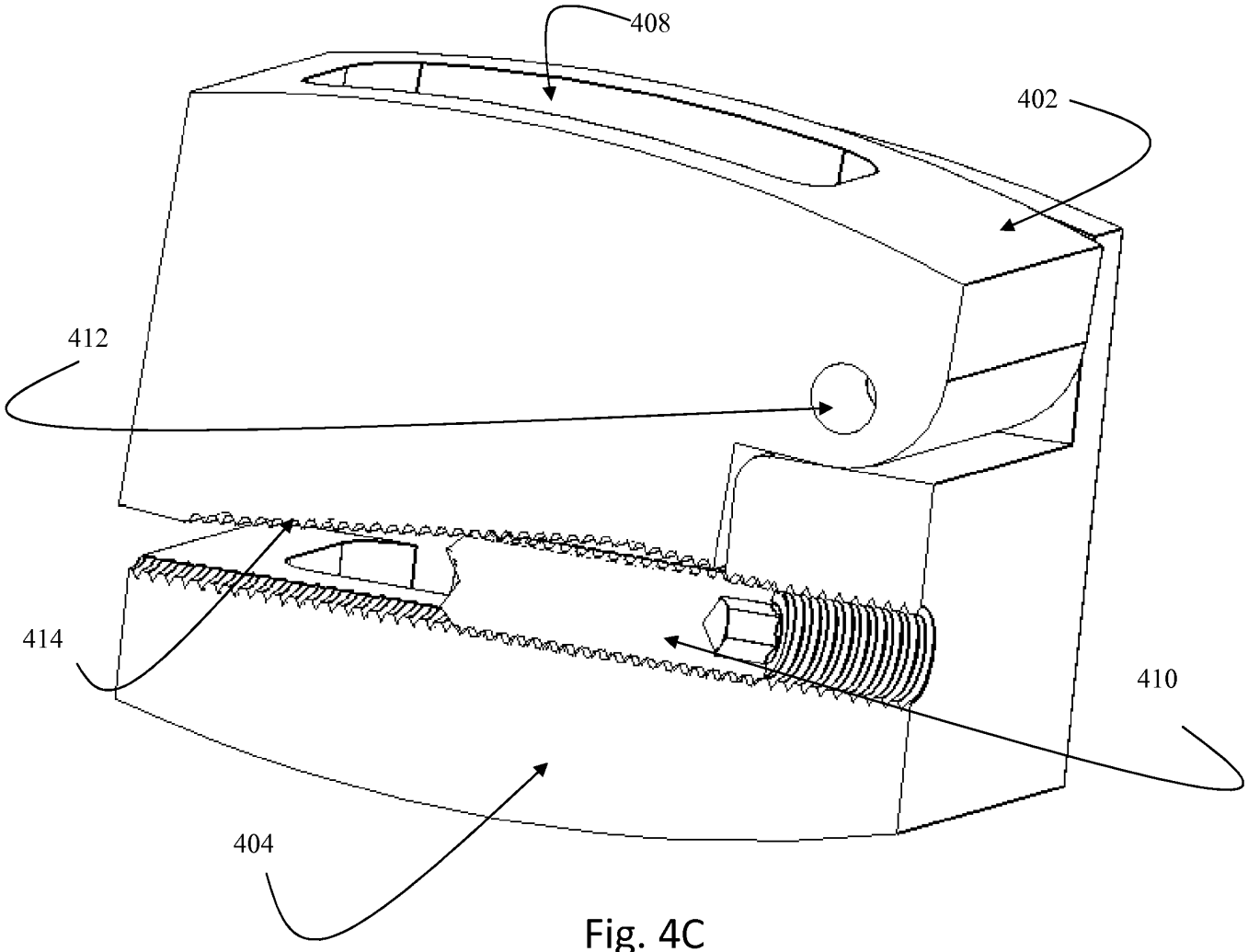


Fig. 4C

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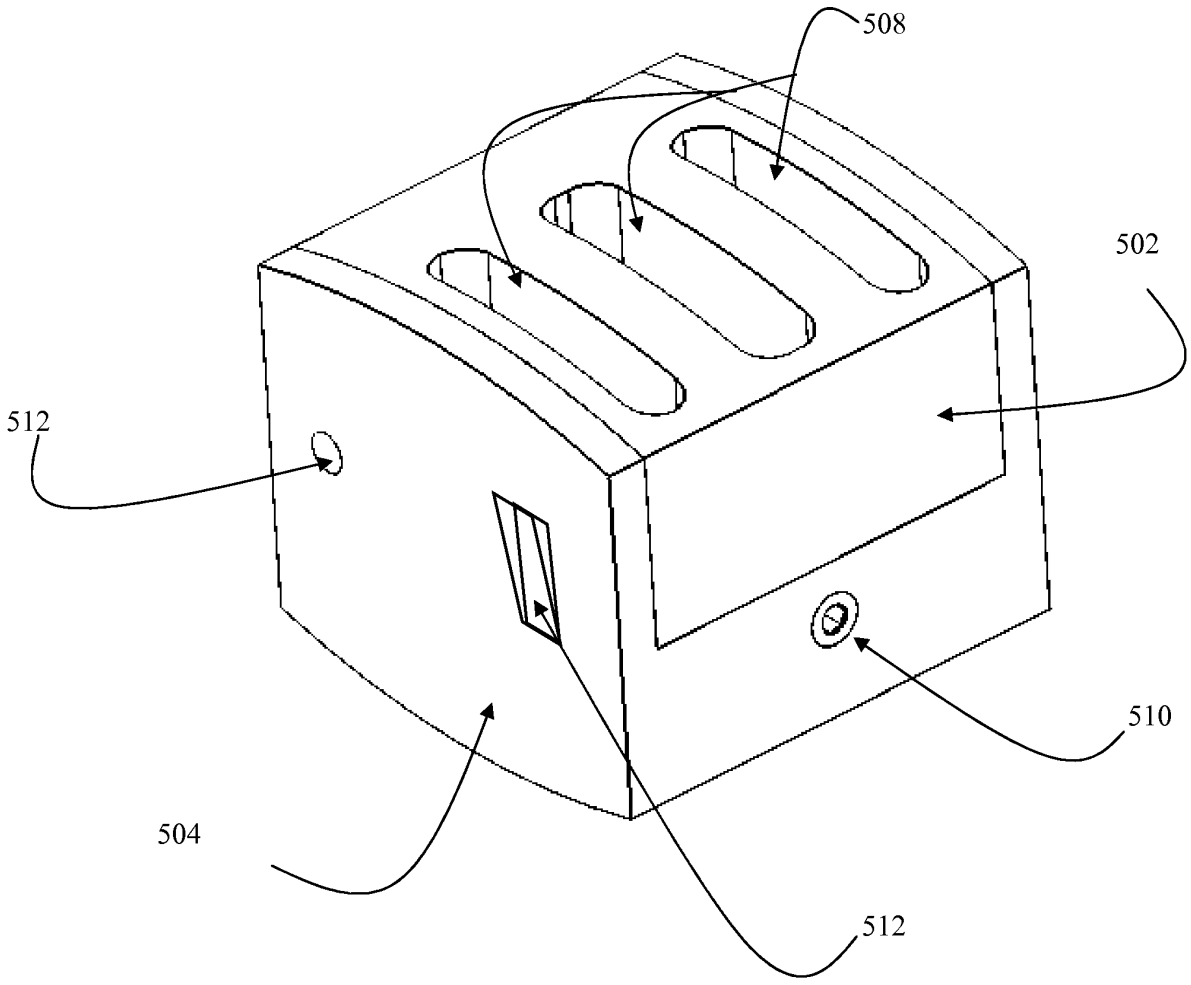


Fig. 5A

500

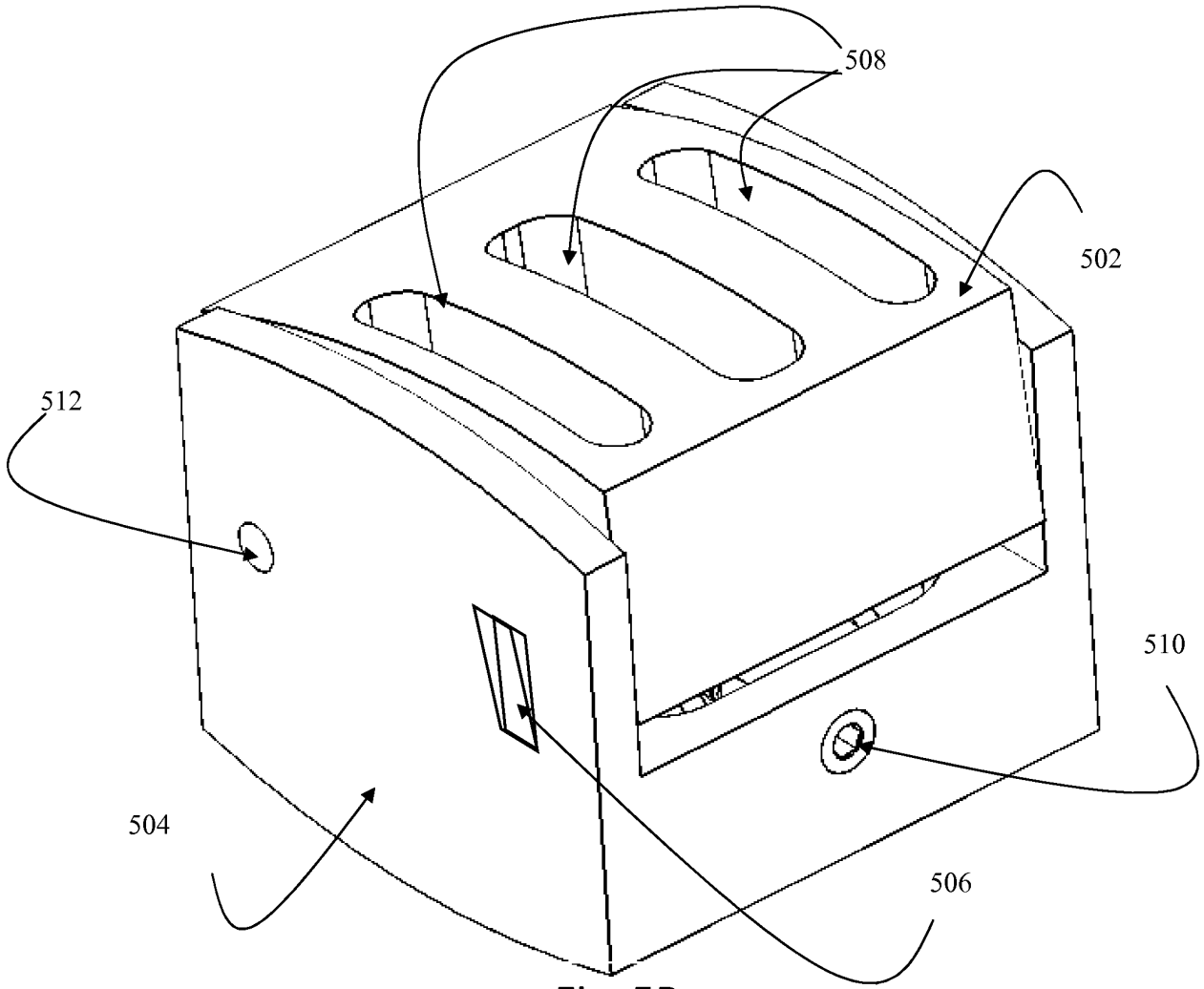


Fig. 5B

500

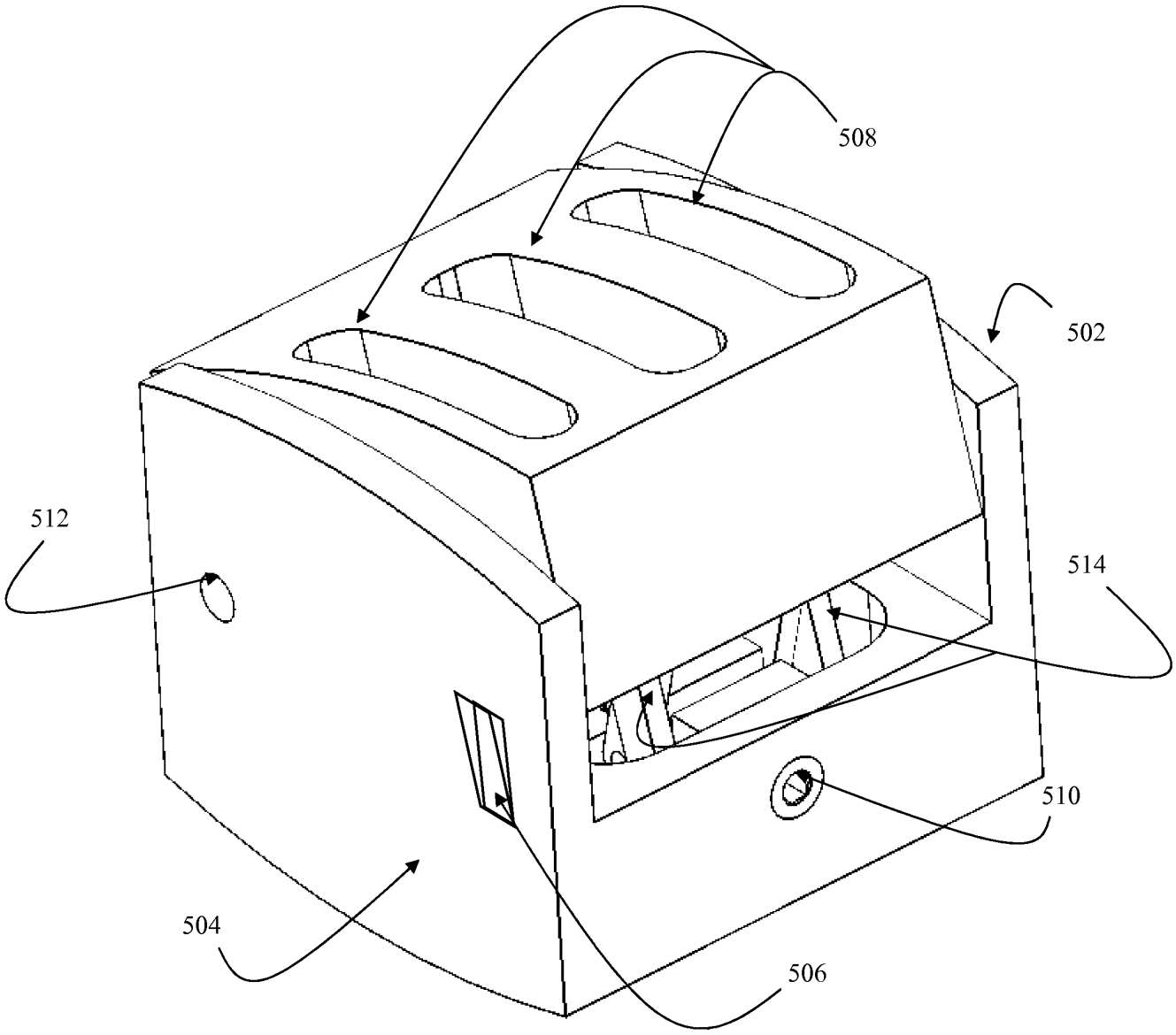


Fig. 5C

500

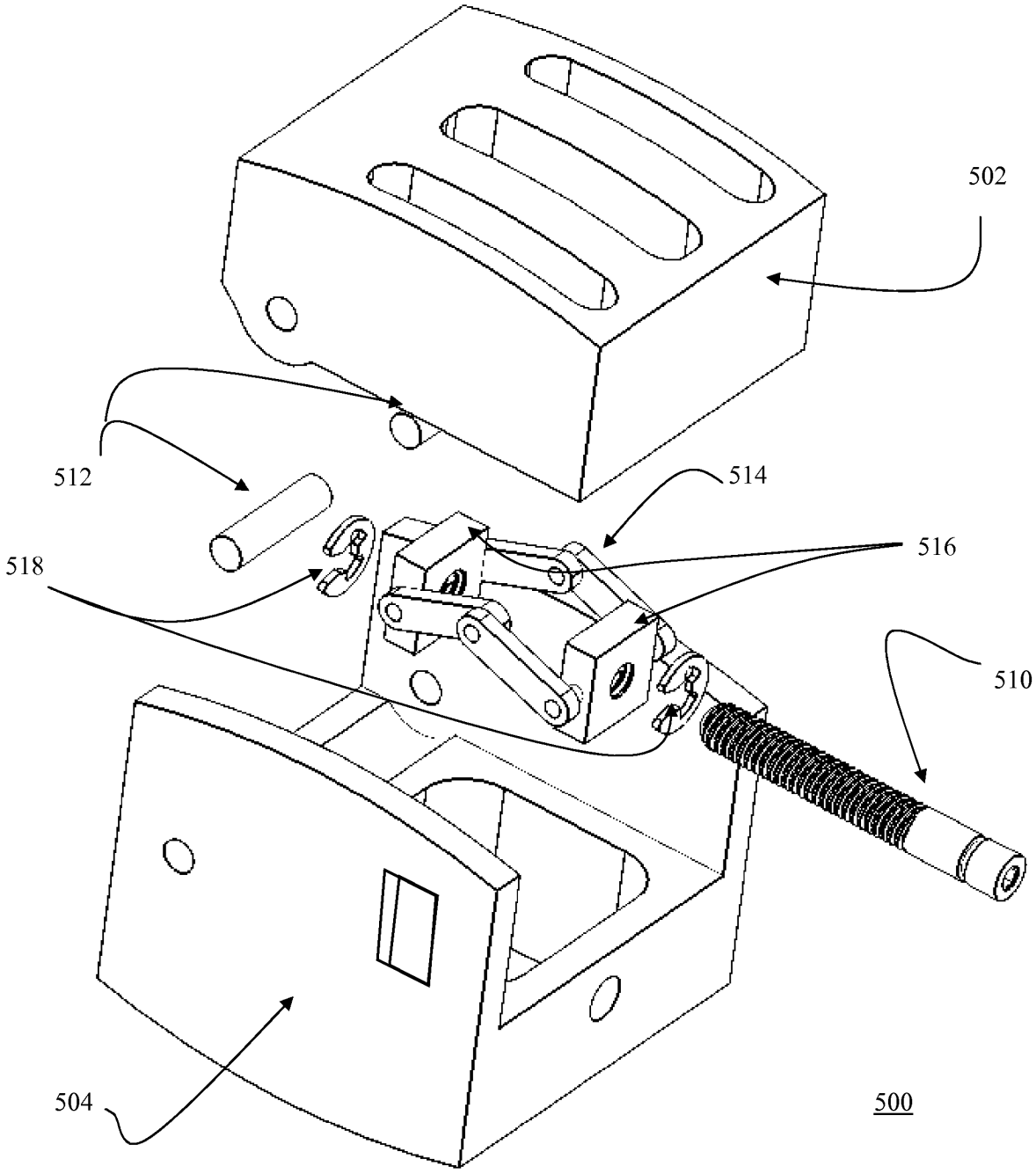


Fig. 5D

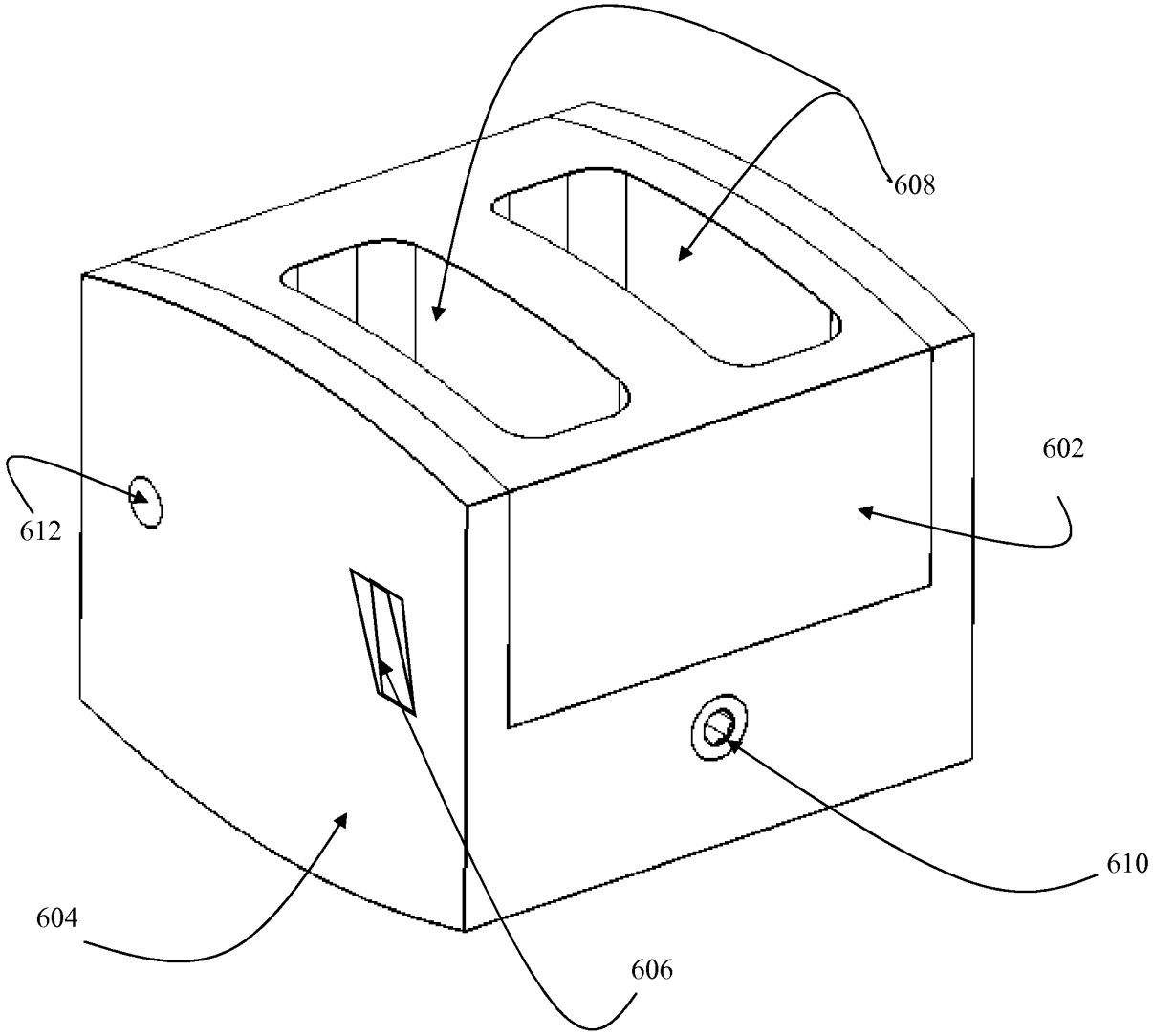


Fig. 6A

600

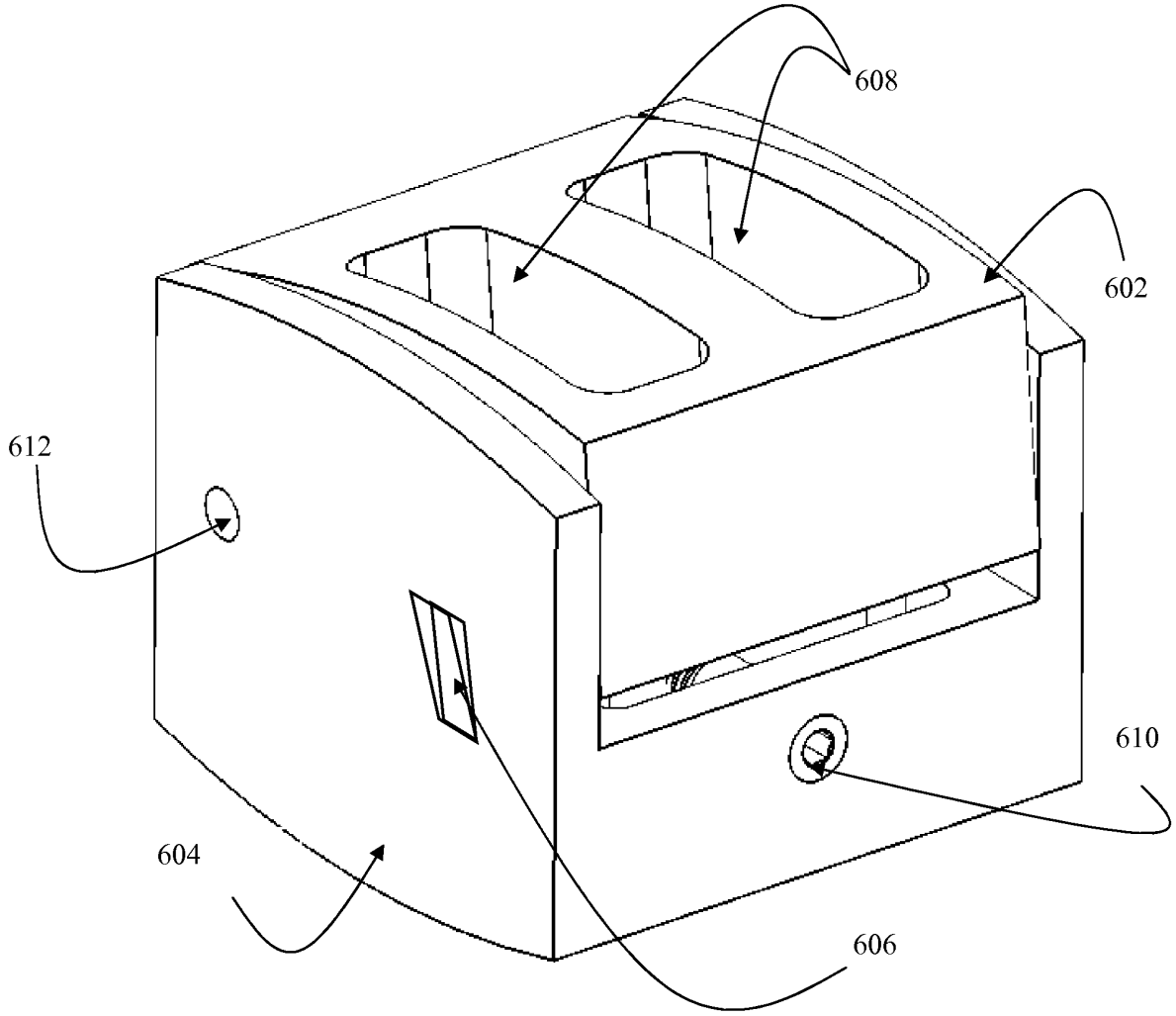


Fig. 6B

600

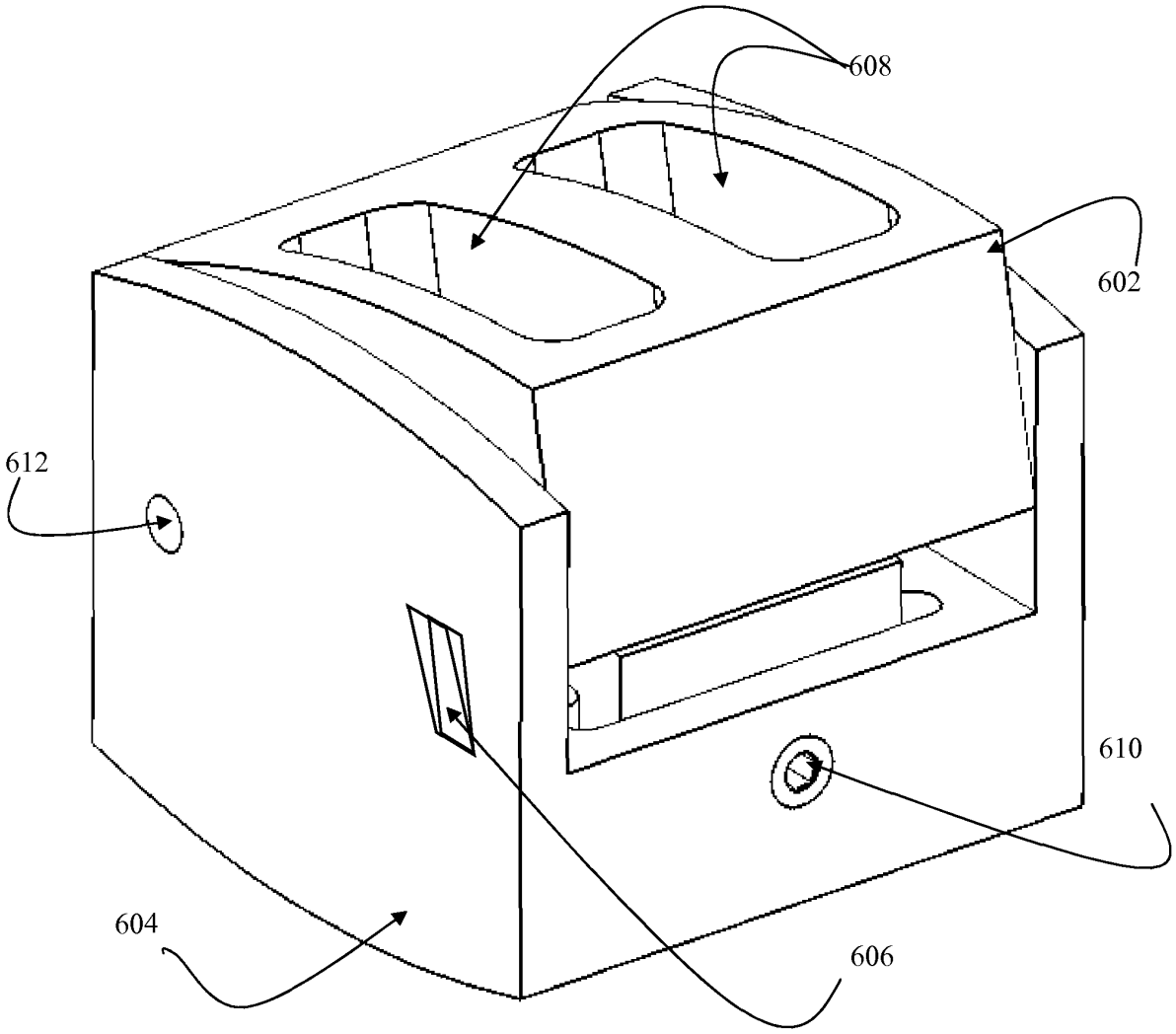


Fig. 6C

600

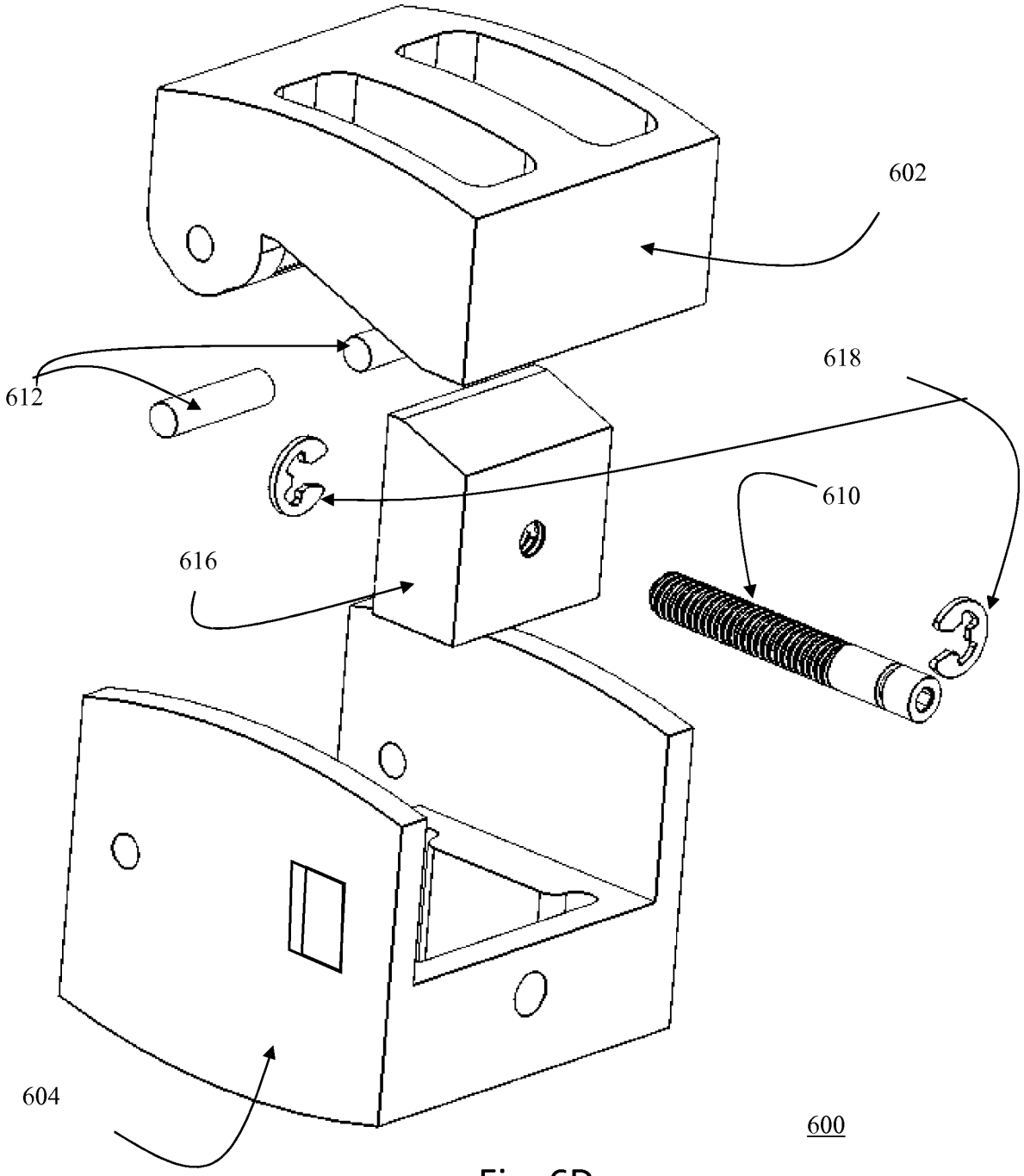


Fig. 6D

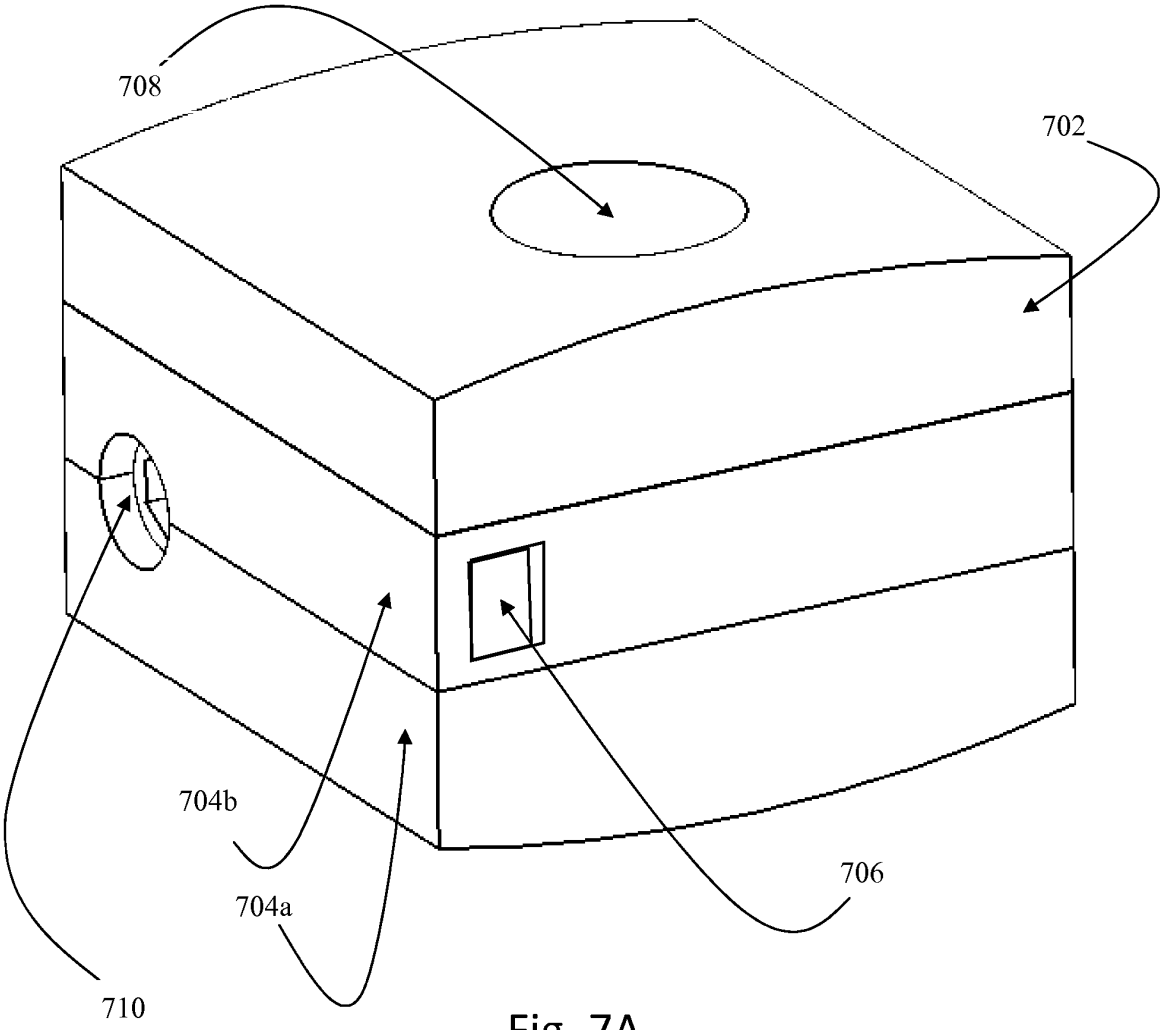


Fig. 7A

700

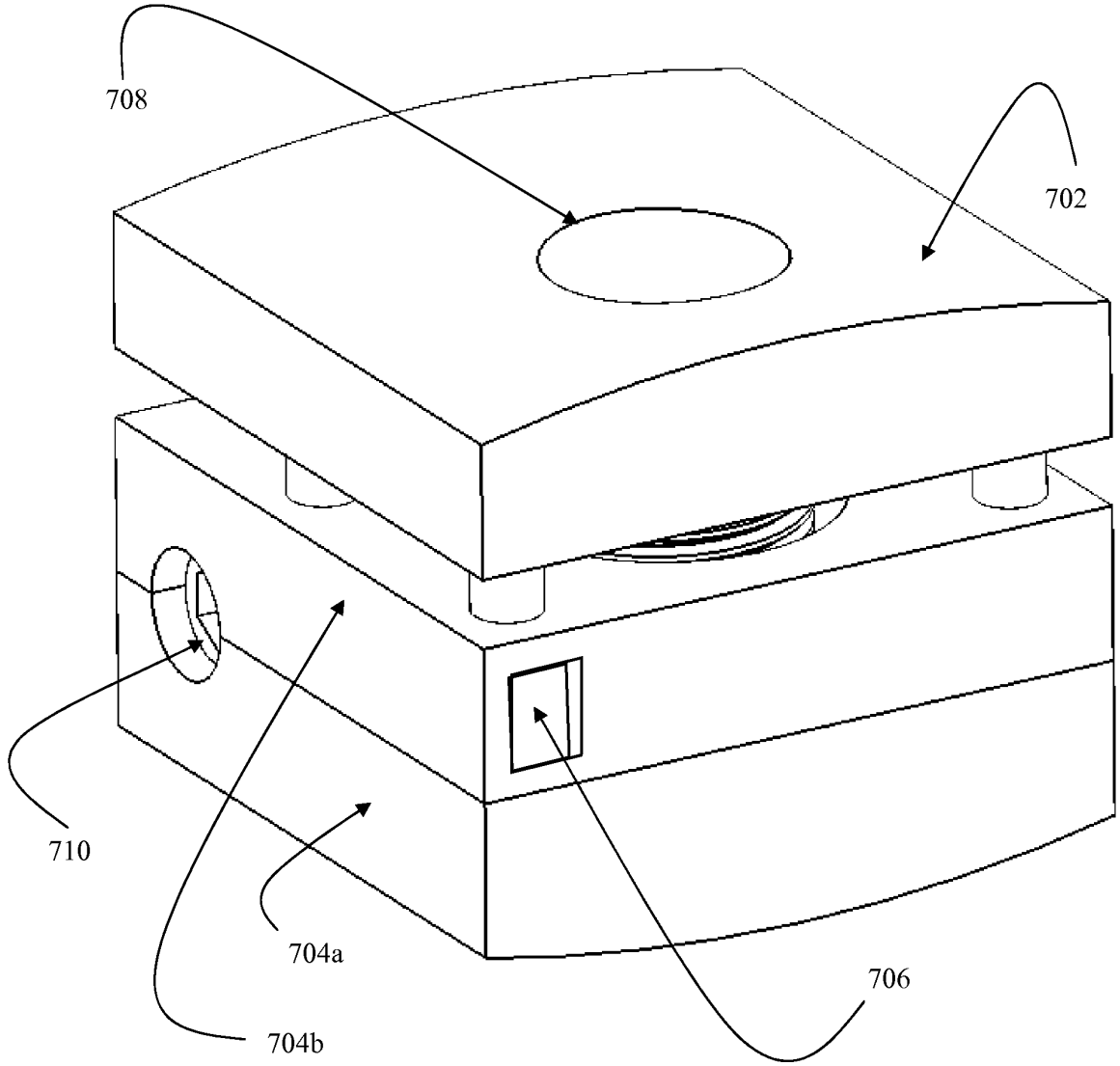


Fig. 7B 700

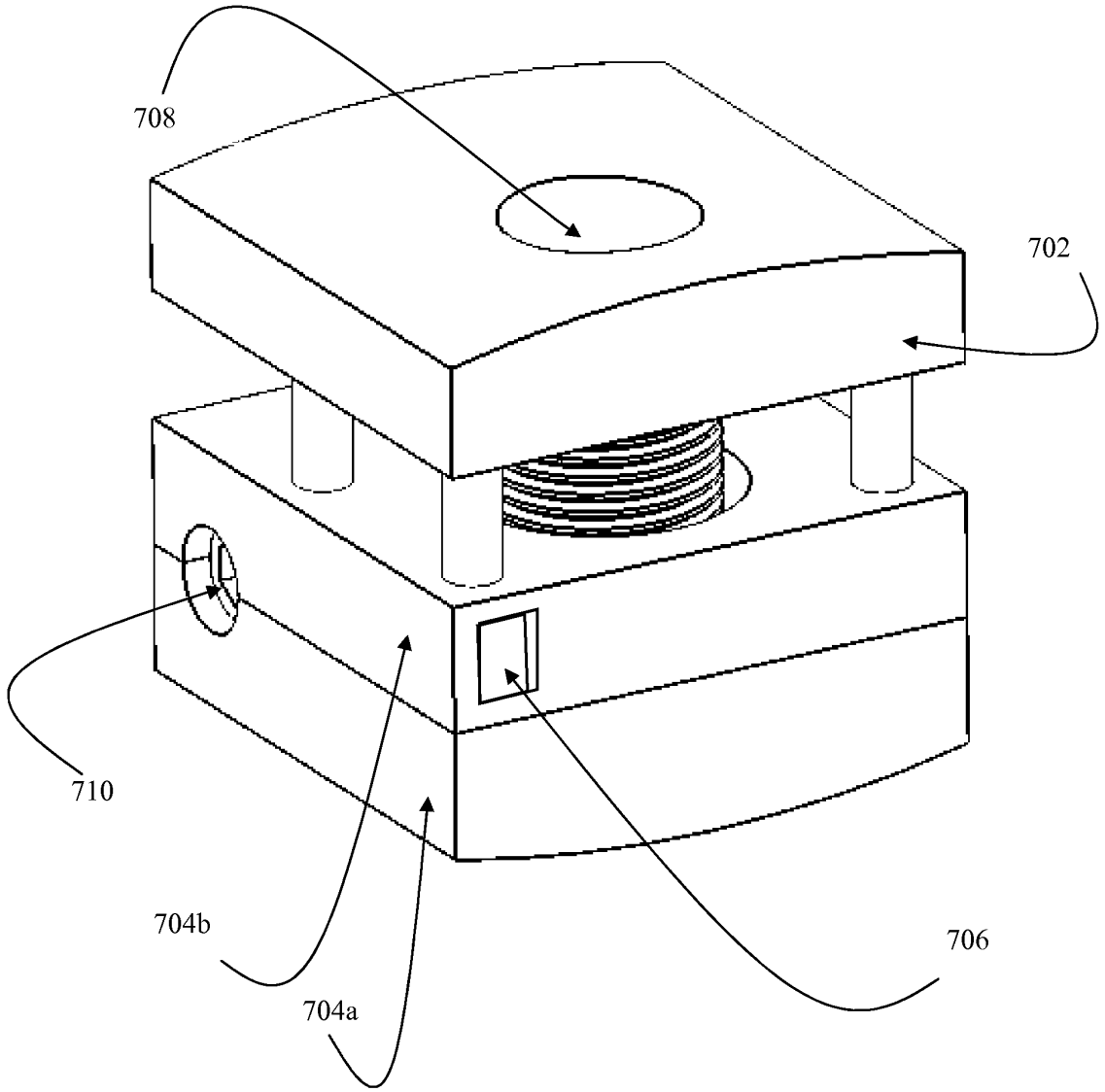


Fig. 7C

700

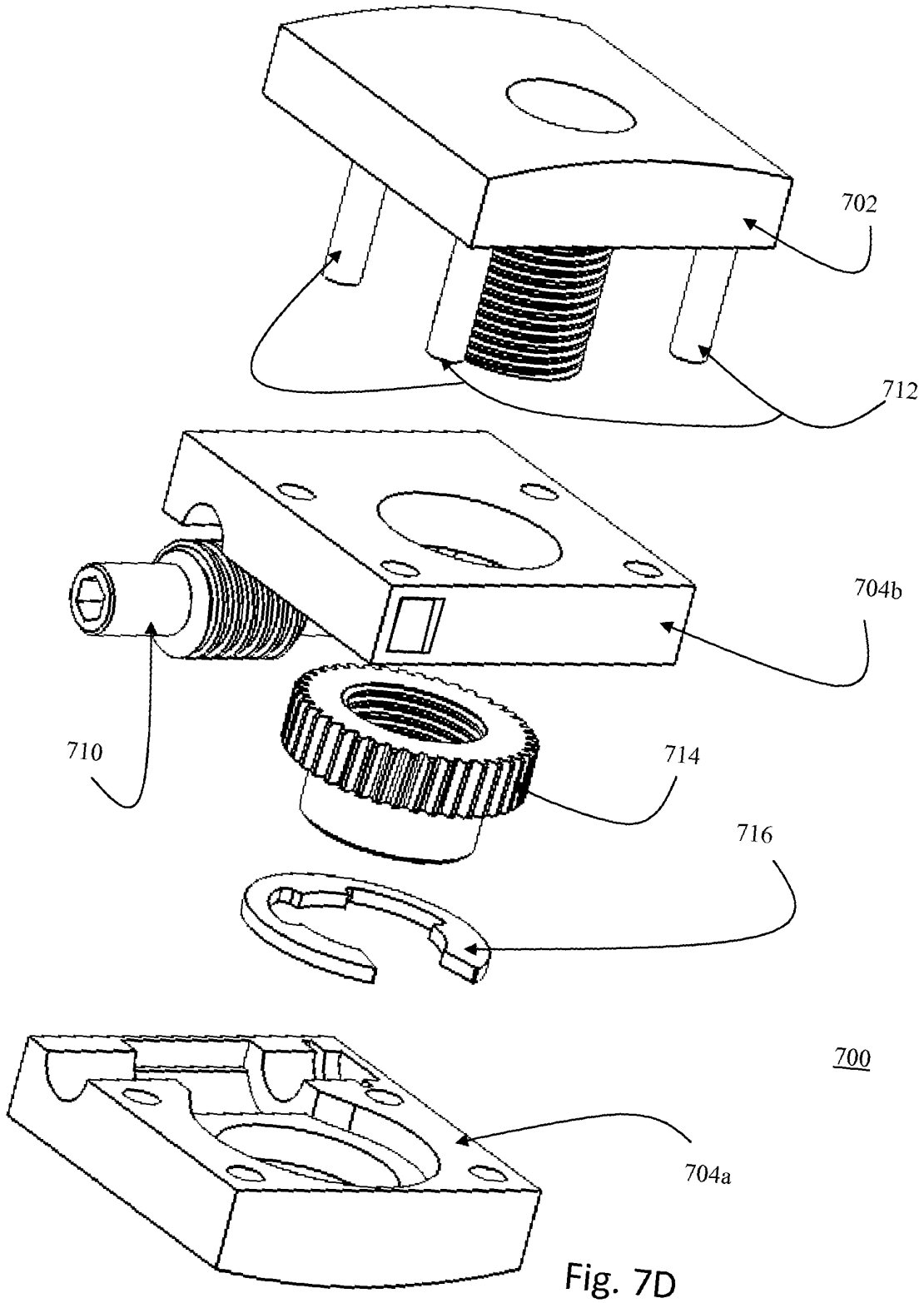


Fig. 7D

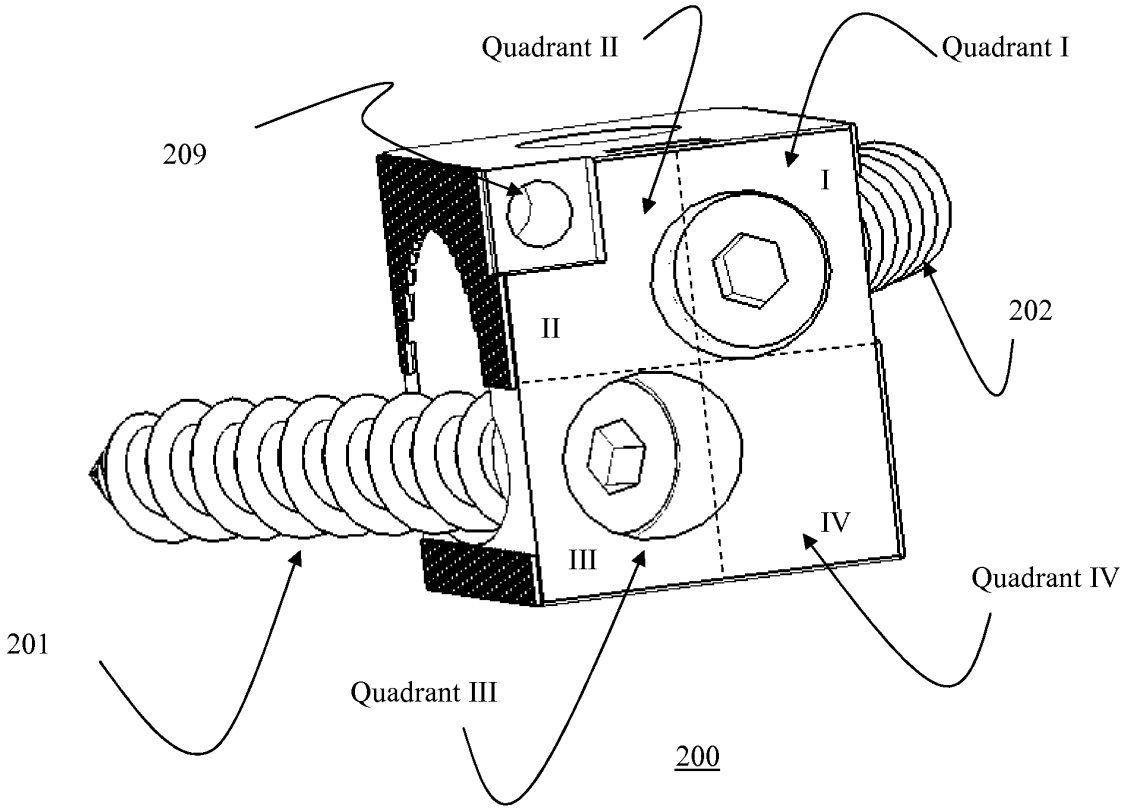

Quadrant II
Quadrant I
209
I
II
202
IV
III
Quadrant IV
201
Quadrant III
200

Fig. 7E(i)

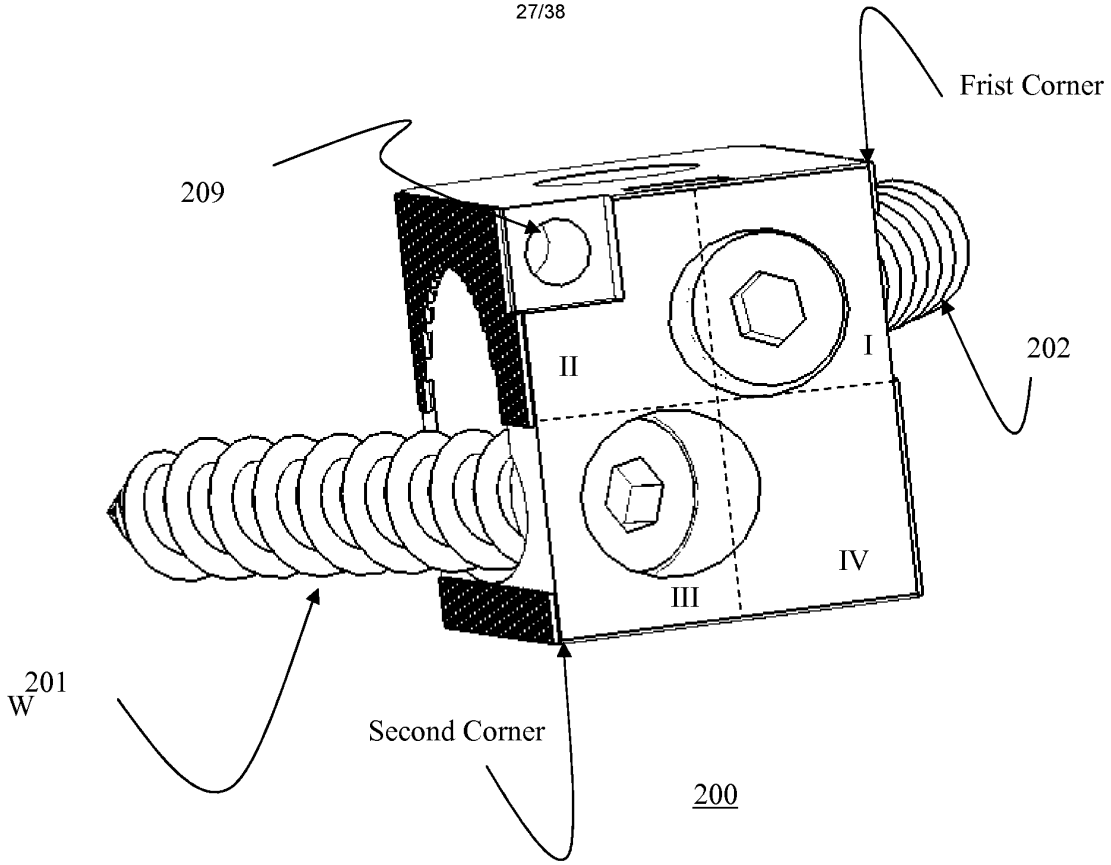


Fig. 7E(ii)

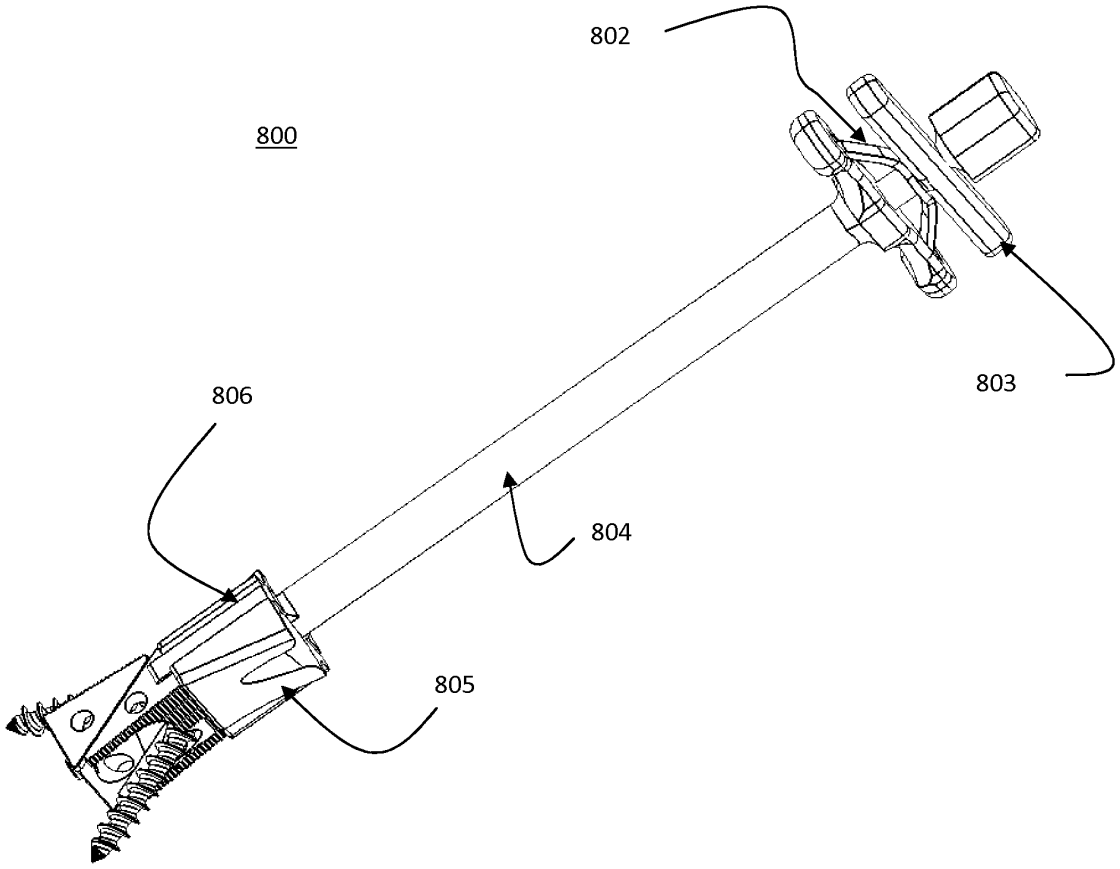


Fig. 8A

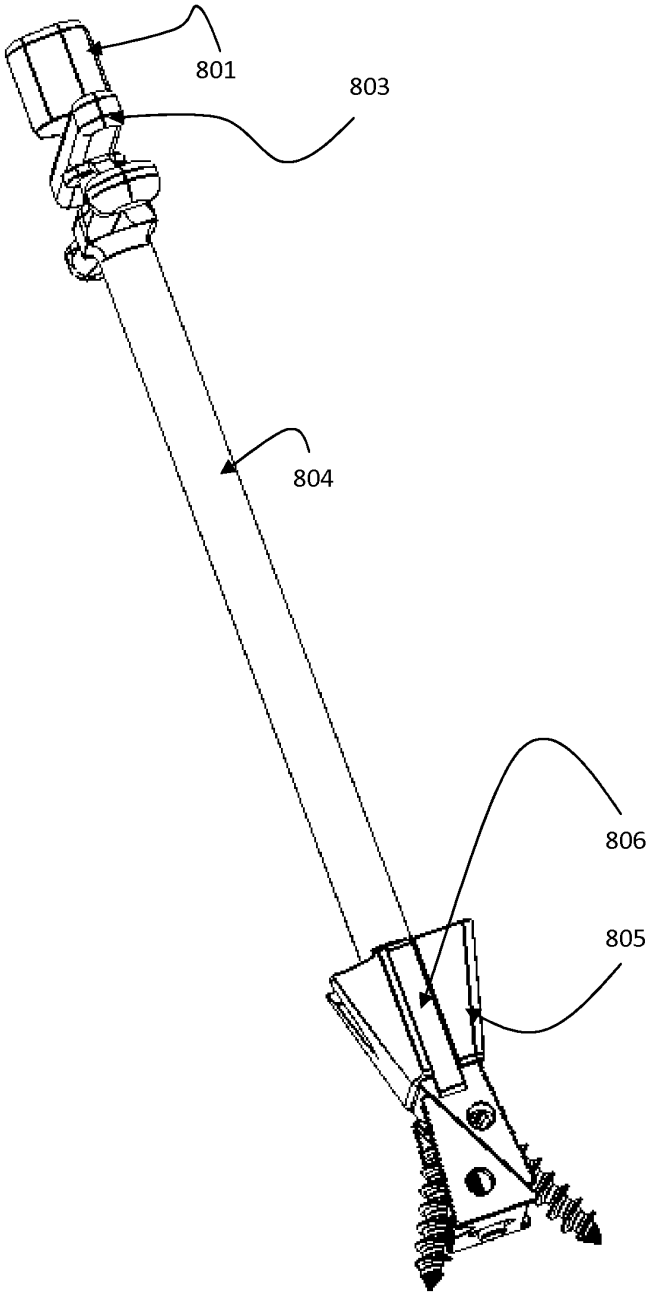


Fig. 8B

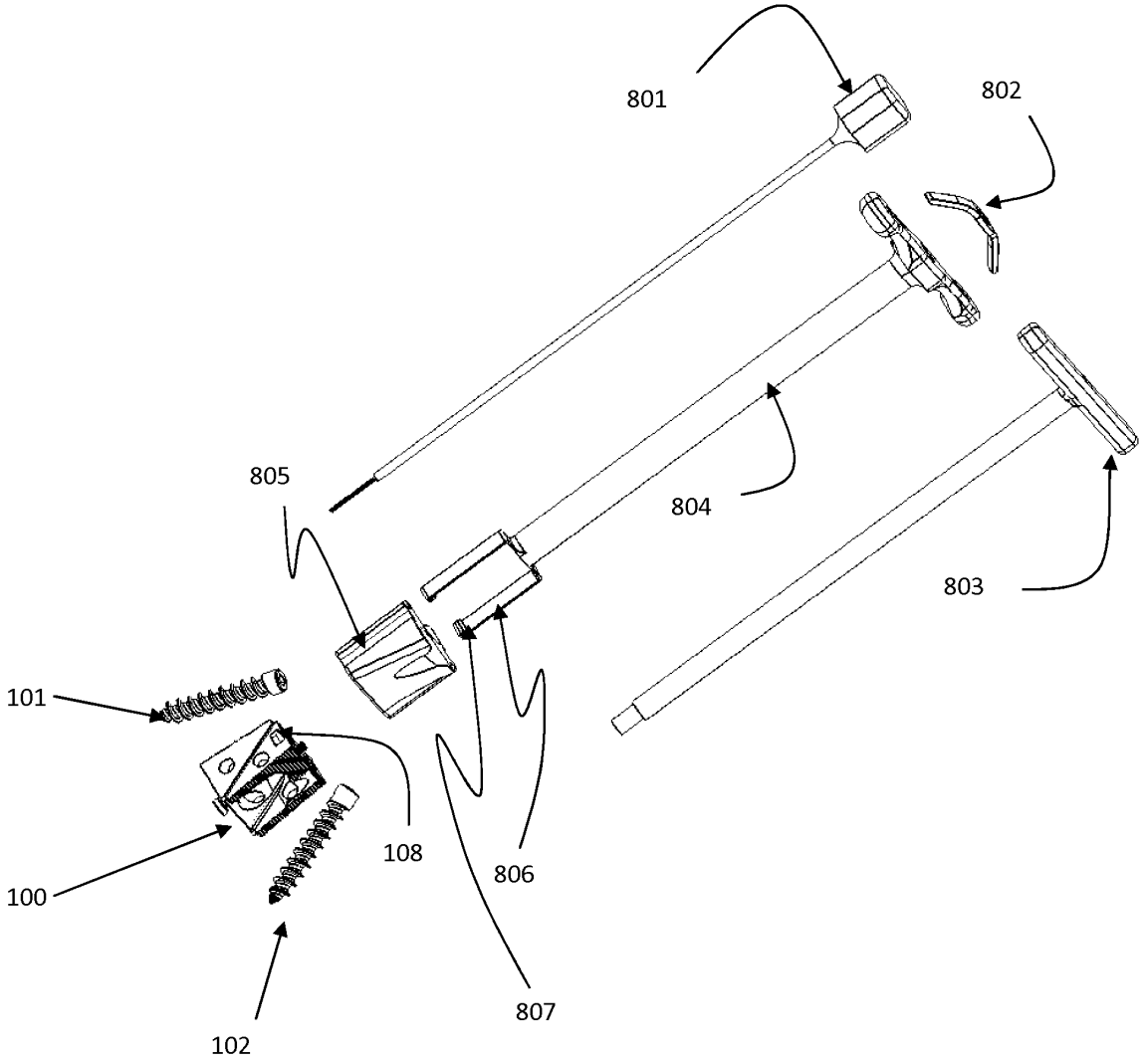


Fig. 8C

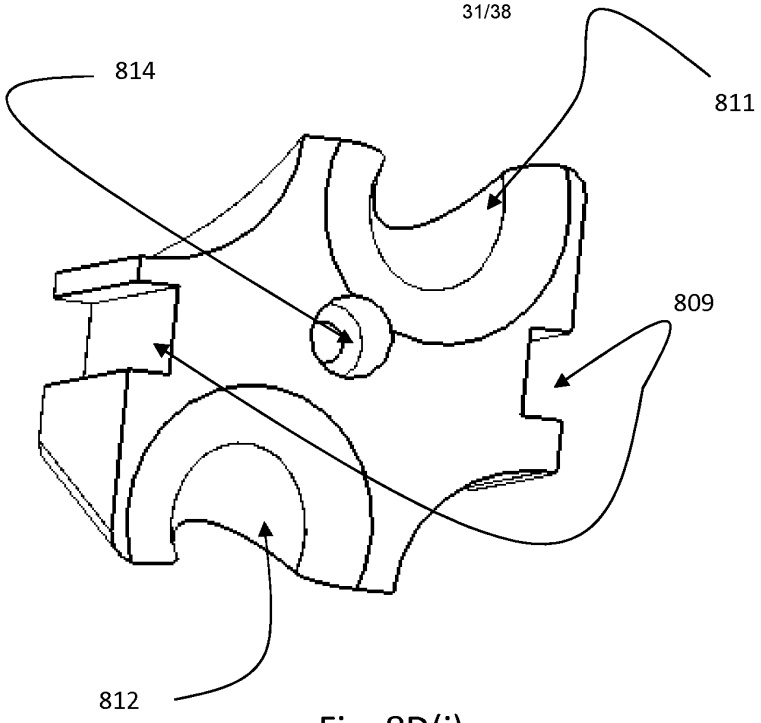


Fig. 8D(i)

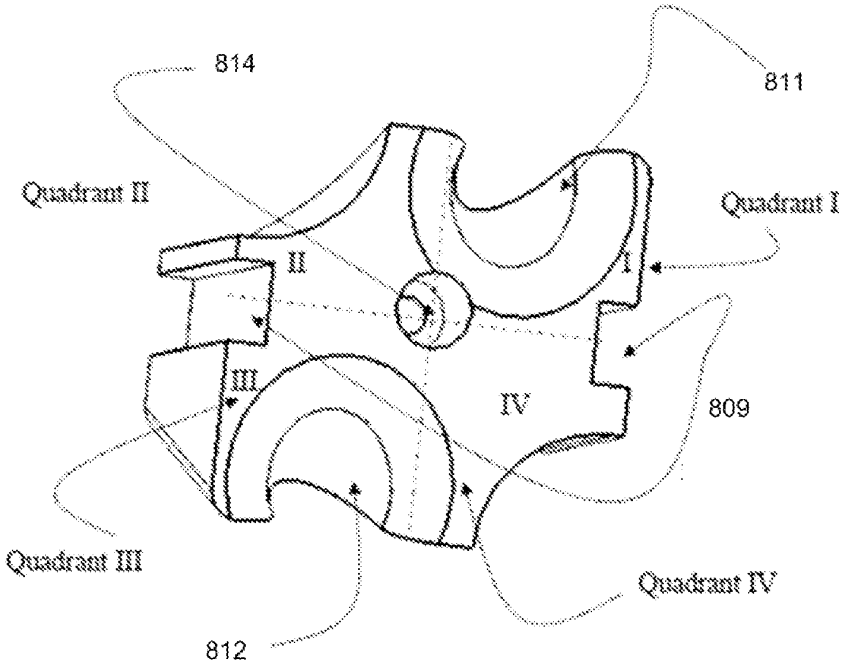


Fig. 8D(ii)

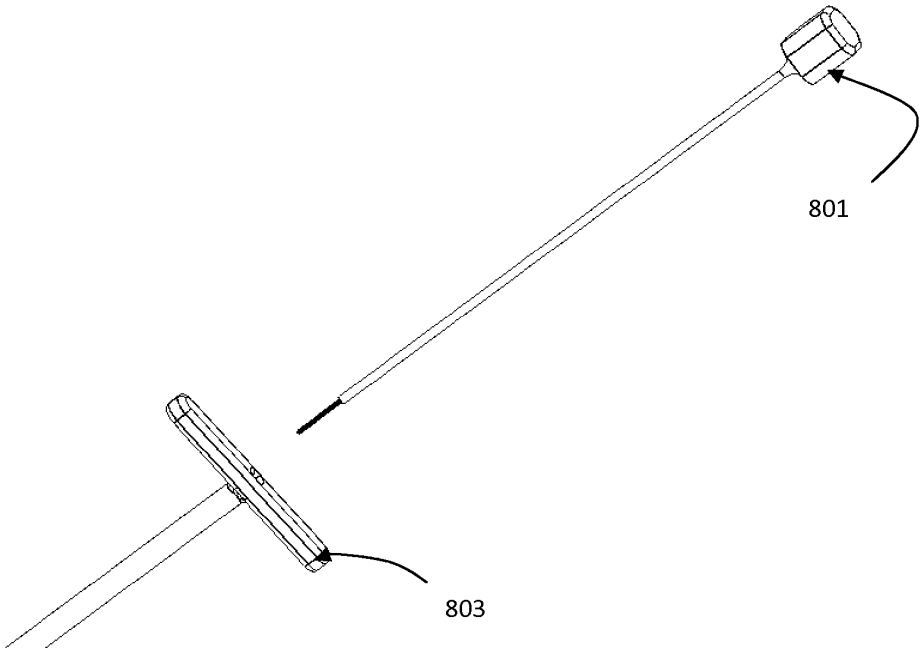


Fig. 8E

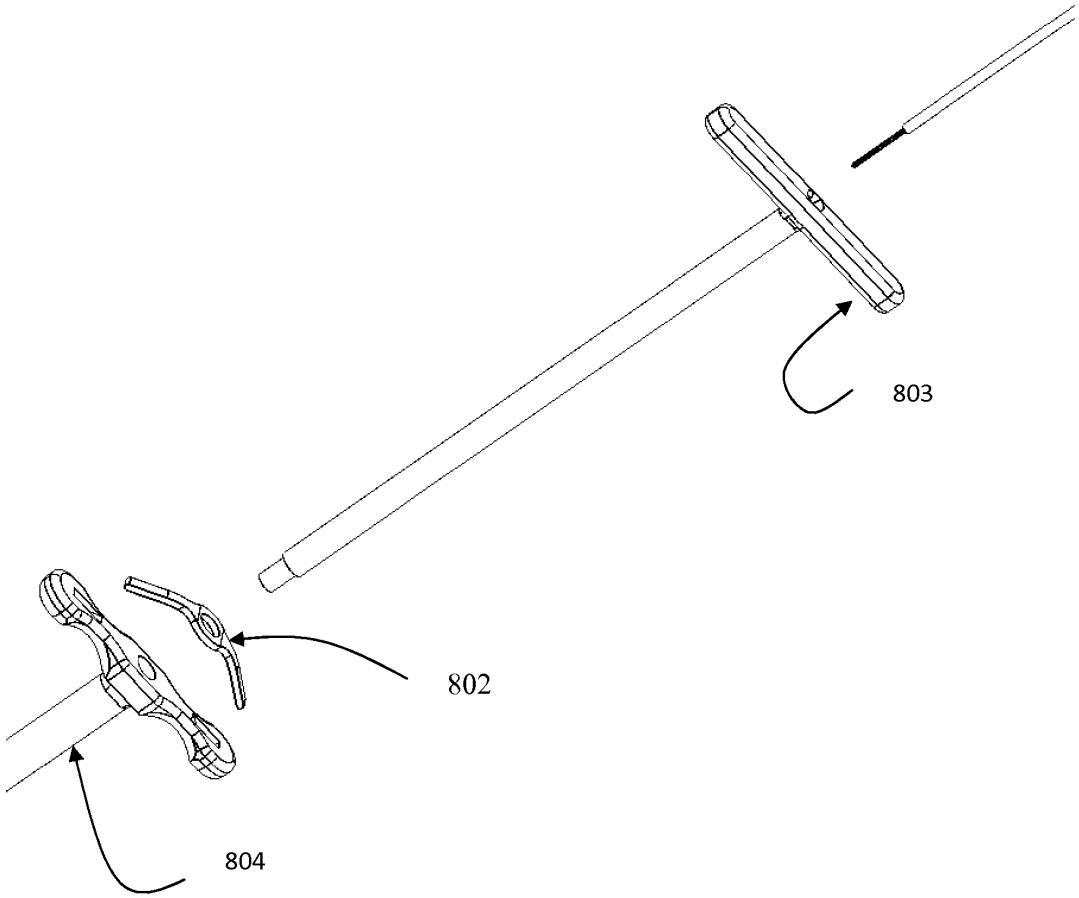


Fig. 8F

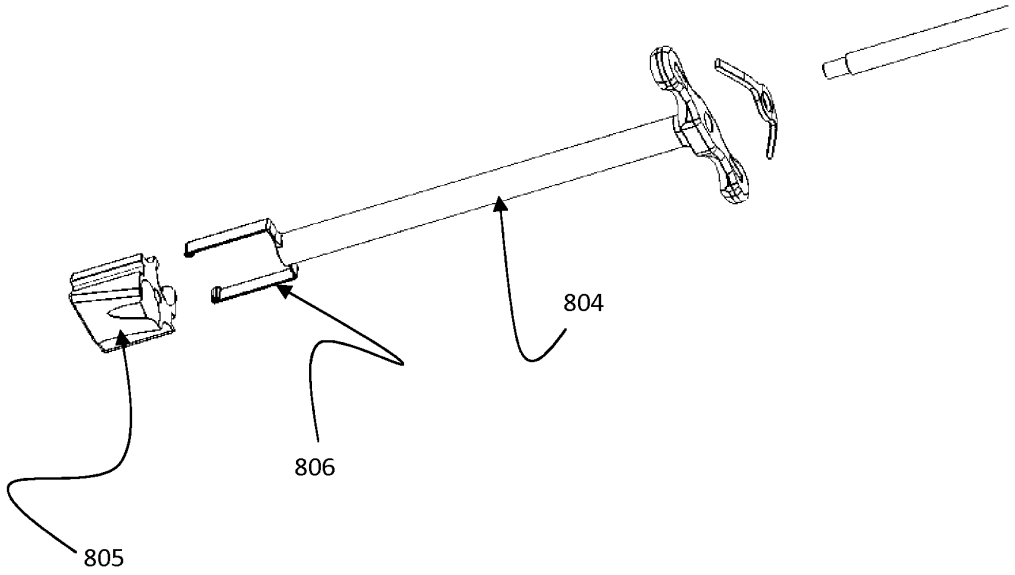


Fig. 8G

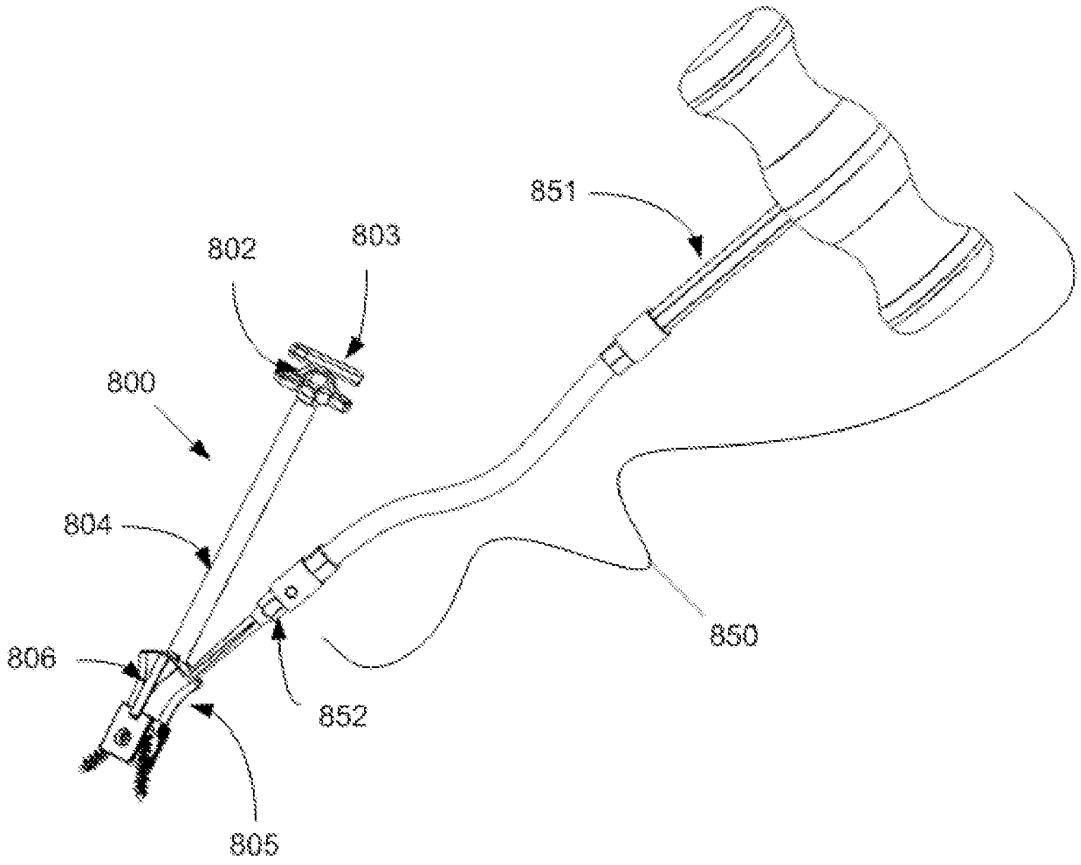


Fig. 8H

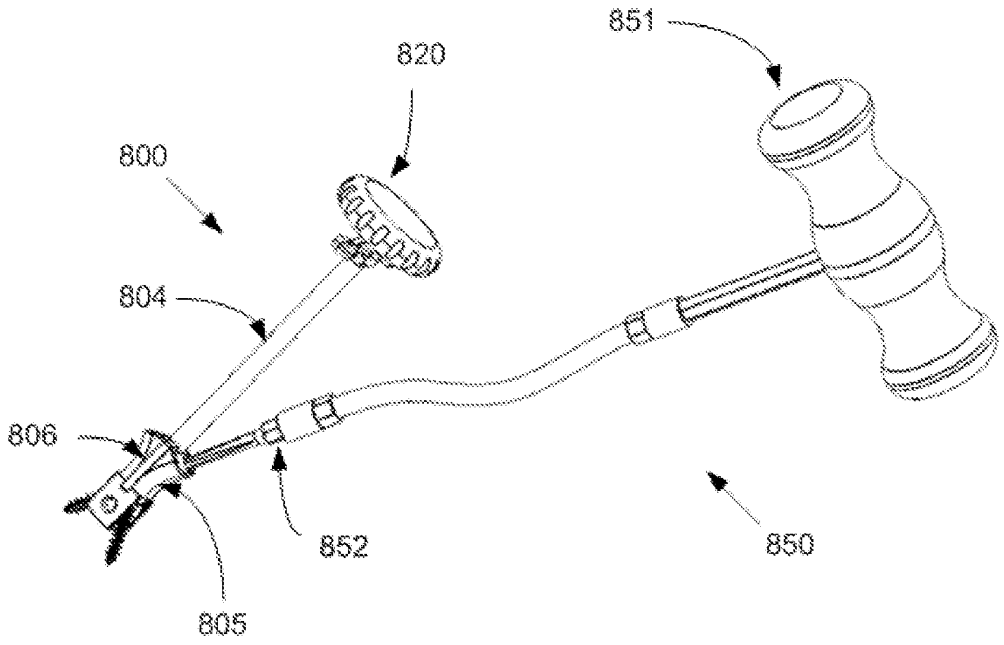


Fig. 8I

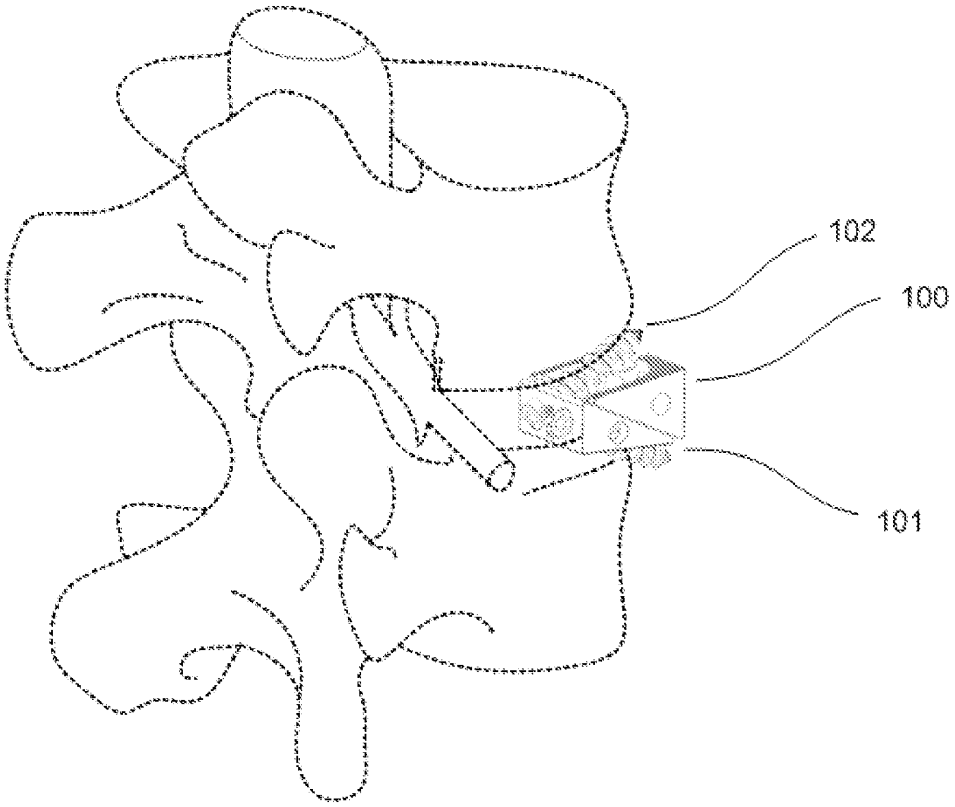


Fig. 8J

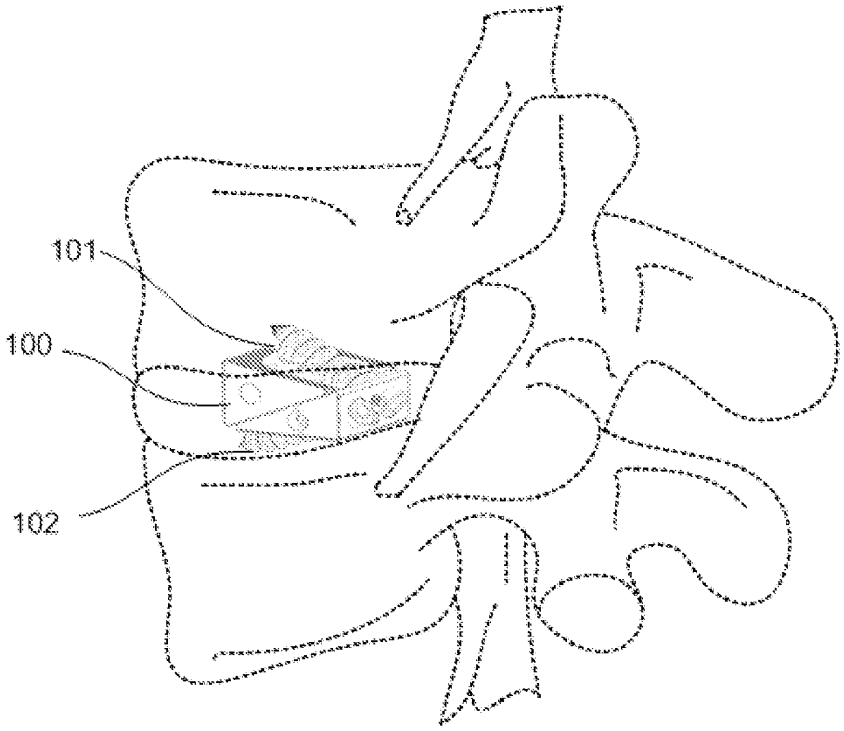


Fig. 8K

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION

As the below named inventor, I hereby declare that:

This declaration is directed to:

[ ] The attached application, or

[X] United States application or PCT international application number 14/063,197

filed on October 25, 2013.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

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LEGAL NAME OF INVENTOR

Inventor: Ahmnon D. Moskowitz Date (Optional): 9/25/17

Signature: Ahmnon Moskowitz

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

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LEGAL NAME OF INVENTOR

Inventor: Mosheh T. Moskowitz Date (Optional): 11/24/13

Signature:

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

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LEGAL NAME OF INVENTOR

Inventor: Pablo A. Valdivia y Alvarado Date (Optional): OCT-10-2017

Signature:

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

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LEGAL NAME OF INVENTOR

Inventor: Eric Sugalski Date (Optional): 09 / 27 / 2017

Signature: _____

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/AIA/01 (06-12)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION

As the below named inventor, I hereby declare that:

This declaration is directed to:

[ ] The attached application, or

[X] United States application or PCT international application number 14/063,197

filed on October 25, 2013.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Nathan C. Moskowitz Date (Optional): 9/25/13

Signature: Nathan C. Moskowitz

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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PTO/AIA/01 (06-12)
Approved for use through 01/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION

As the below named inventor, I hereby declare that:

This declaration is directed to:

- ☐ The attached application, or
- ☒ United States application or PCT international application number 14/063,197 filed on 10/25/2013.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

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LEGAL NAME OF INVENTOR

Inventor: David SCHOON Date (Optional): 4/1/2015

Signature: _____

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
17/408,068	08/20/2021	3783	0.00	46440-0020005	20	1

CONFIRMATION NO. 4713

26191
FISH & RICHARDSON P.C. (TC)
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

FILING RECEIPT

OC000000128077125

Date Mailed: 09/01/2021

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

Ahmnon D. Moskowitz, Rockville, MD;
Mosheh T. Moskowitz, Rockville, MD;
Pablo A. Valdivia Y. Alvarado, Cambridge, MA;
Eric Sugalski, Arlington, MA;
Nathan C. Moskowitz, Rockville, MD;
David Schoon, Rockville, MD;

Applicant(s)

Moskowitz Family LLC, Rockville, MD;

Power of Attorney: The patent practitioners associated with Customer Number 26191

Domestic Priority data as claimed by applicant

This application is a CON of 16/587,993 09/30/2019 PAT 11096797
which is a CON of 16/025,667 07/02/2018 PAT 10426633
which is a CON of 15/820,232 11/21/2017 PAT 10016284
which is a CON of 14/063,197 10/25/2013 PAT 9848993
which claims benefit of 61/801,783 03/15/2013
and claims benefit of 61/718,707 10/25/2012
and is a CIP of 13/210,150 08/15/2011 PAT 9867719
and is a CIP of 13/210,157 08/15/2011 PAT 9889022
and is a CIP of 13/210,162 08/15/2011 PAT 9895238
and is a CIP of 13/210,168 08/15/2011 PAT 9907674
and is a CIP of 13/741,361 01/14/2013 PAT 9301854

and said 13/210,150 08/15/2011
is a CON of 13/084,543 04/11/2011 PAT 8353913
and is a CON of 13/108,982 05/16/2011 PAT 9005293
and said 13/210,157 08/15/2011
is a CON of 13/084,543 04/11/2011 PAT 8353913
and is a CON of 13/108,982 05/16/2011 PAT 9005293
and said 13/210,162 08/15/2011
is a CON of 13/084,543 04/11/2011 PAT 8353913
and is a CON of 13/108,982 05/16/2011 PAT 9005293
and said 13/210,168 08/15/2011
is a CON of 13/084,543 04/11/2011 PAT 8353913
and is a CON of 13/108,982 05/16/2011 PAT 9005293
and said 13/741,361 01/14/2013
is a CON of 13/084,543 04/11/2011 PAT 8353913
and is a CON of 13/108,982 05/16/2011 PAT 9005293
and said 13/084,543 04/11/2011
is a CON of 11/842,855 08/21/2007 PAT 7942903
and said 13/108,982 05/16/2011
is a CON of 11/842,855 08/21/2007 PAT 7942903
which is a CIP of 11/536,815 09/29/2006 PAT 7846188
which is a CIP of 11/208,644 08/23/2005 PAT 7704279
which claims benefit of 60/670,231 04/12/2005

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 08/30/2021
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 17/408,068**
Projected Publication Date: To Be Determined - pending completion of Missing Parts
Non-Publication Request: No
Early Publication Request: No
** **SMALL ENTITY** **
Title

ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION

Preliminary Class

604

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 17/408,068

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	80		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	350		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	400		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*	x 50 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	*	x 240 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	830		TOTAL	

APPLICATION AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)	OR	RATE($)	ADDITIONAL FEE($)
Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
17/408,068	08/20/2021	Ahmnon D. Moskowitz	46440-0020005

CONFIRMATION NO. 4713

26191
FISH & RICHARDSON P.C. (TC)
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

FORMALITIES LETTER

OC000000128077126

Date Mailed: 09/01/2021

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
- The application search fee must be submitted.
- The application examination fee must be submitted.
- Surcharge as set forth in 37 CFR 1.16(f) must be submitted.
  The surcharge is due for any one of:
  - late submission of the basic filing fee, search fee, or examination fee,
  - late submission of inventor's oath or declaration,
  - filing an application that does not contain at least one claim on filing, or
  - submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

The fee(s) required within **TWO MONTHS** from the date of this Notice to avoid abandonment is/are itemized below. Small entity discount is in effect. If applicant is qualified for micro entity status, an acceptable Certification of Micro Entity Status must be submitted to establish micro entity status. (See 37 CFR 1.29 and forms PTO/SB/15A and 15B.)

- $ **80** basic filing fee.
- $ **80** surcharge.
- $ **350** search fee.
- $ **400** examination fee.
- $(**0**) previous unapplied payment amount.
- $ **910** TOTAL FEE BALANCE DUE.

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web, including a copy of this Notice and selecting the document description "Applicant response to Pre-Exam Formalities Notice". https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at http://www.uspto.gov/ebc.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/swong/

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor	:	Ahmnon D. Moskowitz	Art Unit	:	Unknown
Application No.	:	17/408,068	Examiner	:	Unknown
Filed	:	August 20, 2021	Conf. No.	:	4713
Title	:	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION			

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRELIMINARY AMENDMENT

Prior to examination, please amend the application as indicated on the following pages.

Amendments to the Specification:

Please amend the title as follows:

"AN EXPANDABLE INTERVERTEBRAL DEVICE ~~ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION~~"

Please replace the paragraphs [0001] and [0002] beginning after the title with the following paragraphs:

[0001] This application is a Continuation Application of application Serial No. 16/587,993, filed on September 30, 2019, now U.S. Patent No. 11,096,797, which is a continuation application of application Serial No. 16,025,667, filed on July 2, 2018, now U.S. Patent No. 10,426,633, which is a Continuation Application of application Serial No. 15/820,232, filed on November 21, 2017, now U.S. Patent No. 10,016,284 issued July 10, 2018, which is a Continuation Application of application Serial No. 14/063,197, filed on October 25, 2013, which is a Continuation-in-part Application of co-pending application Serial No. 13/210,150, filed August 15, 2011, now U.S. Patent No. 9,867,719 issued January 16, 2018, and a Continuation-in-part Application of co-pending application Serial No. 13/210,157, filed August 15, 2011, now U.S. Patent No. 9,889,022 issued February 13, 2018, and a Continuation-in-part Application of co-pending application Serial No. 13/210,162, filed August 15, 2011, now U.S. Patent No. 9,895,238 issued February 20, 2018 and a Continuation-in-part Application of co-pending application Serial No. 13/210,168, filed August 15, 2011, now U.S. Patent No. 9,907,674 issued March 6, 2018, and a Continuation-in-part Application of application Serial No. 13/741,361, filed on January 14, 2013, now U.S. Patent No. 9,301,854 issued April 5, 2016.

[0002] Serial No. 14/063,197, filed on October 25, 2013, claims priority under U.S.C. § 119(e) of U.S. provisional application Nos. 61/801,783, filed March 15, 2013 and 61/718,707, filed October 25, 2012.

[0003] Serial No. 13/210,150, filed August 15, 2011, is a Continuation of application Serial No. 13/084,543, filed April 11, 2011, now U.S. Patent No. 8,353,913 issued on January

15, 2013, and is a Continuation of 13/108,982, filed May 16, 2011, now U.S. Patent No. 9,005,293 issued April 14, 2015.

[0004] Serial No. 13/210,157, filed August 15, 2011, is a Continuation of application Serial No. 13/084,543, filed April 11, 2011, now U.S. Patent No. 8,353,913 issued on January 15, 2013, and is a Continuation of 13/108,982, filed May 16, 2011, now U.S. Patent No. 9,005,293 issued April 14, 2015.

[0005] Serial No. 13/210,162, filed August 15, 2011, is a Continuation of application Serial No. 13/084,543, filed April 11, 2011, now U.S. Patent No. 8,353,913 issued on January 15, 2013, and is a Continuation of 13/108,982, filed May 16, 2011, now U.S. Patent No. 9,005,293 issued April 14, 2015.

[0006] Serial No. 13/210,168, filed August 15, 2011, is a Continuation of application Serial No. 13/084,543, filed April 11, 2011, now U.S. Patent No. 8,353,913 issued on January 15, 2013, and is a Continuation of 13/108,982, filed May 16, 2011, now U.S. Patent No. 9,005,293 issued April 14, 2015.

[0007] Serial No. 13/741,361, filed January 14, 2013, is a Continuation of application Serial No. 13/084,543, filed April 11, 2011, now U.S. Patent No. 8,353,913 issued on January 15, 2013, and is a Continuation of 13/108,982, filed May 16, 2011, now U.S. Patent No. 9,005,293 issued April 14, 2015.

[0008] Serial No. 13/084,543, filed April 11, 2011, is a Continuation of application Serial No. 11/842,855, filed August 21, 2007, now U.S. Patent No. 7,942,903 issued May 17, 2011.

[0009] Serial No. 13/108,982, filed May 16, 2011, is a Continuation of application Serial No. 11/842,855, filed August 21, 2007, now U.S. Patent No. 7,942,903 issued May 17, 2011, which is a Continuation-in-part of application Serial No. 11/536,815, filed September 29, 2006, now U.S. Patent No. 7,846,188 issued December 7, 2010, which is a Continuation-in-part of application Serial No.11/208,644, filed August 23, 2005, now U.S. Patent No. 7,704,279 issued April 27, 2010, which claims priority under 35 U.S.C. § 119(e) of U.S. provisional application No. 60/670,231, filed on April 12, 2005; the entire contents of all the above identified patent applications are hereby incorporated by reference.

Please replace the paragraph [0034] with the following amended paragraph:

FIG. 7C illustrates a ~~FIGS. 7C(i) and 7C(ii) illustrate~~ top, perspective ~~views~~ view of an intervertebral cage construct according to an exemplary embodiment of the invention.

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1-20. (Cancelled)

21. (New) An expandable intervertebral device comprising:

a first body extending from a first end to a second end, wherein the first body has first and second end portions positioned at the first and second ends, respectively, and has first and second side portions extending between the first and second end portions, wherein the first body has a first vertebral body engagement surface and has a first interior surface positioned on an opposite side of the first body than the first vertebral body engagement surface, the first interior surface includes at least one angled housing surface protruding from the first interior surface;

a second body extending from a third end to a fourth end, wherein the second body has third and fourth end portions positioned at the third and fourth ends, respectively, and has third and fourth side portions extending between the third and fourth end portions, wherein the second body has a second vertebral body engagement surface and has a second interior surface positioned on an opposite side of the second body than the second vertebral body engagement surface; and

a wedge having an angled wedge surface, wherein the wedge is positioned between the first body and the second body with the angled wedge surface facing the first interior surface of the first body and the at least one angled housing surface of the first body is positioned to engage the angled wedge surface of the wedge, wherein the wedge is configured to slide within a space defined by the first body and second body in a direction toward the second and fourth ends of the first body and second body from a first wedge position in which the first body and the second body are in a substantially closed position to a second wedge position whereby the angled wedge surface presses against

the first interior surface of the first body to move the first body relative to the second body from a compressed configuration to an expanded configuration, whereby the wedge remains axially confined within the space defined by the first body and second body in the compressed and expanded configurations.

22. (New) The expandable intervertebral device of claim 21, wherein the first body and second body are hingedly connected such that the first body can pivot with respect to the second body so as to move the first end of the first body away from the third end of the second body.

23. (New) The expandable intervertebral device of claim 21, wherein the first vertebral body engagement surface comprises a plurality of ridges for interfacing with a vertebral body surface.

24. (New) The expandable intervertebral device of claim 23, wherein in the expanded configuration of the expandable intervertebral device the plurality of ridges on the first vertebral body engagement surface are in contact with the vertebral body surface.

25. (New) The expandable intervertebral device of claim 21, wherein a cavity configured to be filled with bone fusion materials is defined within the expandable intervertebral device.

26. (New) The expandable intervertebral device of claim 25, wherein movement of the first body relative to the second body toward the expanded configuration of the expandable intervertebral device increases a volume of the cavity.

27. (New) The expandable intervertebral device of claim 21, further comprising a locking mechanism for retaining the expandable intervertebral device in the expanded configuration.

28. (New) The expandable intervertebral device of claim 27, further comprising means to promote segmental spinal fusion.

29. (New) The expandable intervertebral device of claim 21, wherein the first body defines first and second bone cavities extending through the first vertebral body engagement surface with a wall of the first body at least partially separating the first and second bone cavities and wherein the first and second side portions of the first body have respective first and second outer side surfaces, wherein the third and fourth side portions of the second body have respective third and fourth inner side surfaces, and wherein the first body is positioned at least partially inside the second body with the first and second outer side surfaces positioned inward of and adjacent to the third and fourth inner side surfaces of the third and fourth side portions in the compressed configuration.

30. (New) The expandable intervertebral device of claim 21, further comprising
wherein the wedge is actuated in response to a rotation of a threaded screw; and
wherein the rotation of the threaded screw results in axial movement of the wedge within the space defined by the first body and the second body such that the at least one angled housing surface of the first body engages the angled wedge surface of the wedge to move the first body relative to the second body from the compressed configuration to the expanded configuration.

31. (New) The expandable intervertebral device of claim 30, wherein the rotation of the threaded screw in a first direction actuates movement of the first body relative to the second body so as to expand the expandable intervertebral device vertically.

32. (New) The expandable intervertebral device of claim 31, wherein the expandable intervertebral device further comprises indentations on opposing sides for engaging a positioning tool.

33. (New) A system comprising:

the expandable intervertebral device of claim 32; and

a tool comprising:

an elongate shaft;

first and second prongs that are sized and positioned such that the first and second prongs engage the indentations on opposing sides of the expandable intervertebral device when the tool engages the expandable intervertebral device; and

a screwdriver sized and configured for operating the threaded screw.

34. (New) The system of claim 33, wherein the screwdriver comprises an elongate member configured to extend within the elongate shaft of the tool.

35. (New) The system of claim 33, the tool further comprising a handle positioned at a proximal end of the elongate shaft.

36. (New) An expandable intervertebral device comprising:

a first body extending from a first end to a second end, wherein the first body has first and second end portions positioned at the first and second ends, respectively, and has first and second side portions extending between the first and second end portions, wherein the first body has a first vertebral body engagement surface having a first plurality of ridges formed therein and has a first interior surface positioned on an opposite side of the first body than the first vertebral body engagement surface;

a second body extending from a third end to a fourth end, wherein the second body has third and fourth end portions positioned at the third and fourth ends, respectively, and has third and fourth side portions extending between the third and fourth end portions, wherein the second body has a second vertebral body engagement surface having a second plurality of ridges formed therein and has a second interior surface positioned on an opposite side of the second body than the second vertebral body engagement surface, wherein the first body is aligned with the second body such that the first end of the first body is axially aligned with the third end of the second body and the second end of the first body is axially aligned with the fourth end of the second body,

wherein the first end portion of the first body and the third end portion of the second body are hingedly interconnected such that the first body can pivot with respect to the second body so as to move the second end portion of the first body away from the fourth end portion of the second body; and

a wedge extending from a fifth end to a sixth end and having an angled wedge surface extending along at least a portion of a distance between the fifth end and the sixth end, wherein the wedge is positioned between the first body and the second body with the angled wedge surface facing the first interior surface of the first body, wherein the first interior surface of the first body has an angled housing surface shaped to engage the angled wedge surface of the wedge, wherein the wedge is configured to slide within a space defined by the first body and second body in a direction toward the second and fourth ends of the first body and second body from a first wedge position that allows the first body and second body to pivot to a position that is substantially closed to a second wedge position whereby the angled wedge surface presses against the first interior surface of the first body to hingedly open the first body with respect to the second body whereby the wedge remains axially confined within the space defined by the first body and second body in the first and second wedge positions.

37. (New) The expandable intervertebral device of claim 36, wherein a first length of the first body from the first end to the second end is substantially equal to a second length of the second body from the third end to the fourth end, and wherein the second end portion of the first body is smaller than the fourth end portion of the second body such that the second end portion of the first body is positionable between the third and fourth side portions of the second body at the fourth end of the second body.

38. (New) The expandable intervertebral device of claim 37, wherein the first body defines a first bone material receiving area between the first and second end portions and the first and second side portions, and the second body defines a second bone material receiving area between the third and fourth end portions and the third and fourth side portions, and

wherein the first bone material receiving area is coupled to the second bone material receiving area when the wedge is in the second wedge position.

39. (New) The expandable intervertebral device of claim 38, wherein a distance from the fifth end to the sixth end of the wedge is less than a distance from the first end to the second end of the first body and is less than a distance from the third end to the fourth end of the second body.

40. (New) A method of operating the expandable intervertebral device of claim 36, the method comprising:

inserting the expandable intervertebral device in a target surgical location between two vertebrae of a human patient; and

turning a rotation screw to actuate a movement of the wedge to pivot the first body away from the second body while the device is positioned between the vertebrae of the human patient.

REMARKS

With this amendment claims 1-20 are cancelled and new claims 21-40 are added. Support for these amendments can be found throughout the specification and figures, and no new matter is added. Applicant asks that all claims be examined in view of the amendment to the claims.

With this amendment, the title of the application has been amended to be descriptive of the claimed subject matter, and the specification has been amended to update the cross-reference paragraphs and to correct a typo in paragraph [0034]. All amendments are supported by the originally-filed specification and figures, and no new matter is added.

Applicant believes that no fees are due at this time, other than those listed on the fee transmittal and being paid with this reply on the Electronic Filing System. In addition, please apply any other necessary charges or credits to Deposit Account 06-1050, referencing the above attorney docket number.

Respectfully submitted,

Date: November 1, 2021

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Electronic Patent Application Fee Transmittal

Application Number:	17408068
Filing Date:	20-Aug-2021
Title of Invention:	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
First Named Inventor/Applicant Name:	Ahmnon D. Moskowitz
Filer:	Kiersten M. Batzli/Emily Whitcomb
Attorney Docket Number:	46440-0020005

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY FILING FEE (ELECTRONIC FILING)	4011	1	80	80
UTILITY SEARCH FEE	2111	1	350	350
UTILITY EXAMINATION FEE	2311	1	400	400
Pages:				
Claims:				
Miscellaneous-Filing:				
LATE FILING FEE FOR OATH OR DECLARATION	2051	1	80	80
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**910**

Electronic Acknowledgement Receipt	
EFS ID:	44170697
Application Number:	17408068
International Application Number:	
Confirmation Number:	4713
Title of Invention:	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
First Named Inventor/Applicant Name:	Ahmnon D. Moskowitz
Customer Number:	26191
Filer:	Kiersten M. Batzli/Emily Whitcomb
Filer Authorized By:	Kiersten M. Batzli
Attorney Docket Number:	46440-0020005
Receipt Date:	01-NOV-2021
Filing Date:	20-AUG-2021
Time Stamp:	13:28:38
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$910
RAM confirmation Number	E2021A1D29034346
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Applicant Response to Pre-Exam Formalities Notice	MissingParts.PDF	56783 2131e587446634a5bd33dd82514d567832d8a02d	no	1
Warnings:					
Information:					
2		PrelimAmend.PDF	109734 a08adc08ae73b3910af38ff9aa3bb1f33c10eac5	yes	11

Multipart Description/PDF files in .zip description

Document Description	Start	End
Preliminary Amendment	1	1
Specification	2	4
Claims	5	10
Applicant Arguments/Remarks Made in an Amendment	11	11

Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	47236 5c905d753e981a48814cc5b85d34a3a8facb0fae	no	2
Warnings:					
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		Total Files Size (in bytes):	213753		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor	:	Ahmnon D. Moskowitz	Art Unit	:	Unknown
Application No.	:	17/408,068	Examiner	:	Unknown
Filed	:	August 20, 2021	Conf. No.	:	4713

Title : ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION

MAIL STOP MISSING PARTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY TO NOTICE TO FILE MISSING PARTS OF APPLICATION

In response to the Notice to File Missing Parts of Application under 37 CFR §1.53(b) dated September 1, 2021, applicant claims small entity status (see 37 CFR §1.27) and submits herewith the following:

- ☒ Payment of the basic filing fee of $80;
- ☒ Payment of the search fee of $350;
- ☒ Payment of the examination fee of $400; and
- ☒ Payment of the surcharge of $80 for late filing of the basic filing fee and/or declaration.

The fees in the amount of $910 are being paid with this reply on the Electronic Filing System. Apply any necessary charges or credits to Deposit Account 06-1050, referencing the above attorney docket number.

Respectfully submitted,

Date: November 1, 2021

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
17/408,068	08/20/2021	3783	910	46440-0020005	20	3

CONFIRMATION NO. 4713

UPDATED FILING RECEIPT

26191
FISH & RICHARDSON P.C. (TC)
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

OC000000129337030

Date Mailed: 11/04/2021

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

Inventor(s)

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Power of Attorney: The patent practitioners associated with Customer Number 26191

Domestic Priority data as claimed by applicant

This application is a CON of 16/587,993 09/30/2019 PAT 11096797
which is a CON of 16/025,667 07/02/2018 PAT 10426633
which is a CON of 15/820,232 11/21/2017 PAT 10016284
which is a CON of 14/063,197 10/25/2013 PAT 9848993
which claims benefit of 61/801,783 03/15/2013
and claims benefit of 61/718,707 10/25/2012
and is a CIP of 13/210,150 08/15/2011 PAT 9867719
and is a CIP of 13/210,157 08/15/2011 PAT 9889022
and is a CIP of 13/210,162 08/15/2011 PAT 9895238
and is a CIP of 13/210,168 08/15/2011 PAT 9907674
and is a CIP of 13/741,361 01/14/2013 PAT 9301854

and said 13/210,150 08/15/2011
is a CON of 13/084,543 04/11/2011 PAT 8353913
and is a CON of 13/108,982 05/16/2011 PAT 9005293
and said 13/210,157 08/15/2011
is a CON of 13/084,543 04/11/2011 PAT 8353913
and is a CON of 13/108,982 05/16/2011 PAT 9005293
and said 13/210,162 08/15/2011
is a CON of 13/084,543 04/11/2011 PAT 8353913
and is a CON of 13/108,982 05/16/2011 PAT 9005293
and said 13/210,168 08/15/2011
is a CON of 13/084,543 04/11/2011 PAT 8353913
and is a CON of 13/108,982 05/16/2011 PAT 9005293
and said 13/741,361 01/14/2013
is a CON of 13/084,543 04/11/2011 PAT 8353913
and is a CON of 13/108,982 05/16/2011 PAT 9005293
and said 13/084,543 04/11/2011
is a CON of 11/842,855 08/21/2007 PAT 7942903
and said 13/108,982 05/16/2011
is a CON of 11/842,855 08/21/2007 PAT 7942903
which is a CIP of 11/536,815 09/29/2006 PAT 7846188
which is a CIP of 11/208,644 08/23/2005 PAT 7704279
which claims benefit of 60/670,231 04/12/2005

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 08/30/2021

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 17/408,068**

Projected Publication Date: 02/10/2022

Non-Publication Request: No

Early Publication Request: No
**** SMALL ENTITY ****
Title

EXPANDABLE INTERVERTEBRAL DEVICE

Preliminary Class

604

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 17/408,068

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	80		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	350		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	400		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*	x 50 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*	x 240 =	0.00			
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			0.00			
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00			
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	830		TOTAL	

APPLICATION AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)	OR	RATE($)	ADDITIONAL FEE($)
Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
					TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
17/408,068	08/20/2021	Ahmnon D. Moskowitz	46440-0020005

CONFIRMATION NO. 4713

26191
FISH & RICHARDSON P.C. (TC)
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

PUBLICATION NOTICE



Title:EXPANDABLE INTERVERTEBRAL DEVICE

Publication No.US-2022-0039963-A1
Publication Date:02/10/2022

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently https://portal.uspto.gov/pair/PublicPair. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Substitute Disclosure Form	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No. 46440-0020005	Application No. 17/408,068
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		Filing Date August 20, 2021	Group Art Unit OPAP

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Filing Date If Appropriate	Class	Subclass
	1.	2,360,942	10/24/1944	Ellerstein			
	2.	4,064,881	12/27/1977	Meredith			
	3.	4,554,914	11/26/1985	Kapp			
	4.	4,599,086	7/8/1986	Doty			
	5.	4,636,217	1/13/1987	Ogilvie			
	6.	4,904,261	2/27/1990	Dove			
	7.	4,960,420	10/2/1990	Goble			
	8.	4,997,432	3/5/1991	Keller			
	9.	5,005,749	4/9/1991	Aranyi			
	10.	5,062,850	11/5/1991	Macmillan			
	11.	5,123,926	6/23/1992	Pisharodi			
	12.	5,290,312	3/1/1994	Kojimoto			
	13.	5,405,391	4/11/1995	Henderson			
	14.	5,413,583	5/9/1995	Wohlers			
	15.	5,454,819	10/3/1995	Knoepfler			
	16.	5,514,180	5/7/1996	Heggeness			
	17.	5,653,763	8/5/1997	Errico			
	18.	5,658,336	8/19/1997	Pisharodi			
	19.	5,660,188	8/26/1997	Groiso			
	20.	5,665,122	9/9/1997	Kambin			
	21.	5,667,472	9/7/1997	Finn			
	22.	5,713,912	2/3/1998	Porter			
	23.	5,782,832	7/21/1998	Larsen			
	24.	5,865,848	2/2/1999	Baker			
	25.	5,888,223	3/30/1999	Bray, Jr.			
	26.	5,916,224	6/29/1999	Esplin			
	27.	5,951,574	9/14/1999	Stefanchik			

Examiner Signature	Date Considered

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U.S. Patent Documents

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	28.	5,960,522	10/5/1999	Boe			
	29.	5,968,054	10/19/1999	Yeatts			
	30.	5,976,136	11/2/1999	Bailey			
	31.	5,980,522	11/9/1999	Koros			
	32.	6,102,950	8/15/2000	Vaccaro			
	33.	6,126,689	10/3/2000	Brett			
	34.	6,190,414	2/20/2001	Young			
	35.	6,193,757	2/27/2001	Foley			
	36.	6,224,602	5/1/2001	Hayes			
	37.	6,235,034	5/22/2001	Bray, Jr.			
	38.	6,299,642	10/9/2001	Chan			
	39.	6,322,562	11/27/2001	Wolter			
	40.	6,342,074	1/29/2002	Simpson			
	41.	6,368,350	4/9/2002	Erickson			
	42.	6,368,351	4/9/2002	Glenn			
	43.	6,375,682	4/23/2002	Fleischman			
	44.	6,419,704	7/16/2002	Ferree			
	45.	6,419,705	4/9/2002	Glenn			
	46.	6,432,106	8/13/2002	Fraser			
	47.	6,454,807	9/24/2002	Jackson			
	48.	6,458,159	10/1/2002	Thalgott			
	49.	6,491,724	12/10/2002	Ferree			
	50.	6,527,804	3/4/2003	Gauchet			
	51.	6,533,818	3/18/2003	Weber			
	52.	6,558,423	5/6/2003	Michelson			
	53.	6,572,653	6/3/2003	Simonson			
	54.	6,579,318	6/17/2003	Varga			

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U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Filing Date If Appropriate	Class	Subclass
	55.	6,582,468	6/24/2003	Gauchet			
	56.	6,613,055	9/2/2003	Di Emidio			
	57.	6,629,998	10/7/2003	Lin			
	58.	6,641,614	11/4/2003	Wagner			
	59.	6,655,243	12/2/2003	Anderson			
	60.	6,716,247	4/6/2004	Michelson			
	61.	6,719,794	4/13/2004	Gerber			
	62.	6,723,126	4/20/2004	Berry			
	63.	6,733,532	5/11/2004	Gauchet			
	64.	6,764,491	7/20/2004	Frey			
	65.	6,770,094	8/3/2004	Fehling			
	66.	6,824,564	11/30/2004	Crozet			
	67.	6,835,206	12/28/2004	Jackson			
	68.	6,852,117	2/8/2005	Orlowski			
	69.	6,890,355	5/10/2005	Michelson			
	70.	6,904,308	6/7/2005	Frisch			
	71.	6,953,477	10/11/2005	Berry			
	72.	6,955,671	10/18/2005	Uchikubo			
	73.	6,955,691	10/18/2005	Ayyanathan			
	74.	6,962,606	11/8/2005	Michelson			
	75.	6,972,019	12/6/2005	Michelson			
	76.	6,974,480	12/13/2005	Messerli			
	77.	7,030,904	4/18/2006	Adair			
	78.	7,033,394	4/25/2006	Michelson			
	79.	7,037,258	5/2/2006	Chatenever			
	80.	7,044,971	5/16/2006	Suddaby			
	81.	7,070,598	7/4/2006	Lim			

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U.S. Patent Documents

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	82.	7,077,864	7/18/2006	Byrd			
	83.	7,087,055	8/8/2006	Lim			
	84.	7,097,615	8/29/2006	Banik			
	85.	7,118,579	10/10/2006	Michelson			
	86.	7,135,043	11/14/2006	Nakahara			
	87.	7,211,112	5/1/2007	Baynham			
	88.	7,214,243	5/8/2007	Taylor			
	89.	7,232,464	6/19/2007	Mathieu			
	90.	7,238,203	7/3/2007	Bagga			
	91.	7,320,555	1/22/2008	Chang			
	92.	7,326,248	2/5/2008	Michelson			
	93.	7,410,501	8/12/2008	Michelson			
	94.	7,442,209	10/28/2008	Michelson			
	95.	7,442,299	10/28/2008	Lee			
	96.	7,445,636	11/4/2008	Michelson			
	97.	7,615,059	11/10/2009	Watschke			
	98.	7,618,456	11/17/2009	Mathieu			
	99.	7,628,816	12/8/2009	Magerl			
	100.	7,655,027	2/2/2010	Michelson			
	101.	7,655,046	2/2/2010	Dryer			
	102.	7,704,279	4/27/2010	Moskowitz			
	103.	7,722,674	5/25/2010	Grotz			
	104.	7,727,246	6/1/2010	Sixto			
	105.	7,753,958	7/13/2010	Gordon			
	106.	7,763,078	7/27/2010	Peterman			
	107.	7,776,047	8/17/2010	Fanger			
	108.	7,776,093	8/17/2010	Wolek			

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U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Filing Date If Appropriate	Class	Subclass
	109.	7,799,081	9/21/2010	McKinley			
	110.	7,803,162	9/28/2010	Marnay			
	111.	7,828,849	11/9/2010	Lim			
	112.	7,846,185	12/7/2010	Carls			
	113.	7,846,207	12/7/2010	Lechmann			
	114.	7,850,733	12/14/2010	Baynham			
	115.	7,862,616	1/4/2011	Lechmann			
	116.	7,875,078	1/25/2011	Wysocki			
	117.	7,887,591	2/15/2011	Aebi			
	118.	7,909,869	3/22/2011	Gordon			
	119.	7,942,903	5/17/2011	Moskowitz			
	120.	7,959,675	6/14/2011	Gately			
	121.	7,972,363	7/5/2011	Moskowitz			
	122.	7,985,255	7/26/2011	Bray			
	123.	8,029,512	10/4/2011	Paltzer			
	124.	8,034,060	10/11/2011	Keren			
	125.	8,043,376	10/25/2011	Falahee et al.			
	126.	8,062,375	11/22/2011	Glerum			
	127.	8,105,358	1/31/2012	Phan			
	128.	8,105,367	1/31/2012	Austin			
	129.	8,105,382	1/31/2012	Olmos			
	130.	8,114,162	2/14/2012	Bradley			
	131.	8,123,810	2/28/2012	Gordon			
	132.	8,133,232	3/13/2012	Levy			
	133.	8,137,405	3/20/2012	Kostuik			
	134.	8,167,949	5/1/2012	Tyber			
	135.	8,187,332	5/29/2012	McLuen			

Examiner Signature	Date Considered

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U.S. Patent Documents

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	136.	8,267,939	9/18/2012	Cipoletti			
	137.	8,268,000	9/18/2012	Waugh			
	138.	8,273,127	9/25/2012	Jones			
	139.	8,328,872	12/11/2012	Duffield			
	140.	8,353,913	11/15/2013	Moskowitz			
	141.	8,382,842	2/26/2013	Greenhalgh			
	142.	8,394,145	3/12/2013	Weiman			
	143.	8,398,713	3/19/2013	Weiman			
	144.	8,403,986	3/26/2013	Michelson			
	145.	8,403,990	3/26/2013	Dryer			
	146.	8,414,651	4/9/2013	Tyber			
	147.	8,419,797	4/16/2013	Biedermann			
	148.	8,425,607	4/23/2013	Waugh			
	149.	8,435,298	5/17/2013	Weiman			
	150.	8,491,659	7/23/2013	Weiman			
	151.	8,496,706	7/30/2013	Ragab			
	152.	8,518,120	8/27/2013	Glerum			
	153.	8,523,944	9/3/2013	Jimenez			
	154.	8,535,380	9/17/2013	Greenhalgh			
	155.	8,540,774	9/24/2013	Kueenzi			
	156.	8,556,979	10/15/2013	Glerum			
	157.	8,568,481	10/29/2013	Olmos			
	158.	8,603,170	12/10/2013	Cipoletti			
	159.	8,613,761	12/24/2013	Lindemann			
	160.	8,628,577	1/14/2014	Jimenez			
	161.	8,628,578	1/14/2014	Miller			
	162.	8,632,595	1/21/2014	Weiman			

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U.S. Patent Documents

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	163.	8,663,329	3/4/2014	Ernst			
	164.	8,679,183	3/25/2014	Glerum			
	165.	8,685,095	4/1/2014	Miller			
	166.	8,685,098	4/1/2014	Glerum			
	167.	8,709,086	4/29/2014	Glerum			
	168.	8,721,723	5/13/2014	Hansell			
	169.	8,728,165	5/20/2014	Parry			
	170.	8,778,025	7/15/2014	Ragab			
	171.	8,790,405	7/29/2014	Biedermann			
	172.	8,795,366	8/5/2014	Varela			
	173.	8,845,731	9/30/2014	Weiman			
	174.	8,845,732	9/30/2014	Weiman			
	175.	8,845,734	9/30/2014	Weiman			
	176.	8,888,853	11/18/2014	Glerum			
	177.	8,888,854	11/18/2014	Glerum			
	178.	8,894,711	11/25/2014	Varela			
	179.	8,894,712	11/25/2014	Varela			
	180.	8,926,704	1/6/2015	Glerum			
	181.	8,940,049	1/27/2015	Jimenez			
	182.	9,034,045	5/19/2015	Davenport			
	183.	9,039,771	5/26/2015	Glerum			
	184.	9,119,730	9/1/2015	Glerum			
	185.	9,198,772	12/1/2015	Weiman			
	186.	9,445,919	9/20/2016	Palmatier			
	187.	9,848,993	12/26/2017	Moskowitz			
	188.	10,016,284	7/10/2018	Moskowitz			
	189.	10,426,633	10/1/2019	Moskowitz			

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U.S. Patent Documents

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	190.	2002/0068976	6/6/2002	Jackson			
	191.	2002/0068977	6/6/2002	Jackson			
	192.	2002/0143338	10/3/2002	Orbay			
	193.	2003/0130737	7/10/2003	McGahan			
	194.	2004/0010315	1/15/2004	Song			
	195.	2004/0087947	5/6/2004	Lim			
	196.	2004/0088054	5/6/2004	Berry			
	197.	2004/0177531	9/16/2004	Dibenedetto			
	198.	2004/0186569	9/23/2004	Berry			
	199.	2004/0193272	9/30/2004	Zubok			
	200.	2004/0220571	11/4/2004	Assaker			
	201.	2004/0249466	12/9/2004	Liu			
	202.	2004/0254644	12/16/2004	Taylor			
	203.	2005/0027362	2/3/2005	Williams			
	204.	2005/0049590	3/3/2005	Alleyne			
	205.	2005/0113916	5/26/2005	Branch			
	206.	2005/0113917	5/26/2005	Chae			
	207.	2005/0177235	8/11/2005	Baynham			
	208.	2005/0216084	9/29/2005	Fleischman			
	209.	2005/0256576	11/17/2005	Moskowitz			
	210.	2005/0261769	11/24/2005	Moskowitz			
	211.	2005/0273170	12/8/2005	Navarro			
	212.	2005/0273171	12/8/2005	Gordon			
	213.	2005/0278026	12/15/2005	Gordon			
	214.	2006/0155285	7/13/2006	Anderson			
	215.	2006/0206207	9/14/2006	Dryer			
	216.	2006/0241621	10/26/2006	Moskowitz			

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U.S. Patent Documents

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	217.	2006/0241643	10/26/2006	Lim			
	218.	2006/0241770	10/26/2006	Rhoda			
	219.	2006/0247778	11/2/2006	Ferree			
	220.	2007/0049943	3/1/2007	Moskowitz			
	221.	2007/0167678	7/19/2007	Moskowitz			
	222.	2007/0198089	8/23/2007	Moskowitz			
	223.	2007/0213820	9/13/2007	Magerl			
	224.	2007/0250167	10/25/2007	Bray			
	225.	2007/0250172	10/25/2007	Moskowitz			
	226.	2007/0270968	11/22/2007	Baynham			
	227.	2007/0276498	11/29/2007	Aebi			
	228.	2008/0033440	2/7/2008	Moskowitz			
	229.	2008/0058938	3/6/2008	Mujwid			
	230.	2008/0177307	7/24/2008	Moskowitz			
	231.	2008/0183293	7/31/2008	Parry			
	232.	2008/0249569	10/9/2008	Waugh			
	233.	2008/0249575	10/9/2008	Waugh			
	234.	2008/0249625	10/9/2008	Waugh			
	235.	2008/0281424	11/13/2008	Parry			
	236.	2008/0281425	11/13/2008	Thalgott			
	237.	2009/0030520	1/29/2009	Biederman			
	238.	2009/0080997	3/26/2009	Johnson			
	239.	2009/0105830	4/23/2009	Jones			
	240.	2009/0105831	4/23/2009	Jones			
	241.	2009/0112271	4/30/2009	Moskowitz			
	242.	2009/0112319	4/30/2009	O'Neil			
	243.	2009/0171461	7/2/2009	Conner			

Examiner Signature	Date Considered

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Disclosure Form

Substitute Disclosure Form	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No. 46440-0020005	Application No. 17/408,068
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Moskowitz Family LLC	
		Filing Date August 20, 2021	Group Art Unit OPAP

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Filing Date If Appropriate	Class	Subclass
	244.	2009/0182430	7/16/2009	Tyber			
	245.	2009/0187218	7/23/2009	Schaffhausen			
	246.	2009/0210062	8/20/2009	Thalgott			
	247.	2009/0224023	9/10/2009	Moskowitz			
	248.	2009/0234455	9/17/2009	Moskowitz			
	249.	2009/0292361	11/26/2009	Lopez			
	250.	2009/0299478	12/3/2009	Carls			
	251.	2010/0057208	3/4/2010	Dryer			
	252.	2010/0145460	6/10/2010	McDonough			
	253.	2010/0168862	7/1/2010	Edie			
	254.	2010/0204795	8/12/2010	Greenhalgh			
	255.	2010/0286780	11/11/2010	Dryer			
	256.	2010/0292796	11/18/2010	Greenhalgh			
	257.	2010/0305704	12/2/2010	Messerli			
	258.	2010/0318189	12/16/2010	Edie			
	259.	2010/0324606	12/23/2010	Moskowitz			
	260.	2011/0015742	1/20/2011	Hong			
	261.	2011/0029082	2/3/2011	Hall			
	262.	2011/0054621	3/3/2011	Lim			
	263.	2011/0093074	4/21/2011	Glerum			
	264.	2011/0125269	5/26/2011	Moskowitz			
	265.	2011/0137349	6/9/2011	Moskowitz			
	266.	2011/0172721	7/14/2011	Frigg			
	267.	2011/0172774	7/14/2011	Varela			
	268.	2011/0178600	7/21/2011	Moskowitz			
	269.	2011/0208312	8/25/2011	Moskowitz			
	270.	2011/0288646	11/24/2011	Moskowitz			

Examiner Signature	Date Considered

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U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Filing Date If Appropriate	Class	Subclass
	271.	2011/0295327	12/1/2011	Moskowitz			
	272.	2011/0295371	12/1/2011	Moskowitz			
	273.	2011/0307011	12/15/2011	Moskowitz			
	274.	2011/0319935	12/29/2011	Moskowitz			
	275.	2012/0010714	1/12/2012	Moskowitz			
	276.	2012/0035729	2/9/2012	Glerum			
	277.	2012/0109319	5/3/2012	Perisic			
	278.	2012/0150304	6/14/2012	Glerum			
	279.	2012/0150305	6/14/2012	Glerum			
	280.	2012/0158146	6/21/2012	Glerum			
	281.	2012/0158147	6/21/2012	Glerum			
	282.	2012/0158148	6/21/2012	Glerum			
	283.	2012/0271419	10/25/2012	Marik			
	284.	2012/0271423	10/25/2012	Wallenstein			
	285.	2012/0277865	11/1/2012	Trieu			
	286.	2012/0277870	11/1/2012	Wolters			
	287.	2012/0323330	12/20/2012	Kueenzi			
	288.	2012/0330419	12/27/2012	Moskowitz			
	289.	2013/0018468	1/17/2013	Moskowitz			
	290.	2013/0018469	1/17/2013	Moskowitz			
	291.	2013/0018470	1/17/2013	Moskowitz			
	292.	2013/0023991	1/24/2013	Moskowitz			
	293.	2013/0023992	1/24/2013	Moskowitz			
	294.	2013/0053962	2/28/2013	Moskowitz			
	295.	2013/0060339	3/7/2013	Duffield			
	296.	2013/0073044	3/21/2013	Gamache			
	297.	2013/0144388	6/6/2013	Emery			

Examiner Signature	Date Considered

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		Filing Date August 20, 2021	Group Art Unit OPAP

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Filing Date If Appropriate	Class	Subclass
	298.	2013/0158663	6/20/2013	Miller			
	299.	2013/0158664	6/20/2013	Palmatier			
	300.	2013/0173002	7/4/2013	Moskowitz			
	301.	2013/0211526	8/15/2013	Alheidt			
	302.	2013/0282017	10/24/2013	Moskowitz			
	303.	2014/0088714	3/27/2014	Miller			
	304.	2014/0121774	5/1/2014	Glerum			
	305.	2014/0249628	9/4/2014	Weiman			
	306.	2014/0249629	9/4/2014	Moskowitz			
	307.	2014/0324171	10/30/2014	Glerum			
	308.	2015/0025637	1/22/2015	Moskowitz			
	309.	2015/0105824	4/16/2015	Moskowitz			
	310.	2015/0148847	5/28/2015	Moskowitz			
	311.	2016/0374830	12/29/2016	Moskowitz			
	312.	2017/0252178	9/7/2017	Moskowitz			
	313.	2018/0078383	3/22/2018	Moskowitz			
	314.	2018/0318103	11/8/2018	Moskowitz			
	315.	D626233	10/26/2010	Cipoletti			

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Translation	Class	Subclass
	316.	FR 2727003	5/24/1996	FR	English abstract		
	317.	WO 2004093749	11/4/2004	WO	English abstract		
	318.	WO 2006091503	8/31/2006	WO			

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document

Examiner Signature	Date Considered

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Disclosure Form

Substitute Disclosure Form	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No.	Application No.
Information Disclosure Statement by Applicant (Use several sheets if necessary)		46440-0020005	17/408,068
		Applicant: Moskowitz Family LLC	
(37 CFR §1.98(b))		Filing Date: August 20, 2021	Group Art Unit: OPAP

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	319.	Grob, et al.. "Clinical Experience With the Dynesys Semirigid Fixation System for the Lumbar Spine," SPINE, Vol. 30, No. 3, 2005, pp. 324-331
	320.	Guyer, et al., "Intervertebral Disc Prostheses," Spine, Volume 28, Number 15S, Supp. To 8/1/03, pages S15-S23
	321.	International Search Report and Written Opinion of the International Searching Authority, 03 December 2007, International Application No. PCT/US 07/05005
	322.	International Search Report and Written Opinion of the International Searching Authority, 09 July 2008, International Application No. PCT/US2007021013
	323.	International Search Report and Written Opinion of the International Searching Authority, 21 May 2008, International Application No. PCT/US2007/021015
	324.	Traynelis, "Prosthetics and Biologics: The Wave of the Future," CLINICAL NEUROSURGERY, Volume 50, Proceedings of the Congress of Neurological Surgeons, Philadelphia, PA 2002, Chapter 9, pages 207-219
	325.	Wai, et al., "Disk Replacement Arthroplasties: Can The Success of Hip and Knee Replacements be Repeated in the Spine?," Seminars in Spine Surgery, Vol. 15, No. 4 (December) 2003, pp 473-482

Examiner Signature	Date Considered

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Disclosure Form

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor	:	Ahmnon D. Moskowitz	Art Unit	:	OPAP
Application No.	:	17/408,068	Examiner	:	Central, Docket
Filed	:	August 20, 2021	Conf. No.	:	4713
Title	:	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION			

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Please consider the documents listed on the disclosure form submitted with this statement. Copies of the documents are being submitted with this statement to the extent required under 37 C.F.R. § 1.98(a)(2).

Under 35 U.S.C. § 120, this application relies on the earlier filing date of application number 16/587,993, filed on September 30, 2019. All listed documents were submitted to and/or cited by the Office in the prior application, and so copies of those documents are not provided in this application.

This statement is being filed within three months of the filing date of the application or before the receipt of a first action on the merits.

Please contact the undersigned if there are any questions regarding this statement.

Respectfully submitted,

Date: February 15, 2022

/Kiersten M. Batzli/
Kiersten M. Batzli, Reg. No. 75,476

Customer Number 26191
Fish & Richardson P.C.
Telephone: (612) 337-2538
Facsimile: (877) 769-7945

62790786.doc

Electronic Acknowledgement Receipt	
EFS ID:	45003572
Application Number:	17408068
International Application Number:	
Confirmation Number:	4713
Title of Invention:	EXPANDABLE INTERVERTEBRAL DEVICE
First Named Inventor/Applicant Name:	Ahmnon D. Moskowitz
Customer Number:	26191
Filer:	Kiersten M. Batzli/Callie Benge
Filer Authorized By:	Kiersten M. Batzli
Attorney Docket Number:	46440-0020005
Receipt Date:	15-FEB-2022
Filing Date:	20-AUG-2021
Time Stamp:	16:37:37
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	IDS.pdf	196198 fc92077ba9d137e361431016122b3941272adb49	no	14
Warnings:					

Information:	
This is not an USPTO supplied IDS fillable form	
Total Files Size (in bytes):	196198

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Notice of References Cited	Application/Control No. 17/408,068	Applicant(s)/Patent Under Reexamination Moskowitz et al.	
	Examiner CHRISTINA NEGRELLI-RODRIGUEZ	Art Unit 3773	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-6102950-A	08-2000	Vaccaro; Alex	A61F2/4637	606/247
*	B	US-10426633-B2	10-2019	Moskowitz; Ahmnon D.	A61F2/4611	1/1
	C					
	D					
	E					
	F					
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	I					
	J					
	K					
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	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	Art Unit
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	05/05/2023								
	1	-								
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	18	-								
	19	-								
	20	-								
	21	✓								
	22	✓								
	23	O								
	24	O								
	25	O								
	26	O								
	27	O								
	28	O								
	29	O								
	30	✓								
	31	O								
	32	O								
	33	O								
	34	O								
	35	O								
	36	✓								
	37	✓								
	38	✓								
	39	✓								
	40	✓								

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	Art Unit
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

CPC - Searched*		
Symbol	**Date**	**Examiner**
A61F2/442, 4425, 2002/443, 4455	05/05/2023	CN

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**
623	17.11-17.16	05/05/2023	CN
606	246-249	05/05/2023	CN

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	**Date**	**Examiner**
Inventor Name Search	05/05/2023	CN
Considered all references in circled areas in PE2E search (see PE2E printout)	05/05/2023	CN

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	

Last Name: Sugalski
First Name: Eric

Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
11/536,278	8061305	250	09/28/2006	SUGALSKI, ERIC	LEASH HANDLE WITH AN INTEGRATED COMPARTMENT
12/846,822	[]	160	07/29/2010	SUGALSKI, Eric	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
12/983,107	9901455	150	12/31/2010	SUGALSKI, Eric	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
14/063,197	9848993	150	10/25/2013	SUGALSKI, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
14/597,798	9700324	150	01/15/2015	SUGALSKI, Eric	SURGICAL CLIP APPLICATOR
16/205,674	11191939	150	11/30/2018	SUGALSKI, Eric	STABILIZING CONNECTOR DEVICES FOR VASCULAR ACCESS AND METHODS OF USING THE SAME
29/537,472	[]	161	08/26/2015	SUGALSKI, Eric	WALL MOUNTED PANEL FOR PURIFICATION
61/928,171	[]	159	01/16/2014	SUGALSKI, Eric	SURGICAL CLIP APPLICATOR
62/238,858	[]	159	10/08/2015	SUGALSKI, Eric	WALL PURIFICATION SYSTEMS, METHODS AND KITS
62/631,208	[]	159	02/15/2018	SUGALSKI, Eric	STABILIZING CONNECTOR DEVICES FOR VASCULAR ACCESS AND METHODS OF USING THE SAME
10/551,169	7228589	150	09/28/2005	Sugalski, Eric	UNATTENDED SPOT CLEANING APPARATUS
10/603,568	[]	161	06/25/2003	Sugalski, Eric	Removable light
11/393,373	[]	161	03/30/2006	Sugalski, Eric	Liquid dispensing devices including an attached cleaning element
11/455,952	7481406	150	06/20/2006	Sugalski, Eric	PLASTIC PEGBOARD ASSEMBLY
12/144,338	[]	161	06/23/2008	Sugalski, Eric	GRILL LIGHT WITH AUTOMATIC SWITCH
12/349,019	[]	161	01/06/2009	Sugalski, Eric	Plastic Pegboard Assembly
12/565,367	8545513	150	09/23/2009	Sugalski, Eric	Uterine Manipulator Assemblies and Related Components and Methods
12/842,327	8663270	150	07/23/2010	Sugalski, Eric	Jaw Movement Mechanism and Method for a Surgical Tool
12/842,399	[]	161	07/23/2010	Sugalski, Eric	Surgical Tool with Crossbar Lever
13/138,209	10933191	150	02/01/2012	Sugalski, Eric	INFUSION SET
13/613,927	10018364	150	09/13/2012	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
13/614,068	9255712	150	09/13/2012	Sugalski, Eric	OVEN APPLIANCE WITH DOORS HAVING A TONGUE AND GROOVE INTERFACE
13/614,274	9651265	150	09/13/2012	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
13/614,482	8944536	150	09/13/2012	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/013,216	8740916	150	08/29/2013	Sugalski, Eric	Uterine Manipulator Assemblies and Related Components and Methods
14/578,687	9188346	150	12/22/2014	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/727,896	9562818	250	06/02/2015	Sugalski, Eric	Manipulation Device with Force Read-Out
14/874,766	9328929	150	10/05/2015	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/974,896	9900735	150	12/18/2015	Sugalski, Eric	COMMUNICATION SYSTEMS
15/083,329	9494323	150	03/29/2016	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/291,223	9644848	150	10/12/2016	Sugalski, Eric	AN OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/499,092	9890957	150	04/27/2017	Sugalski, Eric	Oven Appliance with Dual Opening and Closing Doors

Last Name: Sugalski
First Name: Eric

Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
15/820,232	10016284	150	11/21/2017	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/892,461	10508817	150	02/09/2018	Sugalski, Eric	Oven Appliance with Dual Opening and Closing Doors
15/904,617	10022238	150	02/26/2018	Sugalski, Eric	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/025,667	10426633	150	07/02/2018	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/034,545	11116642	150	07/13/2018	Sugalski, Eric	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/079,701	11253013	150	08/24/2018	Sugalski, Eric	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
16/587,993	11096797	150	09/30/2019	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
17/167,565	[]	41	02/04/2021	Sugalski, Eric	INFUSION SET
17/167,651	[]	93	02/04/2021	Sugalski, Eric	INFUSION SET
17/167,692	[]	93	02/04/2021	Sugalski, Eric	INFUSION SET
17/408,068	[]	30	08/20/2021	Sugalski, Eric	EXPANDABLE INTERVERTEBRAL DEVICE
17/471,667	[]	30	09/10/2021	Sugalski, Eric	3-D PRINTED SPINAL IMPLANT
17/512,452	[]	30	10/27/2021	Sugalski, Eric	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
17/517,368	[]	30	11/02/2021	Sugalski, Eric	Stabilizing Connector Devices for Vascular Access and Methods of Using the Same
60/667,187	[]	159	03/30/2005	Sugalski, Eric	Liquid dispensing devices including an attached cleaning element
60/721,553	[]	159	09/29/2005	Sugalski, Eric	Leash handle with integrated compartment
60/757,740	[]	159	01/09/2006	Sugalski, Eric	Pet perch
61/108,211	[]	159	10/24/2008	Sugalski, Eric	Uterine Manipulator Assemblies and Related Components and Methods
61/202,019	[]	159	01/21/2009	Sugalski, Eric	Infusion set
61/718,707	[]	159	10/25/2012	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/801,783	[]	159	03/15/2013	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
62/301,157	[]	159	02/29/2016	Sugalski, Eric	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
62/592,684	[]	159	11/30/2017	Sugalski, Eric	STABILIZING CONNECTOR DEVICES FOR VASCULAR ACCESS AND METHODS OF USING THE SAME
60/845,730	[]	159	09/19/2006	Sugalski, Eric C.	Stroller toy apparatus

Last Name: Sugalski Examiner: NEGRELLIRODRIGUE, CHRISTINA

First Name: Eric

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
10/933,381	7462187	150	09/03/2004	Sugalski, Eric Christopher	POWERED SURGICAL APPARATUS, METHOD OF MANUFACTURING POWERED SURGICAL APPARATUS, AND METHOD OF USING POWERED SURGICAL APPARATUS
11/045,135	8454640	150	01/31/2005	Sugalski, Eric Christopher	Powered surgical apparatus, method of manufacturing powered surgical apparatus, and method of using powered surgical apparatus
11/045,138	[]	161	01/31/2005	Sugalski, Eric Christopher	Powered surgical apparatus, method of manufacturing powered surgical apparatus, and method of using powered surgical apparatus
11/045,255	7473263	150	01/31/2005	Sugalski, Eric Christopher	POWERED SURGICAL APPARATUS, METHOD OF MANUFACTURING POWERED SURGICAL APPARATUS, AND METHOD OF USING POWERED SURGICAL APPARATUS
11/045,256	7799044	250	01/31/2005	Sugalski, Eric Christopher	POWERED SURGICAL APPARATUS, METHOD OF MANUFACTURING POWERED SURGICAL APPARATUS, AND METHOD OF USING POWERED SURGICAL APPARATUS
11/508,063	8616932	150	08/22/2006	Sugalski, Eric Christopher	Collapsible umbrella gym
11/711,787	7416539	150	02/28/2007	Sugalski, Eric Christopher	POWERED SURGICAL APPARATUS, METHOD OF MANUFACTURING POWERED SURGICAL APPARATUS, AND METHOD OF USING POWERED SURGICAL APPARATUS
12/007,756	[]	161	01/15/2008	Sugalski, Eric Christopher	Powered surgical apparatus, method of manufacturing powered surgical apparatus, and method of using powered surgical apparatus
16/834,953	[]	41	03/30/2020	Sugalski, Eric Christopher	CONTROLLED-DOSE MEDICINAL LIQUID VAPING DEVICE
60/366,224	[]	159	03/22/2002	Sugalski, Eric Christopher	Powered surgical apparatus, method of manufacturing powered surgical apparatus, and method of using powered surgical apparatus
62/825,935	[]	159	03/29/2019	Sugalski, Eric Christopher	CONTROLLED-DOSE MEDICINAL OIL VAPING DEVICE

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11/943,334	8535379	150	11/20/2007	MOSKOWITZ, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
12/471,345	8257370	250	05/22/2009	MOSKOWITZ, Ahmnon D.	POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLES, STAPLING GUNS, AND DEVICES FOR SPINAL FUSION
12/846,822	[]	160	07/29/2010	MOSKOWITZ, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
12/983,107	9901455	150	12/31/2010	MOSKOWITZ, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
13/084,543	8353913	150	04/11/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/101,129	8784450	150	05/04/2011	MOSKOWITZ, Ahmnon D.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
13/108,982	9005293	150	05/16/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,150	9867719	150	08/15/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,157	9889022	150	08/15/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,162	9895238	150	08/15/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,168	9907674	150	08/15/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/621,243	[]	160	09/15/2012	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
13/741,361	9301854	150	01/14/2013	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION

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13/893,326	9056018	150	05/13/2013	MOSKOWITZ, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
14/049,743	10842357	150	10/09/2013	MOSKOWITZ, Ahmnon D.	ENDOSCOPIC SURGICAL SYSTEM
14/063,197	9848993	150	10/25/2013	MOSKOWITZ, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
14/150,758	[]	161	01/08/2014	MOSKOWITZ, Ahmnon D.	GAME WITH PARAMETERS AND VARIABLES CORRESPONDING TO UNITS OF TIME
14/257,650	9622875	150	04/21/2014	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
14/332,351	9898895	250	07/15/2014	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
14/336,909	[]	160	07/21/2014	MOSKOWITZ, Ahmnon D.	CERVICAL SPINOUS PROCESS STAPLE
14/337,210	10098672	150	07/21/2014	MOSKOWITZ, Ahmnon D.	CERVICAL SPINOUS PROCESS STAPLE
14/460,330	[]	161	08/14/2014	MOSKOWITZ, Ahmnon D.	SYSTEMS AND APPARATUSES FOR IMPROVED VISUALIZATION OF ENDOSCOPIC IMAGES
14/467,006	[]	161	08/23/2014	MOSKOWITZ, Ahmnon D.	LOTTERY GAME BASED ON DATES AND METHOD OF PLAYING A LOTTERY GAME BASED ON DATES
14/668,908	9824544	150	03/25/2015	MOSKOWITZ, Ahmnon D.	METHODS OF PLAYING WAGERING GAMES WITH THE KENO SYSTEM
14/685,374	[]	160	04/13/2015	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
14/739,327	9867712	250	06/15/2015	MOSKOWITZ, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/054,926	9848998	150	02/26/2016	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/162,541	9965924	150	05/23/2016	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING MULTI-ZONE 21
15/397,198	10098678	150	01/03/2017	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM

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15/470,066	[]	160	03/27/2017	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
15/490,107	10064738	150	04/18/2017	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
15/657,811	10186108	150	07/24/2017	MOSKOWITZ, Ahmnon D.	Wagering Game Apparatuses, Methods and Systems for Slot Games with a "21" Theme and Video Three Card Poker featuring Multiple Pay Lines with Progressive Jackpots
15/722,089	10930119	150	10/02/2017	MOSKOWITZ, Ahmnon D.	SYSTEMS AND A METHODS FOR PLAYING MULTI-ZONE TWENTY ONE (21) ACROSS ELECTORNIC GAMING SYSTEMS AND SCRATCH OFF TICKETS
15/945,561	10269206	150	04/04/2018	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
16/277,272	10713884	150	02/15/2019	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
16/457,946	11127261	150	06/29/2019	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
17/182,514	[]	41	02/23/2021	MOSKOWITZ, Ahmnon D.	SYSTEMS AND METHODS FOR PLAYING MULTI-ZONE TWENTY ONE (21) ACROSS ELECTRONIC GAMING SYSTEMS
17/474,410	[]	41	09/14/2021	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
18/141,731	[]	19	[]	MOSKOWITZ, Ahmnon D.	SYSTEMS AND METHODS FOR PLAYING MULTI-ZONE TWENTY ONE (21) ACROSS ELECTRONIC GAMING SYSTEMS
62/696,503	[]	159	07/11/2018	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
13/103,994	9603713	150	05/09/2011	Moskowitz, Ahmnon D	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
09/849,521	[]	161	05/07/2001	Moskowitz, Ahmnon D.	Hands free umbrella
11/842,855	7942903	150	08/21/2007	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
12/054,335	7972363	150	03/24/2008	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION

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12/471,340	8734516	150	05/22/2009	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
12/957,776	9888918	250	12/01/2010	Moskowitz, Ahmnon D.	HORIZONTAL-TRANSVERTEBRAL CURVILINEAR NAIL-SCREWS WITH INTER-LOCKING RIGID OR JOINTED FLEXIBLE RODS FOR SPINAL FUSION
13/101,135	9675385	150	05/04/2011	Moskowitz, Ahmnon D.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
13/401,829	9744052	150	02/21/2012	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,323	9814601	150	03/12/2012	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,335	9532821	150	03/12/2012	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/678,401	10238505	150	08/16/2017	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/693,594	10149703	150	09/01/2017	Moskowitz, Ahmnon D.	CERVICAL SPINOUS PROCESS STAPLE
15/707,684	10424166	150	09/18/2017	Moskowitz, Ahmnon D.	METHODS OF PLAYING WAGERING GAMES WITH THE KENO SYSTEM
15/791,484	10376383	150	10/24/2017	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/820,232	10016284	150	11/21/2017	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/862,016	10028740	150	01/04/2018	Moskowitz, Ahmnon D.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
15/870,406	10610371	150	01/12/2018	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/894,471	10390969	150	02/12/2018	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/904,617	10022238	150	02/26/2018	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
15/944,117	10537442	150	04/03/2018	Moskowitz, Ahmnon D.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM

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15/944,221	10376376	150	04/03/2018	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/976,340	10307268	150	05/10/2018	Moskowitz, Ahmnon D.	INTERVERTEBRAL EXPANDABLE IMPLANT
16/018,354	10376386	150	06/26/2018	Moskowitz, Ahmnon D.	SPINAL STAPLE
16/018,798	10369003	150	06/26/2018	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
16/025,667	10426633	150	07/02/2018	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/034,545	11116642	150	07/13/2018	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/042,163	10258329	150	07/23/2018	Moskowitz, Ahmnon D.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/100,410	10603183	150	08/10/2018	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/160,824	10842542	150	10/15/2018	Moskowitz, Ahmnon D.	SPINAL BONE FUSION SYSTEM
16/160,937	10722274	150	10/15/2018	Moskowitz, Ahmnon D.	Cervical Spinous Process Staple
16/280,684	10478319	150	02/20/2019	Moskowitz, Ahmnon D.	SYSTEM WITH TOOL ASSEMBLY AND EXPANDABLE SPINAL IMPLANT
16/362,294	10925753	150	03/22/2019	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/384,232	[]	161	04/15/2019	Moskowitz, Ahmnon D.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/532,033	11141288	150	08/05/2019	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/564,946	11024127	150	09/09/2019	Moskowitz, Ahmnon D.	METHODS OF PLAYING WAGERING GAMES WITH THE KENO SYSTEM
16/587,993	11096797	150	09/30/2019	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/744,755	11376136	150	01/16/2020	Moskowitz, Ahmnon D.	EXPANDABLE SPINAL IMPLANT AND TOOL SYSTEM
16/829,246	11229525	150	03/25/2020	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION

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16/841,355	11478359	150	04/06/2020	Moskowitz, Ahmnon D.	ARTIFICIAL DISC SYSTEM
16/952,241	[]	89	11/19/2020	Moskowitz, Ahmnon D.	SPINAL BONE FUSION SYSTEM
16/953,797	[]	71	11/20/2020	Moskowitz, Ahmnon D.	Endoscopic Surgical System
17/129,149	11083591	150	12/21/2020	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/180,021	[]	30	02/19/2021	Moskowitz, Ahmnon D.	SPINAL FUSION IMPLANT
17/181,706	[]	30	02/22/2021	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/393,672	[]	30	08/04/2021	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/408,068	[]	30	08/20/2021	Moskowitz, Ahmnon D.	EXPANDABLE INTERVERTEBRAL DEVICE
17/471,667	[]	30	09/10/2021	Moskowitz, Ahmnon D.	3-D PRINTED SPINAL IMPLANT
17/492,996	[]	30	10/04/2021	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/577,722	[]	30	01/18/2022	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
17/706,873	[]	41	03/29/2022	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
60/208,070	[]	159	05/31/2000	Moskowitz, Ahmnon D.	Hands free umbrella
61/264,648	[]	159	11/25/2009	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/265,752	[]	159	12/01/2009	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/306,926	[]	159	02/22/2010	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/419,679	[]	159	12/03/2010	Moskowitz, Ahmnon D.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
61/425,749	[]	159	12/21/2010	Moskowitz, Ahmnon D.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
61/445,034	[]	159	02/21/2011	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
61/451,579	[]	159	03/10/2011	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL LEAF SPRING- RATCHET SCREW LOCKING MECHANISM

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61/451,582	[]	159	03/10/2011	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
61/712,251	[]	159	10/10/2012	Moskowitz, Ahmnon D.	ENDOSCOPIC SURGICAL SYSTEM
61/718,707	[]	159	10/25/2012	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/750,350	[]	159	01/08/2013	Moskowitz, Ahmnon D.	GAME WITH PARAMETERS AND VARIABLES CORRESPONDING TO UNITS OF TIME
61/801,783	[]	159	03/15/2013	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/846,608	[]	159	07/15/2013	Moskowitz, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
61/866,038	[]	159	08/14/2013	Moskowitz, Ahmnon D.	ENDOSCOPIC VIEWING APPARATUSES
61/869,645	[]	159	08/23/2013	Moskowitz, Ahmnon D.	LOTTERY GAME BASED ON DATES AND METHOD OF PLAYING A LOTTERY GAME BASED ON DATES
61/970,249	[]	159	03/25/2014	Moskowitz, Ahmnon D.	Methods of playing wagering games with the Keno system
62/165,870	[]	159	05/22/2015	Moskowitz, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING MULTI-ZONE 21
62/403,195	[]	159	10/02/2016	Moskowitz, Ahmnon D.	SYSTEM AND A METHOD FOR PLAYING NUMERICAL CARD GAMES

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11/737,846	7854765	250	04/20/2007	MOSKOWITZ, Mosheh T.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
11/943,334	8535379	150	11/20/2007	MOSKOWITZ, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
12/347,990	7951180	150	12/31/2008	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
12/846,822	[]	160	07/29/2010	MOSKOWITZ, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
12/945,835	9492282	250	11/13/2010	MOSKOWITZ, Mosheh T.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
12/983,107	9901455	150	12/31/2010	MOSKOWITZ, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
13/084,543	8353913	150	04/11/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/101,129	8784450	150	05/04/2011	MOSKOWITZ, Mosheh T.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
13/101,135	9675385	150	05/04/2011	MOSKOWITZ, Mosheh T.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
13/108,982	9005293	150	05/16/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,150	9867719	150	08/15/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,157	9889022	150	08/15/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,162	9895238	150	08/15/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION

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13/210,168	9907674	150	08/15/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/596,038	9801728	250	08/27/2012	MOSKOWITZ, Mosheh T.	TOOLS FOR IMPLANTATION AND EXTRACTION OF ARTICIAL DISCS
13/621,243	[]	160	09/15/2012	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
13/741,361	9301854	150	01/14/2013	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/893,326	9056018	150	05/13/2013	MOSKOWITZ, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
14/049,743	10842357	150	10/09/2013	MOSKOWITZ, Mosheh T.	ENDOSCOPIC SURGICAL SYSTEM
14/063,197	9848993	150	10/25/2013	MOSKOWITZ, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
14/257,650	9622875	150	04/21/2014	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
14/299,711	10016225	150	06/09/2014	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
14/336,909	[]	160	07/21/2014	MOSKOWITZ, Mosheh T.	CERVICAL SPINOUS PROCESS STAPLE
14/337,210	10098672	150	07/21/2014	MOSKOWITZ, Mosheh T.	CERVICAL SPINOUS PROCESS STAPLE
14/460,330	[]	161	08/14/2014	MOSKOWITZ, Mosheh T.	SYSTEMS AND APPARATUSES FOR IMPROVED VISUALIZATION OF ENDOSCOPIC IMAGES
14/685,374	[]	160	04/13/2015	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION

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14/739,327	9867712	250	06/15/2015	MOSKOWITZ, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/054,926	9848998	150	02/26/2016	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/350,352	10123881	150	11/14/2016	MOSKOWITZ, Mosheh T.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
15/397,198	10098678	150	01/03/2017	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/470,066	[]	160	03/27/2017	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
15/490,107	10064738	150	04/18/2017	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
11/019,351	7083650	250	12/23/2004	Moskowitz, Mosheh	ARTIFICIAL EXPANSILE TOTAL LUMBAR AND THORACIC DISCS FOR POSTERIOR PLACEMENT WITHOUT SUPPLEMENTAL INSTRUMENTATION AND ITS ADAPTATION FOR ANTERIOR PLACEMENT OF ARTIFICIAL CERVICAL, THORACIC AND LUMBAR DISCS
15/678,401	10238505	150	08/16/2017	Moskowitz, Mosheh	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
09/849,521	[]	161	05/07/2001	Moskowitz, Mosheh T.	Hands free umbrella
10/964,633	[]	161	10/15/2004	Moskowitz, Mosheh T.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs
11/208,644	7704279	250	08/23/2005	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION

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11/487,415	7854766	250	07/17/2006	Moskowitz, Mosheh T.	ARTIFICIAL TOTAL LUMBAR DISC FOR UNILATERAL SAFE AND SIMPLE POSTERIOR PLACEMENT IN THE LUMBAR SPINE, AND REMOVABLE BIFUNCTIONAL SCREW WHICH DRIVES VERTICAL SLIDING EXPANSILE PLATE EXPANSION, AND INTERPLATE WIDENING,AND ANGLED TRACTION SPIKES
11/536,815	7846188	250	09/29/2006	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
11/684,787	8251891	250	03/12/2007	Moskowitz, Mosheh T.	TOTALLY WIRELESS ELECTRONICALLY EMBEDDED ACTION-ENDED ENDOSCOPE UTILIZING DIFFERENTIAL DIRECTIONAL ILLUMINATION WITH DIGITALLY CONTROLLED MIRRORS AND/OR PRISMS
11/842,855	7942903	150	08/21/2007	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
12/054,335	7972363	150	03/24/2008	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
12/471,340	8734516	150	05/22/2009	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
12/471,345	8257370	250	05/22/2009	Moskowitz, Mosheh T.	POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLES, STAPLING GUNS, AND DEVICES FOR SPINAL FUSION
12/868,451	8747444	250	08/25/2010	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
12/889,328	10130493	150	09/23/2010	Moskowitz, Mosheh T.	ARTIFICIAL TOTAL LUMBAR DISC FOR UNILATERAL SAFE AND SIMPLE POSTERIOR PLACEMENT IN THE LUMBAR SPINE, AND REMOVEABLE BIFUNCTIONAL SCREW WHICH DRIVES VERTICAL SLIDING EXPANSILE PLATE EXPANSION, AND INTERPLATE WIDENING, AND ANGLED TRACTION SPIKES
12/957,776	9888918	250	12/01/2010	Moskowitz, Mosheh T.	HORIZONTAL-TRANSVERTEBRAL CURVILINEAR NAIL-SCREWS WITH INTER-LOCKING RIGID OR JOINTED FLEXIBLE RODS FOR SPINAL FUSION

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13/093,812	9924940	150	04/25/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
13/103,994	9603713	150	05/09/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
13/401,829	9744052	150	02/21/2012	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,323	9814601	150	03/12/2012	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,335	9532821	150	03/12/2012	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/693,594	10149703	150	09/01/2017	Moskowitz, Mosheh T.	CERVICAL SPINOUS PROCESS STAPLE
15/724,015	10695187	150	10/03/2017	Moskowitz, Mosheh T.	HAND MANIPULATED ENDOSCOPIC MEDICAL DEVICE
15/791,484	10376383	150	10/24/2017	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/820,232	10016284	150	11/21/2017	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/862,016	10028740	150	01/04/2018	Moskowitz, Mosheh T.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
15/870,406	10610371	150	01/12/2018	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/894,471	10390969	150	02/12/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/896,130	10076367	150	02/14/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
15/904,617	10022238	150	02/26/2018	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT

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15/934,614	10537367	150	03/23/2018	Moskowitz, Mosheh T.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/934,622	10251643	150	03/23/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
15/944,117	10537442	150	04/03/2018	Moskowitz, Mosheh T.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/944,221	10376376	150	04/03/2018	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/976,340	10307268	150	05/10/2018	Moskowitz, Mosheh T.	INTERVERTEBRAL EXPANDABLE IMPLANT
16/018,354	10376386	150	06/26/2018	Moskowitz, Mosheh T.	SPINAL STAPLE
16/018,798	10369003	150	06/26/2018	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
16/018,904	10238383	150	06/26/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
16/025,667	10426633	150	07/02/2018	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/034,545	11116642	150	07/13/2018	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/042,163	10258329	150	07/23/2018	Moskowitz, Mosheh T.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/100,410	10603183	150	08/10/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/134,364	10952867	150	09/18/2018	Moskowitz, Mosheh T.	Electronically Assisted Medical Device
16/160,824	10842542	150	10/15/2018	Moskowitz, Mosheh T.	SPINAL BONE FUSION SYSTEM
16/160,937	10722274	150	10/15/2018	Moskowitz, Mosheh T.	Cervical Spinous Process Staple
16/194,976	11135072	150	11/19/2018	Moskowitz, Mosheh T.	ARTIFICIAL DISC SYSTEM
16/280,684	10478319	150	02/20/2019	Moskowitz, Mosheh T.	SYSTEM WITH TOOL ASSEMBLY AND EXPANDABLE SPINAL IMPLANT

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16/362,152	10952723	150	03/22/2019	Moskowitz, Mosheh T.	ARTIFICIAL INTERVERTEBRAL IMPLANT
16/362,294	10925753	150	03/22/2019	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/384,232	[]	161	04/15/2019	Moskowitz, Mosheh T.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/532,033	11141288	150	08/05/2019	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/587,993	11096797	150	09/30/2019	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/673,806	[]	61	11/04/2019	Moskowitz, Mosheh T.	SYSTEMS AND METHODS FOR AUTONOMOUS ROBOTIC SURGERY
16/744,716	11357551	150	01/16/2020	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
16/744,755	11376136	150	01/16/2020	Moskowitz, Mosheh T.	EXPANDABLE SPINAL IMPLANT AND TOOL SYSTEM
16/829,246	11229525	150	03/25/2020	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/841,355	11478359	150	04/06/2020	Moskowitz, Mosheh T.	ARTIFICIAL DISC SYSTEM
16/952,241	[]	89	11/19/2020	Moskowitz, Mosheh T.	SPINAL BONE FUSION SYSTEM
16/953,797	[]	71	11/20/2020	Moskowitz, Mosheh T.	Endoscopic Surgical System
17/129,149	11083591	150	12/21/2020	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/180,021	[]	30	02/19/2021	Moskowitz, Mosheh T.	SPINAL FUSION IMPLANT
17/181,706	[]	30	02/22/2021	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/208,640	[]	61	03/22/2021	Moskowitz, Mosheh T.	ARTIFICIAL EXPANSIBLE IMPLANT SYSTEMS
17/208,669	11491021	150	03/22/2021	Moskowitz, Mosheh T.	ELECTRONICALLY ASSISTED MEDICAL DEVICE
17/393,672	[]	30	08/04/2021	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/408,068	[]	30	08/20/2021	Moskowitz, Mosheh T.	EXPANDABLE INTERVERTEBRAL DEVICE
17/471,667	[]	30	09/10/2021	Moskowitz, Mosheh T.	3-D PRINTED SPINAL IMPLANT
17/487,360	[]	93	09/28/2021	Moskowitz, Mosheh T.	ARTIFICIAL DISC SYSTEM

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17/492,996	[]	30	10/04/2021	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/577,722	[]	30	01/18/2022	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
17/681,231	11452619	150	02/25/2022	Moskowitz, Mosheh T.	ARTIFICIAL DISC SYSTEM
17/706,873	[]	41	03/29/2022	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
17/752,330	[]	30	05/24/2022	Moskowitz, Mosheh T.	Intervertebral spinal implant systems
17/981,686	[]	30	11/07/2022	Moskowitz, Mosheh T.	ELECTRONICALLY ASSISTED MEDICAL DEVICE
60/208,070	[]	159	05/31/2000	Moskowitz, Mosheh T.	Hands free umbrella
60/670,231	[]	159	04/12/2005	Moskowitz, Mosheh T.	Stand-alone expansile intervertebral body fusion device utilizing bi-directional fixating transvertebral body screws or pneumatically driven expansile spiked telescoping cylinders with optional motion-calibrating interarticulating joint stapling device
60/673,761	[]	159	04/22/2005	Moskowitz, Mosheh T.	Spinal disc microchip implant providing dynamic disc motion in response to variable axial loading forces
60/788,720	[]	159	04/04/2006	Moskowitz, Mosheh T.	Posteriorly placed total lumbar atrificial disc with novel removeable bifunctional screw which drives vertical sliding expansile plate expansion, and interplate widening, and novel angled traction spikes, and interchangeable cores
60/793,329	[]	159	04/20/2006	Moskowitz, Mosheh T.	Electronically controlled artificial intervertebral disc with linear actuation systems and an active closed-loop microchip responding to variable human locomotor activity and spinal motion
61/264,648	[]	159	11/25/2009	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/265,752	[]	159	12/01/2009	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/306,926	[]	159	02/22/2010	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/419,679	[]	159	12/03/2010	Moskowitz, Mosheh T.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
61/425,749	[]	159	12/21/2010	Moskowitz, Mosheh T.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
61/445,034	[]	159	02/21/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
61/451,579	[]	159	03/10/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL LEAF SPRING- RATCHET SCREW LOCKING MECHANISM

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61/451,582	[]	159	03/10/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
61/712,251	[]	159	10/10/2012	Moskowitz, Mosheh T.	ENDOSCOPIC SURGICAL SYSTEM
61/718,707	[]	159	10/25/2012	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/801,783	[]	159	03/15/2013	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/866,038	[]	159	08/14/2013	Moskowitz, Mosheh T.	ENDOSCOPIC VIEWING APPARATUSES
62/815,605	[]	159	03/08/2019	Moskowitz, Mosheh T.	Systems and Methods for Autonomous Robotic Surgery
63/411,943	[]	20	09/30/2022	Moskowitz, Mosheh T.	ASSISTIVE DEVICE AND METHOD

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13/596,038	9801728	250	08/27/2012	MOSKOWITZ, Nathan	TOOLS FOR IMPLANTATION AND EXTRACTION OF ARTICIAL DISCS
11/943,334	8535379	150	11/20/2007	MOSKOWITZ, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
12/347,990	7951180	150	12/31/2008	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
12/846,822	[]	160	07/29/2010	MOSKOWITZ, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
12/983,107	9901455	150	12/31/2010	MOSKOWITZ, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
13/084,543	8353913	150	04/11/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/101,129	8784450	150	05/04/2011	MOSKOWITZ, Nathan C.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
13/108,982	9005293	150	05/16/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,150	9867719	150	08/15/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,157	9889022	150	08/15/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,162	9895238	150	08/15/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,168	9907674	150	08/15/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/621,243	[]	160	09/15/2012	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/741,361	9301854	150	01/14/2013	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/893,326	9056018	150	05/13/2013	MOSKOWITZ, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
14/049,743	10842357	150	10/09/2013	MOSKOWITZ, Nathan C.	ENDOSCOPIC SURGICAL SYSTEM
14/063,197	9848993	150	10/25/2013	MOSKOWITZ, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
14/257,650	9622875	150	04/21/2014	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
14/299,711	10016225	150	06/09/2014	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
14/336,909	[]	160	07/21/2014	MOSKOWITZ, Nathan C.	CERVICAL SPINOUS PROCESS STAPLE
14/337,210	10098672	150	07/21/2014	MOSKOWITZ, Nathan C.	CERVICAL SPINOUS PROCESS STAPLE
14/460,330	[]	161	08/14/2014	MOSKOWITZ, Nathan C.	SYSTEMS AND APPARATUSES FOR IMPROVED VISUALIZATION OF ENDOSCOPIC IMAGES
14/685,374	[]	160	04/13/2015	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
14/739,327	9867712	250	06/15/2015	MOSKOWITZ, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/054,926	9848998	150	02/26/2016	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/350,352	10123881	150	11/14/2016	MOSKOWITZ, Nathan C.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS

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15/397,198	10098678	150	01/03/2017	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/470,066	[]	160	03/27/2017	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
15/490,107	10064738	150	04/18/2017	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
11/487,415	7854766	250	07/17/2006	Moskowitz, Nathan	ARTIFICIAL TOTAL LUMBAR DISC FOR UNILATERAL SAFE AND SIMPLE POSTERIOR PLACEMENT IN THE LUMBAR SPINE, AND REMOVABLE BIFUNCTIONAL SCREW WHICH DRIVES VERTICAL SLIDING EXPANSILE PLATE EXPANSION, AND INTERPLATE WIDENING,AND ANGLED TRACTION SPIKES
11/684,787	8251891	250	03/12/2007	Moskowitz, Nathan	TOTALLY WIRELESS ELECTRONICALLY EMBEDDED ACTION-ENDED ENDOSCOPE UTILIZING DIFFERENTIAL DIRECTIONAL ILLUMINATION WITH DIGITALLY CONTROLLED MIRRORS AND/OR PRISMS
12/868,451	8747444	250	08/25/2010	Moskowitz, Nathan	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
12/889,328	10130493	150	09/23/2010	Moskowitz, Nathan	ARTIFICIAL TOTAL LUMBAR DISC FOR UNILATERAL SAFE AND SIMPLE POSTERIOR PLACEMENT IN THE LUMBAR SPINE, AND REMOVEABLE BIFUNCTIONAL SCREW WHICH DRIVES VERTICAL SLIDING EXPANSILE PLATE EXPANSION, AND INTERPLATE WIDENING, AND ANGLED TRACTION SPIKES
60/788,720	[]	159	04/04/2006	Moskowitz, Nathan	Posteriorly placed total lumbar atrificial disc with novel removeable bifunctional screw which drives vertical sliding expansile plate expansion, and interplate widening, and novel angled traction spikes, and interchangeable cores
60/793,329	[]	159	04/20/2006	Moskowitz, Nathan	Electronically controlled artificial intervertebral disc with linear actuation systems and an active closed-loop microchip responding to variable human locomotor activity and spinal motion
09/849,521	[]	161	05/07/2001	Moskowitz, Nathan C.	Hands free umbrella
10/964,633	[]	161	10/15/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs

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11/019,351	7083650	250	12/23/2004	Moskowitz, Nathan C.	ARTIFICIAL EXPANSILE TOTAL LUMBAR AND THORACIC DISCS FOR POSTERIOR PLACEMENT WITHOUT SUPPLEMENTAL INSTRUMENTATION AND ITS ADAPTATION FOR ANTERIOR PLACEMENT OF ARTIFICIAL CERVICAL, THORACIC AND LUMBAR DISCS
11/208,644	7704279	250	08/23/2005	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
11/536,815	7846188	250	09/29/2006	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
11/737,846	7854765	250	04/20/2007	Moskowitz, Nathan C.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
11/842,855	7942903	150	08/21/2007	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
12/054,335	7972363	150	03/24/2008	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
12/471,340	8734516	150	05/22/2009	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
12/945,835	9492282	250	11/13/2010	Moskowitz, Nathan C.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
12/957,776	9888918	250	12/01/2010	Moskowitz, Nathan C.	HORIZONTAL-TRANSVERTEBRAL CURVILINEAR NAIL-SCREWS WITH INTER-LOCKING RIGID OR JOINTED FLEXIBLE RODS FOR SPINAL FUSION
13/093,812	9924940	150	04/25/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/101,135	9675385	150	05/04/2011	Moskowitz, Nathan C.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
13/103,994	9603713	150	05/09/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
13/401,829	9744052	150	02/21/2012	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,323	9814601	150	03/12/2012	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,335	9532821	150	03/12/2012	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/678,401	10238505	150	08/16/2017	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/693,594	10149703	150	09/01/2017	Moskowitz, Nathan C.	CERVICAL SPINOUS PROCESS STAPLE
15/724,015	10695187	150	10/03/2017	Moskowitz, Nathan C.	HAND MANIPULATED ENDOSCOPIC MEDICAL DEVICE
15/791,484	10376383	150	10/24/2017	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/820,232	10016284	150	11/21/2017	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/862,016	10028740	150	01/04/2018	Moskowitz, Nathan C.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
15/870,406	10610371	150	01/12/2018	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/894,471	10390969	150	02/12/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/896,130	10076367	150	02/14/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
15/904,617	10022238	150	02/26/2018	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
15/934,614	10537367	150	03/23/2018	Moskowitz, Nathan C.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/934,622	10251643	150	03/23/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
15/944,117	10537442	150	04/03/2018	Moskowitz, Nathan C.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/944,221	10376376	150	04/03/2018	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/976,340	10307268	150	05/10/2018	Moskowitz, Nathan C.	INTERVERTEBRAL EXPANDABLE IMPLANT
16/018,354	10376386	150	06/26/2018	Moskowitz, Nathan C.	SPINAL STAPLE
16/018,798	10369003	150	06/26/2018	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
16/018,904	10238383	150	06/26/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
16/025,667	10426633	150	07/02/2018	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/034,545	11116642	150	07/13/2018	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/042,163	10258329	150	07/23/2018	Moskowitz, Nathan C.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/100,410	10603183	150	08/10/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/134,364	10952867	150	09/18/2018	Moskowitz, Nathan C.	Electronically Assisted Medical Device
16/160,824	10842542	150	10/15/2018	Moskowitz, Nathan C.	SPINAL BONE FUSION SYSTEM
16/160,937	10722274	150	10/15/2018	Moskowitz, Nathan C.	Cervical Spinous Process Staple
16/194,976	11135072	150	11/19/2018	Moskowitz, Nathan C.	ARTIFICIAL DISC SYSTEM

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16/280,684	10478319	150	02/20/2019	Moskowitz, Nathan C.	SYSTEM WITH TOOL ASSEMBLY AND EXPANDABLE SPINAL IMPLANT
16/362,152	10952723	150	03/22/2019	Moskowitz, Nathan C.	ARTIFICIAL INTERVERTEBRAL IMPLANT
16/362,294	10925753	150	03/22/2019	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/384,232	[]	161	04/15/2019	Moskowitz, Nathan C.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/532,033	11141288	150	08/05/2019	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/587,993	11096797	150	09/30/2019	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/673,806	[]	61	11/04/2019	Moskowitz, Nathan C.	SYSTEMS AND METHODS FOR AUTONOMOUS ROBOTIC SURGERY
16/744,716	11357551	150	01/16/2020	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
16/744,755	11376136	150	01/16/2020	Moskowitz, Nathan C.	EXPANDABLE SPINAL IMPLANT AND TOOL SYSTEM
16/829,246	11229525	150	03/25/2020	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/841,355	11478359	150	04/06/2020	Moskowitz, Nathan C.	ARTIFICIAL DISC SYSTEM
16/952,241	[]	89	11/19/2020	Moskowitz, Nathan C.	SPINAL BONE FUSION SYSTEM
16/953,797	[]	71	11/20/2020	Moskowitz, Nathan C.	Endoscopic Surgical System
17/129,149	11083591	150	12/21/2020	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/180,021	[]	30	02/19/2021	Moskowitz, Nathan C.	SPINAL FUSION IMPLANT
17/181,706	[]	30	02/22/2021	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/208,640	[]	61	03/22/2021	Moskowitz, Nathan C.	ARTIFICIAL EXPANSIBLE IMPLANT SYSTEMS
17/208,669	11491021	150	03/22/2021	Moskowitz, Nathan C.	ELECTRONICALLY ASSISTED MEDICAL DEVICE
17/393,672	[]	30	08/04/2021	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/408,068	[]	30	08/20/2021	Moskowitz, Nathan C.	EXPANDABLE INTERVERTEBRAL DEVICE
17/471,667	[]	30	09/10/2021	Moskowitz, Nathan C.	3-D PRINTED SPINAL IMPLANT
17/487,360	[]	93	09/28/2021	Moskowitz, Nathan C.	ARTIFICIAL DISC SYSTEM

Last Name: Moskowitz
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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
17/492,996	[]	30	10/04/2021	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/577,722	[]	30	01/18/2022	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
17/681,231	11452619	150	02/25/2022	Moskowitz, Nathan C.	ARTIFICIAL DISC SYSTEM
17/706,873	[]	41	03/29/2022	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
17/752,330	[]	30	05/24/2022	Moskowitz, Nathan C.	Intervertebral spinal implant systems
17/981,686	[]	30	11/07/2022	Moskowitz, Nathan C.	ELECTRONICALLY ASSISTED MEDICAL DEVICE
60/208,070	[]	159	05/31/2000	Moskowitz, Nathan C.	Hands free umbrella
60/570,098	[]	159	05/12/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement
60/570,837	[]	159	05/14/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation (adaptation for anterior cervical, thoracic and lumbar devices available)
60/572,468	[]	159	05/20/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs
60/573,346	[]	159	05/24/2004	Moskowitz, Nathan C.	Artificial expansible total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs
60/578,319	[]	159	06/10/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs
60/670,231	[]	159	04/12/2005	Moskowitz, Nathan C.	Stand-alone expansile intervertebral body fusion device utilizing bi-directional fixating transvertebral body screws or pneumatically driven expansile spiked telescoping cylinders with optional motion-calibrating interarticulating joint stapling device
60/673,761	[]	159	04/22/2005	Moskowitz, Nathan C.	Spinal disc microchip implant providing dynamic disc motion in response to variable axial loading forces
61/264,648	[]	159	11/25/2009	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/265,752	[]	159	12/01/2009	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/306,926	[]	159	02/22/2010	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/419,679	[]	159	12/03/2010	Moskowitz, Nathan C.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION

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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
61/425,749	[]	159	12/21/2010	Moskowitz, Nathan C.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
61/445,034	[]	159	02/21/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
61/451,579	[]	159	03/10/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL LEAF SPRING- RATCHET SCREW LOCKING MECHANISM
61/451,582	[]	159	03/10/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
61/712,251	[]	159	10/10/2012	Moskowitz, Nathan C.	ENDOSCOPIC SURGICAL SYSTEM
61/718,707	[]	159	10/25/2012	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/801,783	[]	159	03/15/2013	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/866,038	[]	159	08/14/2013	Moskowitz, Nathan C.	ENDOSCOPIC VIEWING APPARATUSES
62/815,605	[]	159	03/08/2019	Moskowitz, Nathan C.	Systems and Methods for Autonomous Robotic Surgery
63/411,943	[]	20	09/30/2022	Moskowitz, Nathan C.	ASSISTIVE DEVICE AND METHOD

Bibliographic Data

Application No: 17/408,068

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /CHRISTINA NEGRELLIRODRIGUEZ/ (Examiner's Signature) (Initials)

Title: EXPANDABLE INTERVERTEBRAL DEVICE

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
08/20/2021	623	3773	46440-0020005
RULE			

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CONTINUING DATA

This application is a CON of 16587993 09/30/2019 PAT 11096797

16587993 is a CON of 16025667 07/02/2018 PAT 10426633

16025667 is a CON of 15820232 11/21/2017 PAT 10016284

15820232 is a CON of 14063197 10/25/2013 PAT 9848993

14063197 has PRO of 61801783 03/15/2013

14063197 is a CIP of 13741361 01/14/2013 PAT 9301854

14063197 has PRO of 61718707 10/25/2012

14063197 is a CIP of 13210150 08/15/2011 PAT 9867719

14063197 is a CIP of 13210157 08/15/2011 PAT 9889022

14063197 is a CIP of 13210168 08/15/2011 PAT 9907674

14063197 is a CIP of 13210162 08/15/2011 PAT 9895238

13741361 is a CON of 13108982 05/16/2011 PAT 9005293

13210150 is a CON of 13108982 05/16/2011 PAT 9005293

13210157 is a CON of 13108982 05/16/2011 PAT 9005293

13210162 is a CON of 13108982 05/16/2011 PAT 9005293

13210168 is a CON of 13108982 05/16/2011 PAT 9005293

13210162 is a CON of 13084543 04/11/2011 PAT 8353913

13741361 is a CON of 13084543 04/11/2011 PAT 8353913

13210157 is a CON of 13084543 04/11/2011 PAT 8353913

13210168 is a CON of 13084543 04/11/2011 PAT 8353913

13210150 is a CON of 13084543 04/11/2011 PAT 8353913

13108982 is a CON of 11842855 08/21/2007 PAT 7942903

13084543 is a CON of 11842855 08/21/2007 PAT 7942903

11842855 is a CIP of 11536815 09/29/2006 PAT 7846188

11536815 is a CIP of 11208644 08/23/2005 PAT 7704279

11208644 has PRO of 60670231 04/12/2005

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

08/30/2021

**** SMALL ENTITY ****

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FILING FEE RECEIVED

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*all references in circled areas have been considered

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	1	"17408068"	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 10:35 AM
L2	5	"16025667"	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 10:59 AM
L3	1504	(expand$4) AND 606/246-249.ccls.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:40 PM
L4	1093	(expand$4) AND 623/17.11-17.16	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:40 PM
L6	4486	(expand$4) AND A61F2/442.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:40 PM
L7	1962	(expand$4) AND A61F2/4425.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:40 PM
L8	1121	(expand$4) AND A61F2002/443.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:41 PM
L9	4824	(expand$4) AND A61F2/4455.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:41 PM
L10	45	(Moskowitz Family).as.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/05/05 12:41 PM
L11	326	(Ahmnon NEAR2 Moskowitz).in. OR (Mosheh NEAR2 Moskowitz).in. OR (Pablo NEAR2 Alvarado).in. OR (Eric NEAR2 Sugalski).in. OR (Nathan NEAR2 Moskowitz).in. OR (David NEAR2 Schoon).in.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/05/05 12:44 PM

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

Last Name: Alvarado
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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/210,168	9907674	150	08/15/2011	ALVARADO, Pablo A Valdivia Y	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/741,361	9301854	150	01/14/2013	ALVARADO, Pablo A Valdivia Y	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/893,326	9056018	150	05/13/2013	ALVARADO, Pablo A Valdivia Y	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/054,926	9848998	150	02/26/2016	ALVARADO, Pablo A Valdivia Y	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/084,543	8353913	150	04/11/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/108,982	9005293	150	05/16/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,150	9867719	150	08/15/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,157	9889022	150	08/15/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,162	9895238	150	08/15/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/401,829	9744052	150	02/21/2012	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,335	9532821	150	03/12/2012	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
14/063,197	9848993	150	10/25/2013	ALVARADO, Pablo A. Valdivia Y.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
14/257,650	9622875	150	04/21/2014	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
14/685,374	[]	160	04/13/2015	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
14/739,327	9867712	250	06/15/2015	ALVARADO, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/490,107	10064738	150	04/18/2017	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
13/801,558	9426430	150	03/13/2013	ALVARADO-MOYA, Pablo	REMOTE SURVEILLANCE SENSOR APPARATUS
13/801,627	8957783	150	03/13/2013	ALVARADO-MOYA, Pablo	REMOTE SURVEILLANCE SYSTEM
13/801,649	9479697	150	03/13/2013	ALVARADO-MOYA, Pablo	SYSTEMS, METHODS AND MEDIA FOR GENERATING A PANORAMIC VIEW
61/445,034	[]	159	02/21/2011	Alvarado, Pablo A. Valdivia Y	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
61/451,579	[]	159	03/10/2011	Alvarado, Pablo A. Valdivia Y	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL LEAF SPRING- RATCHET SCREW LOCKING MECHANISM
61/451,582	[]	159	03/10/2011	Alvarado, Pablo A. Valdivia Y	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
61/718,707	[]	159	10/25/2012	Alvarado, Pablo A. Valdivia Y	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/801,783	[]	159	03/15/2013	Alvarado, Pablo A. Valdivia Y	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
11/842,855	7942903	150	08/21/2007	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
12/471,345	8257370	250	05/22/2009	Alvarado, Pablo A. Valdivia Y.	POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLES, STAPLING GUNS, AND DEVICES FOR SPINAL FUSION

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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/418,323	9814601	150	03/12/2012	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/678,401	10238505	150	08/16/2017	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/791,484	10376383	150	10/24/2017	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/820,232	10016284	150	11/21/2017	Alvarado, Pablo A. Valdivia Y.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/870,406	10610371	150	01/12/2018	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/894,471	10390969	150	02/12/2018	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/944,117	10537442	150	04/03/2018	Alvarado, Pablo A. Valdivia Y.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/944,221	10376376	150	04/03/2018	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/976,340	10307268	150	05/10/2018	Alvarado, Pablo A. Valdivia Y.	INTERVERTEBRAL EXPANDABLE IMPLANT
16/018,354	10376386	150	06/26/2018	Alvarado, Pablo A. Valdivia Y.	SPINAL STAPLE
16/018,798	10369003	150	06/26/2018	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
16/025,667	10426633	150	07/02/2018	Alvarado, Pablo A. Valdivia Y.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/100,410	10603183	150	08/10/2018	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/160,824	10842542	150	10/15/2018	Alvarado, Pablo A. Valdivia Y.	SPINAL BONE FUSION SYSTEM
16/280,684	10478319	150	02/20/2019	Alvarado, Pablo A. Valdivia Y.	SYSTEM WITH TOOL ASSEMBLY AND EXPANDABLE SPINAL IMPLANT

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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
16/362,294	10925753	150	03/22/2019	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
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16/744,755	11376136	150	01/16/2020	Alvarado, Pablo A. Valdivia Y.	EXPANDABLE SPINAL IMPLANT AND TOOL SYSTEM
16/829,246	11229525	150	03/25/2020	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/841,355	11478359	150	04/06/2020	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL DISC SYSTEM
16/952,241	[]	89	11/19/2020	Alvarado, Pablo A. Valdivia Y.	SPINAL BONE FUSION SYSTEM
17/129,149	11083591	150	12/21/2020	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/181,706	[]	30	02/22/2021	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/393,672	[]	30	08/04/2021	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/408,068	[]	30	08/20/2021	Alvarado, Pablo A. Valdivia Y.	EXPANDABLE INTERVERTEBRAL DEVICE
17/492,996	[]	30	10/04/2021	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/577,722	[]	30	01/18/2022	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
17/706,873	[]	41	03/29/2022	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
11/838,869	[]	161	08/14/2007	Alvarado-Moya, Pablo	SYSTEM AND METHOD FOR INSERTING BREAK-IN SIGNALS IN COMMUNICATION SYSTEMS
12/100,081	9806833	150	04/09/2008	Alvarado-Moya, Pablo	SYSTEM AND METHOD FOR INSERTING BREAK-IN SIGNALS IN COMMUNICATION SYSTEMS
14/495,082	10019632	150	09/24/2014	Alvarado-Moya, Pablo	REMOTE SURVEILLANCE SENSOR APPARATUS
14/921,865	10091418	150	10/23/2015	Alvarado-Moya, Pablo	IMAGING SYSTEMS AND METHODS
15/606,907	[]	160	05/26/2017	Alvarado-Moya, Pablo	SYSTEM AND METHOD FOR INSERTING BREAK-IN SIGNALS IN COMMUNICATION SYSTEMS

Last Name: Alvarado
First Name: Pablo

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
16/118,303	10771692	150	08/30/2018	Alvarado-Moya, Pablo	IMAGING SYSTEMS AND METHODS
16/944,539	[]	93	07/31/2020	Alvarado-Moya, Pablo	IMAGING SYSTEMS AND METHODS
62/068,054	[]	159	10/24/2014	Alvarado-Moya, Pablo	Image Processing
62/173,029	[]	159	06/09/2015	Alvarado-Moya, Pablo	Image Processing

Last Name: Schoon
First Name: David

Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
07/568,908	5054893	250	08/17/1990	SCHOON, DAVID	ELECTRO-OPTIC CELL LINEAR ARRAY
06/045,821	4242565	150	06/05/1979	SCHOON, DAVID J.	THERMAL PRINT HEAD
06/434,189	4541061	150	10/13/1982	SCHOON, DAVID J.	DATA CLOCKING CIRCUITRY FOR A SCANNING APPARATUS
06/470,489	4631726	250	02/28/1983	SCHOON, DAVID J.	LASER DIODE CONTROL CIRCUITRY
06/574,066	4571623	150	01/26/1984	SCHOON, DAVID J.	DATA CLOCKING CIRCUITRY
06/586,204	4630223	250	03/05/1984	SCHOON, DAVID J.	SCANNER AMPLITUDE STABILIZATION SYSTEM
06/589,772	4586057	150	03/15/1984	SCHOON, DAVID J.	COMPENSATION CIRCUITRY FOR A LASER PRINTER USING A SELF-RESONANT SCANNER
06/594,211	4683551	250	03/28/1984	SCHOON, DAVID J.	RAM CLOCK SWITCHING CIRCUITRY FOR A LASER BEAM PRINTER
06/820,231	4686363	250	01/21/1986	SCHOON, DAVID J.	SELF-RESONANT SCANNER BIASING SYSTEM
07/096,959	4857904	250	09/15/1987	SCHOON, DAVID J.	COMBINATION OF TRANSITION-ENCODED FONT INFORMATION FOR GENERATION OF SUPERIMPOSED FONT IMAGES
07/096,960	4847607	250	09/15/1987	SCHOON, DAVID J.	IMAGE GENERATION FROM TRANSITION-ENCODED FONT INFORMATION
07/096,961	4870498	250	09/15/1987	SCHOON, DAVID J.	DECOMPRESSING RUN-LENGTH-ENCODED TO TRANSITION-ENCODED FONT IMAGE INFORMATION IN AN IMAGE GENERATOR
07/542,957	5225851	250	06/25/1990	SCHOON, DAVID J.	BAND IMAGING DEVICE
07/811,797	[]	161	12/20/1991	SCHOON, DAVID J.	FAULT TOLERANT IMAGING DEVICE
07/811,806	[]	161	12/20/1991	SCHOON, DAVID J.	HIGH RESOLUTION IMAGING DEVICE
07/811,807	[]	161	12/20/1991	SCHOON, DAVID J.	IMAGING DEVICE
07/827,061	[]	161	01/28/1992	SCHOON, DAVID J.	BANDWISE IMAGING DEVICE
07/828,021	[]	161	01/30/1992	SCHOON, DAVID J.	COLOR IMAGING DEVICE
07/884,408	5434600	250	05/18/1992	SCHOON, DAVID J.	ILLUMINATION MODULE FOR BANDWISE IMAGING DEVICE
07/914,450	5250982	250	07/15/1992	SCHOON, DAVID J.	APPARATUS AND METHOD OF IMAGING UV-SENSITIVE MEDIA
08/175,716	[]	161	12/29/1993	SCHOON, DAVID J.	SPATIAL STABILIZATION FOR BANDWISE IMAGING DEVICE
08/181,573	5481398	250	01/13/1994	SCHOON, DAVID J.	TEMPERATURE STABILIZATION MEANS FOR IMAGING OUTPUT RECORDER
08/181,574	5565906	250	01/13/1994	SCHOON, DAVID J.	CLOCKING MEANS FOR BANDWISE IMAGING DEVICE
08/594,017	5684620	250	01/30/1996	SCHOON, DAVID J.	HIGH RESOLUTION IMAGING SYSTEM AND METHOD OF IMAGING USING THE SAME
09/276,007	6148134	250	03/25/1999	SCHOON, DAVID J.	FIBER MOUNTS FOR FIBER OPTIC HARNESS IN A FIBER OPTIC-BASED IMAGING SYSTEM
09/276,433	[]	161	03/25/1999	SCHOON, DAVID J.	LIGHT DISTRIBUTION DEVICE FOR FIBER OPTIC-BASED IMAGING SYSTEM
14/597,798	9700324	150	01/15/2015	SCHOON, David	SURGICAL CLIP APPLICATOR
61/928,171	[]	159	01/16/2014	SCHOON, David	SURGICAL CLIP APPLICATOR
08/020,951	5281248	250	02/22/1993	SCHOONMAKER, DAVID E.	VAD PROCESS IMPROVEMENTS
08/057,911	5376247	250	05/07/1993	SCHOONOVER, DAVID E.	CONTROL OF CARBON BALANCE IN A SILICON SMELTING FURNACE BY MONITORING CALCUIM

Last Name: Schoon
First Name: David

Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
06/127,724	4329149	150	03/06/1980	SCHOONOVER, DAVID J.	METHOD FOR SPECTROPHOTOMETRIC COMPENSATION FOR COLORIMETRIC REAGENT VARIATION
06/660,784	4557899	250	10/15/1984	SCHOONOVER, DAVID J.	WATER-IN-OIL TESTING APPARATUS
06/660,785	[]	161	10/15/1984	SCHOONOVER, DAVID J.	WATER-IN-OIL TESTING
13/613,927	10018364	150	09/13/2012	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
13/614,068	9255712	150	09/13/2012	Schoon, David	OVEN APPLIANCE WITH DOORS HAVING A TONGUE AND GROOVE INTERFACE
13/614,274	9651265	150	09/13/2012	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
13/614,482	8944536	150	09/13/2012	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/578,687	9188346	150	12/22/2014	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/874,766	9328929	150	10/05/2015	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/083,329	9494323	150	03/29/2016	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/291,223	9644848	150	10/12/2016	Schoon, David	AN OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/499,092	9890957	150	04/27/2017	Schoon, David	Oven Appliance with Dual Opening and Closing Doors
15/762,925	10939711	150	03/23/2018	Schoon, David	NOISE SUPPRESSION DEVICE FOR A PERSONAL IMPACT PROTECTION SYSTEM
15/892,461	10508817	150	02/09/2018	Schoon, David	Oven Appliance with Dual Opening and Closing Doors
16/079,701	11253013	150	08/24/2018	Schoon, David	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
16/587,993	11096797	150	09/30/2019	Schoon, David	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
17/408,068	[]	30	08/20/2021	Schoon, David	EXPANDABLE INTERVERTEBRAL DEVICE
17/512,452	[]	30	10/27/2021	Schoon, David	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
62/232,872	[]	159	09/25/2015	Schoon, David	NOISE SUPPRESSION DEVICE FOR A PERSONAL IMPACT PROTECTION SYSTEM
62/301,157	[]	159	02/29/2016	Schoon, David	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
09/657,419	[]	161	09/08/2000	Schoon, David Jacob	Modular imager
09/657,485	[]	161	09/08/2000	Schoon, David Jacob	High resolution imager
29/205,461	D506904	150	05/17/2004	Schoonejans, David Paul	CANNED FOOD STRAINER
10/083,856	6844102	250	02/27/2002	Schoonmaker, David A.	AQUEOUS BASED ELECTROLYTE SLURRY FOR MCFC AND METHOD OF USE
10/345,073	[]	161	01/15/2003	Schoonmaker, David A.	Aqueous electrode binder and electrodes and fuel cells including same
63/150,600	[]	159	02/18/2021	Schoonmaker, David N.	CATALYST COATED REACTION MEDIA FOR USE IN THE PRODUCTION OF HYDROGEN IN A STEAM REFORMING REACTOR

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Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))	46440-0020005	17/408,068
	Applicant: Moskowitz Family LLC	
	Filing Date: August 20, 2021	Group Art Unit: OPAP

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Filing Date If Appropriate	Class	Subclass
	1.	2,360,942	10/24/1944	Ellerstein			
	2.	4,064,881	12/27/1977	Meredith			
	3.	4,554,914	11/26/1985	Kapp			
	4.	4,599,086	7/8/1986	Doty			
	5.	4,636,217	1/13/1987	Ogilvie			
	6.	4,904,261	2/27/1990	Dove			
	7.	4,960,420	10/2/1990	Goble			
	8.	4,997,432	3/5/1991	Keller			
	9.	5,005,749	4/9/1991	Aranyi			
	10.	5,062,850	11/5/1991	Macmillan			
	11.	5,123,926	6/23/1992	Pisharodi			
	12.	5,290,312	3/1/1994	Kojimoto			
	13.	5,405,391	4/11/1995	Henderson			
	14.	5,413,583	5/9/1995	Wohlers			
	15.	5,454,819	10/3/1995	Knoepfler			
	16.	5,514,180	5/7/1996	Heggeness			
	17.	5,653,763	8/5/1997	Errico			
	18.	5,658,336	8/19/1997	Pisharodi			
	19.	5,660,188	8/26/1997	Groiso			
	20.	5,665,122	9/9/1997	Kambin			
	21.	5,667,472	9/7/1997	Finn			
	22.	5,713,912	2/3/1998	Porter			
	23.	5,782,832	7/21/1998	Larsen			
	24.	5,865,848	2/2/1999	Baker			
	25.	5,888,223	3/30/1999	Bray, Jr.			
	26.	5,916,224	6/29/1999	Esplin			
	27.	5,951,574	9/14/1999	Stefanchik			

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/CHRISTINA NEGRELLIRODRIGUEZ/	05/05/2023

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U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Filing Date If Appropriate	Class	Subclass
	28.	5,960,522	10/5/1999	Boe			
	29.	5,968,054	10/19/1999	Yeatts			
	30.	5,976,136	11/2/1999	Bailey			
	31.	5,980,522	11/9/1999	Koros			
	32.	6,102,950	8/15/2000	Vaccaro			
	33.	6,126,689	10/3/2000	Brett			
	34.	6,190,414	2/20/2001	Young			
	35.	6,193,757	2/27/2001	Foley			
	36.	6,224,602	5/1/2001	Hayes			
	37.	6,235,034	5/22/2001	Bray, Jr.			
	38.	6,299,642	10/9/2001	Chan			
	39.	6,322,562	11/27/2001	Wolter			
	40.	6,342,074	1/29/2002	Simpson			
	41.	6,368,350	4/9/2002	Erickson			
	42.	6,368,351	4/9/2002	Glenn			
	43.	6,375,682	4/23/2002	Fleischman			
	44.	6,419,704	7/16/2002	Ferree			
	45.	6,419,705	4/9/2002	Glenn			
	46.	6,432,106	8/13/2002	Fraser			
	47.	6,454,807	9/24/2002	Jackson			
	48.	6,458,159	10/1/2002	Thalgott			
	49.	6,491,724	12/10/2002	Ferree			
	50.	6,527,804	3/4/2003	Gauchet			
	51.	6,533,818	3/18/2003	Weber			
	52.	6,558,423	5/6/2003	Michelson			
	53.	6,572,653	6/3/2003	Simonson			
	54.	6,579,318	6/17/2003	Varga			

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/CHRISTINA NEGRELLIRODRIGUEZ/	05/05/2023

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	Filing Date: August 20, 2021	Group Art Unit: OPAP

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Filing Date If Appropriate	Class	Subclass
	55.	6,582,468	6/24/2003	Gauchet			
	56.	6,613,055	9/2/2003	Di Emidio			
	57.	6,629,998	10/7/2003	Lin			
	58.	6,641,614	11/4/2003	Wagner			
	59.	6,655,243	12/2/2003	Anderson			
	60.	6,716,247	4/6/2004	Michelson			
	61.	6,719,794	4/13/2004	Gerber			
	62.	6,723,126	4/20/2004	Berry			
	63.	6,733,532	5/11/2004	Gauchet			
	64.	6,764,491	7/20/2004	Frey			
	65.	6,770,094	8/3/2004	Fehling			
	66.	6,824,564	11/30/2004	Crozet			
	67.	6,835,206	12/28/2004	Jackson			
	68.	6,852,117	2/8/2005	Orlowski			
	69.	6,890,355	5/10/2005	Michelson			
	70.	6,904,308	6/7/2005	Frisch			
	71.	6,953,477	10/11/2005	Berry			
	72.	6,955,671	10/18/2005	Uchikubo			
	73.	6,955,691	10/18/2005	Ayyanathan			
	74.	6,962,606	11/8/2005	Michelson			
	75.	6,972,019	12/6/2005	Michelson			
	76.	6,974,480	12/13/2005	Messerli			
	77.	7,030,904	4/18/2006	Adair			
	78.	7,033,394	4/25/2006	Michelson			
	79.	7,037,258	5/2/2006	Chatenever			
	80.	7,044,971	5/16/2006	Suddaby			
	81.	7,070,598	7/4/2006	Lim			

Examiner Signature	Date Considered
/CHRISTINA NEGRELLIRODRIGUEZ/	05/05/2023

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	Filing Date: August 20, 2021	Group Art Unit: OPAP

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Filing Date If Appropriate	Class	Subclass
	82.	7,077,864	7/18/2006	Byrd			
	83.	7,087,055	8/8/2006	Lim			
	84.	7,097,615	8/29/2006	Banik			
	85.	7,118,579	10/10/2006	Michelson			
	86.	7,135,043	11/14/2006	Nakahara			
	87.	7,211,112	5/1/2007	Baynham			
	88.	7,214,243	5/8/2007	Taylor			
	89.	7,232,464	6/19/2007	Mathieu			
	90.	7,238,203	7/3/2007	Bagga			
	91.	7,320,555	1/22/2008	Chang			
	92.	7,326,248	2/5/2008	Michelson			
	93.	7,410,501	8/12/2008	Michelson			
	94.	7,442,209	10/28/2008	Michelson			
	95.	7,442,299	10/28/2008	Lee			
	96.	7,445,636	11/4/2008	Michelson			
	97.	7,615,059	11/10/2009	Watschke			
	98.	7,618,456	11/17/2009	Mathieu			
	99.	7,628,816	12/8/2009	Magerl			
	100.	7,655,027	2/2/2010	Michelson			
	101.	7,655,046	2/2/2010	Dryer			
	102.	7,704,279	4/27/2010	Moskowitz			
	103.	7,722,674	5/25/2010	Grotz			
	104.	7,727,246	6/1/2010	Sixto			
	105.	7,753,958	7/13/2010	Gordon			
	106.	7,763,078	7/27/2010	Peterman			
	107.	7,776,047	8/17/2010	Fanger			
	108.	7,776,093	8/17/2010	Wolek			

Examiner Signature	Date Considered
/CHRISTINA NEGRELLIRODRIGUEZ/	05/05/2023

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U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Filing Date If Appropriate	Class	Subclass
	109.	7,799,081	9/21/2010	McKinley			
	110.	7,803,162	9/28/2010	Marnay			
	111.	7,828,849	11/9/2010	Lim			
	112.	7,846,185	12/7/2010	Carls			
	113.	7,846,207	12/7/2010	Lechmann			
	114.	7,850,733	12/14/2010	Baynham			
	115.	7,862,616	1/4/2011	Lechmann			
	116.	7,875,078	1/25/2011	Wysocki			
	117.	7,887,591	2/15/2011	Aebi			
	118.	7,909,869	3/22/2011	Gordon			
	119.	7,942,903	5/17/2011	Moskowitz			
	120.	7,959,675	6/14/2011	Gately			
	121.	7,972,363	7/5/2011	Moskowitz			
	122.	7,985,255	7/26/2011	Bray			
	123.	8,029,512	10/4/2011	Paltzer			
	124.	8,034,060	10/11/2011	Keren			
	125.	8,043,376	10/25/2011	Falahee et al.			
	126.	8,062,375	11/22/2011	Glerum			
	127.	8,105,358	1/31/2012	Phan			
	128.	8,105,367	1/31/2012	Austin			
	129.	8,105,382	1/31/2012	Olmos			
	130.	8,114,162	2/14/2012	Bradley			
	131.	8,123,810	2/28/2012	Gordon			
	132.	8,133,232	3/13/2012	Levy			
	133.	8,137,405	3/20/2012	Kostuik			
	134.	8,167,949	5/1/2012	Tyber			
	135.	8,187,332	5/29/2012	McLuen			

Examiner Signature	Date Considered
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U.S. Patent Documents

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	136.	8,267,939	9/18/2012	Cipoletti			
	137.	8,268,000	9/18/2012	Waugh			
	138.	8,273,127	9/25/2012	Jones			
	139.	8,328,872	12/11/2012	Duffield			
	140.	8,353,913	11/15/2013	Moskowitz			
	141.	8,382,842	2/26/2013	Greenhalgh			
	142.	8,394,145	3/12/2013	Weiman			
	143.	8,398,713	3/19/2013	Weiman			
	144.	8,403,986	3/26/2013	Michelson			
	145.	8,403,990	3/26/2013	Dryer			
	146.	8,414,651	4/9/2013	Tyber			
	147.	8,419,797	4/16/2013	Biedermann			
	148.	8,425,607	4/23/2013	Waugh			
	149.	8,435,298	5/17/2013	Weiman			
	150.	8,491,659	7/23/2013	Weiman			
	151.	8,496,706	7/30/2013	Ragab			
	152.	8,518,120	8/27/2013	Glerum			
	153.	8,523,944	9/3/2013	Jimenez			
	154.	8,535,380	9/17/2013	Greenhalgh			
	155.	8,540,774	9/24/2013	Kueenzi			
	156.	8,556,979	10/15/2013	Glerum			
	157.	8,568,481	10/29/2013	Olmos			
	158.	8,603,170	12/10/2013	Cipoletti			
	159.	8,613,761	12/24/2013	Lindemann			
	160.	8,628,577	1/14/2014	Jimenez			
	161.	8,628,578	1/14/2014	Miller			
	162.	8,632,595	1/21/2014	Weiman			

Examiner Signature	Date Considered
/CHRISTINA NEGRELLIRODRIGUEZ/	05/05/2023

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Disclosure Form

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /C.N/

Substitute Disclosure Form / U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No.	Application No.
Information Disclosure Statement by Applicant (Use several sheets if necessary) (37 CFR §1.98(b))	46440-0020005	17/408,068
	Applicant: Moskowitz Family LLC	
	Filing Date: August 20, 2021	Group Art Unit: OPAP

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Filing Date If Appropriate	Class	Subclass
	163.	8,663,329	3/4/2014	Ernst			
	164.	8,679,183	3/25/2014	Glerum			
	165.	8,685,095	4/1/2014	Miller			
	166.	8,685,098	4/1/2014	Glerum			
	167.	8,709,086	4/29/2014	Glerum			
	168.	8,721,723	5/13/2014	Hansell			
	169.	8,728,165	5/20/2014	Parry			
	170.	8,778,025	7/15/2014	Ragab			
	171.	8,790,405	7/29/2014	Biedermann			
	172.	8,795,366	8/5/2014	Varela			
	173.	8,845,731	9/30/2014	Weiman			
	174.	8,845,732	9/30/2014	Weiman			
	175.	8,845,734	9/30/2014	Weiman			
	176.	8,888,853	11/18/2014	Glerum			
	177.	8,888,854	11/18/2014	Glerum			
	178.	8,894,711	11/25/2014	Varela			
	179.	8,894,712	11/25/2014	Varela			
	180.	8,926,704	1/6/2015	Glerum			
	181.	8,940,049	1/27/2015	Jimenez			
	182.	9,034,045	5/19/2015	Davenport			
	183.	9,039,771	5/26/2015	Glerum			
	184.	9,119,730	9/1/2015	Glerum			
	185.	9,198,772	12/1/2015	Weiman			
	186.	9,445,919	9/20/2016	Palmatier			
	187.	9,848,993	12/26/2017	Moskowitz			
	188.	10,016,284	7/10/2018	Moskowitz			
	189.	10,426,633	10/1/2019	Moskowitz			

Examiner Signature	Date Considered
/CHRISTINA NEGRELLIRODRIGUEZ/	05/05/2023

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U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Filing Date If Appropriate	Class	Subclass
	190.	2002/0068976	6/6/2002	Jackson			
	191.	2002/0068977	6/6/2002	Jackson			
	192.	2002/0143338	10/3/2002	Orbay			
	193.	2003/0130737	7/10/2003	McGahan			
	194.	2004/0010315	1/15/2004	Song			
	195.	2004/0087947	5/6/2004	Lim			
	196.	2004/0088054	5/6/2004	Berry			
	197.	2004/0177531	9/16/2004	Dibenedetto			
	198.	2004/0186569	9/23/2004	Berry			
	199.	2004/0193272	9/30/2004	Zubok			
	200.	2004/0220571	11/4/2004	Assaker			
	201.	2004/0249466	12/9/2004	Liu			
	202.	2004/0254644	12/16/2004	Taylor			
	203.	2005/0027362	2/3/2005	Williams			
	204.	2005/0049590	3/3/2005	Alleyne			
	205.	2005/0113916	5/26/2005	Branch			
	206.	2005/0113917	5/26/2005	Chae			
	207.	2005/0177235	8/11/2005	Baynham			
	208.	2005/0216084	9/29/2005	Fleischman			
	209.	2005/0256576	11/17/2005	Moskowitz			
	210.	2005/0261769	11/24/2005	Moskowitz			
	211.	2005/0273170	12/8/2005	Navarro			
	212.	2005/0273171	12/8/2005	Gordon			
	213.	2005/0278026	12/15/2005	Gordon			
	214.	2006/0155285	7/13/2006	Anderson			
	215.	2006/0206207	9/14/2006	Dryer			
	216.	2006/0241621	10/26/2006	Moskowitz			

Examiner Signature	Date Considered
/CHRISTINA NEGRELLIRODRIGUEZ/	05/05/2023

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	217.	2006/0241643	10/26/2006	Lim			
	218.	2006/0241770	10/26/2006	Rhoda			
	219.	2006/0247778	11/2/2006	Ferree			
	220.	2007/0049943	3/1/2007	Moskowitz			
	221.	2007/0167678	7/19/2007	Moskowitz			
	222.	2007/0198089	8/23/2007	Moskowitz			
	223.	2007/0213820	9/13/2007	Magerl			
	224.	2007/0250167	10/25/2007	Bray			
	225.	2007/0250172	10/25/2007	Moskowitz			
	226.	2007/0270968	11/22/2007	Baynham			
	227.	2007/0276498	11/29/2007	Aebi			
	228.	2008/0033440	2/7/2008	Moskowitz			
	229.	2008/0058938	3/6/2008	Mujwid			
	230.	2008/0177307	7/24/2008	Moskowitz			
	231.	2008/0183293	7/31/2008	Parry			
	232.	2008/0249569	10/9/2008	Waugh			
	233.	2008/0249575	10/9/2008	Waugh			
	234.	2008/0249625	10/9/2008	Waugh			
	235.	2008/0281424	11/13/2008	Parry			
	236.	2008/0281425	11/13/2008	Thalgott			
	237.	2009/0030520	1/29/2009	Biederman			
	238.	2009/0080997	3/26/2009	Johnson			
	239.	2009/0105830	4/23/2009	Jones			
	240.	2009/0105831	4/23/2009	Jones			
	241.	2009/0112271	4/30/2009	Moskowitz			
	242.	2009/0112319	4/30/2009	O'Neil			
	243.	2009/0171461	7/2/2009	Conner			

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Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Filing Date If Appropriate	Class	Subclass
	244.	2009/0182430	7/16/2009	Tyber			
	245.	2009/0187218	7/23/2009	Schaffhausen			
	246.	2009/0210062	8/20/2009	Thalgott			
	247.	2009/0224023	9/10/2009	Moskowitz			
	248.	2009/0234455	9/17/2009	Moskowitz			
	249.	2009/0292361	11/26/2009	Lopez			
	250.	2009/0299478	12/3/2009	Carls			
	251.	2010/0057208	3/4/2010	Dryer			
	252.	2010/0145460	6/10/2010	McDonough			
	253.	2010/0168862	7/1/2010	Edie			
	254.	2010/0204795	8/12/2010	Greenhalgh			
	255.	2010/0286780	11/11/2010	Dryer			
	256.	2010/0292796	11/18/2010	Greenhalgh			
	257.	2010/0305704	12/2/2010	Messerli			
	258.	2010/0318189	12/16/2010	Edie			
	259.	2010/0324606	12/23/2010	Moskowitz			
	260.	2011/0015742	1/20/2011	Hong			
	261.	2011/0029082	2/3/2011	Hall			
	262.	2011/0054621	3/3/2011	Lim			
	263.	2011/0093074	4/21/2011	Glerum			
	264.	2011/0125269	5/26/2011	Moskowitz			
	265.	2011/0137349	6/9/2011	Moskowitz			
	266.	2011/0172721	7/14/2011	Frigg			
	267.	2011/0172774	7/14/2011	Varela			
	268.	2011/0178600	7/21/2011	Moskowitz			
	269.	2011/0208312	8/25/2011	Moskowitz			
	270.	2011/0288646	11/24/2011	Moskowitz			

Examiner Signature	Date Considered
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Information Disclosure Statement by Applicant (Use several sheets if necessary)		Applicant Moskowitz Family LLC	
(37 CFR §1.98(b))		Filing Date August 20, 2021	Group Art Unit OPAP

U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Filing Date If Appropriate	Class	Subclass
	271.	2011/0295327	12/1/2011	Moskowitz			
	272.	2011/0295371	12/1/2011	Moskowitz			
	273.	2011/0307011	12/15/2011	Moskowitz			
	274.	2011/0319935	12/29/2011	Moskowitz			
	275.	2012/0010714	1/12/2012	Moskowitz			
	276.	2012/0035729	2/9/2012	Glerum			
	277.	2012/0109319	5/3/2012	Perisic			
	278.	2012/0150304	6/14/2012	Glerum			
	279.	2012/0150305	6/14/2012	Glerum			
	280.	2012/0158146	6/21/2012	Glerum			
	281.	2012/0158147	6/21/2012	Glerum			
	282.	2012/0158148	6/21/2012	Glerum			
	283.	2012/0271419	10/25/2012	Marik			
	284.	2012/0271423	10/25/2012	Wallenstein			
	285.	2012/0277865	11/1/2012	Trieu			
	286.	2012/0277870	11/1/2012	Wolters			
	287.	2012/0323330	12/20/2012	Kueenzi			
	288.	2012/0330419	12/27/2012	Moskowitz			
	289.	2013/0018468	1/17/2013	Moskowitz			
	290.	2013/0018469	1/17/2013	Moskowitz			
	291.	2013/0018470	1/17/2013	Moskowitz			
	292.	2013/0023991	1/24/2013	Moskowitz			
	293.	2013/0023992	1/24/2013	Moskowitz			
	294.	2013/0053962	2/28/2013	Moskowitz			
	295.	2013/0060339	3/7/2013	Duffield			
	296.	2013/0073044	3/21/2013	Gamache			
	297.	2013/0144388	6/6/2013	Emery			

Examiner Signature	Date Considered
/CHRISTINA NEGRELLIRODRIGUEZ/	05/05/2023

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U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Filing Date If Appropriate	Class	Subclass
	298.	2013/0158663	6/20/2013	Miller			
	299.	2013/0158664	6/20/2013	Palmatier			
	300.	2013/0173002	7/4/2013	Moskowitz			
	301.	2013/0211526	8/15/2013	Alheidt			
	302.	2013/0282017	10/24/2013	Moskowitz			
	303.	2014/0088714	3/27/2014	Miller			
	304.	2014/0121774	5/1/2014	Glerum			
	305.	2014/0249628	9/4/2014	Weiman			
	306.	2014/0249629	9/4/2014	Moskowitz			
	307.	2014/0324171	10/30/2014	Glerum			
	308.	2015/0025637	1/22/2015	Moskowitz			
	309.	2015/0105824	4/16/2015	Moskowitz			
	310.	2015/0148847	5/28/2015	Moskowitz			
	311.	2016/0374830	12/29/2016	Moskowitz			
	312.	2017/0252178	9/7/2017	Moskowitz			
	313.	2018/0078383	3/22/2018	Moskowitz			
	314.	2018/0318103	11/8/2018	Moskowitz			
	315.	D626233	10/26/2010	Cipoletti			

Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Translation	Class	Subclass
	316.	FR 2727003	5/24/1996	FR	English abstract		
	317.	WO 2004093749	11/4/2004	WO	English abstract		
	318.	WO 2006091503	8/31/2006	WO			

Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document

Examiner Signature	Date Considered
/CHRISTINA NEGRELLIRODRIGUEZ/	05/05/2023

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Sheet 13 of 13

Substitute Disclosure Form / U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No.	Application No.
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	Applicant: Moskowitz Family LLC	
	Filing Date: August 20, 2021	Group Art Unit: OPAP

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	319.	Grob, et al.. "Clinical Experience With the Dynesys Semirigid Fixation System for the Lumbar Spine," SPINE, Vol. 30, No. 3, 2005, pp. 324-331
	320.	Guyer, et al., "Intervertebral Disc Prostheses," Spine, Volume 28, Number 15S, Supp. To 8/1/03, pages S15-S23
	321.	International Search Report and Written Opinion of the International Searching Authority, 03 December 2007, International Application No. PCT/US 07/05005
	322.	International Search Report and Written Opinion of the International Searching Authority, 09 July 2008, International Application No. PCT/US2007021013
	323.	International Search Report and Written Opinion of the International Searching Authority, 21 May 2008, International Application No. PCT/US2007/021015
	324.	Traynelis, "Prosthetics and Biologics: The Wave of the Future," CLINICAL NEUROSURGERY, Volume 50, Proceedings of the Congress of Neurological Surgeons, Philadelphia, PA 2002, Chapter 9, pages 207-219
	325.	Wai, et al., "Disk Replacement Arthroplasties: Can The Success of Hip and Knee Replacements be Repeated in the Spine?," Seminars in Spine Surgery, Vol. 15, No. 4 (December) 2003, pp 473-482

Examiner Signature	Date Considered
/CHRISTINA NEGRELLIRODRIGUEZ/	05/05/2023

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Attorney Docket No.: 46440-0020005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor	:	Ahmnon D. Moskowitz	Art Unit	:	OPAP
Application No.	:	17/408,068	Examiner	:	Central, Docket
Filed	:	August 20, 2021	Conf. No.	:	4713
Title	:	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION			

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Please consider the documents listed on the disclosure form submitted with this statement. Copies of the documents are being submitted with this statement to the extent required under 37 C.F.R. § 1.98(a)(2).

Under 35 U.S.C. § 120, this application relies on the earlier filing date of application number 16/587,993, filed on September 30, 2019. All listed documents were submitted to and/or cited by the Office in the prior application, and so copies of those documents are not provided in this application.

This statement is being filed within three months of the filing date of the application or before the receipt of a first action on the merits.

Please contact the undersigned if there are any questions regarding this statement.

Respectfully submitted,

Date: February 15, 2022 /Kiersten M. Batzli/
Kiersten M. Batzli, Reg. No. 75,476

Customer Number 26191
Fish & Richardson P.C.
Telephone: (612) 337-2538
Facsimile: (877) 769-7945

62790786.doc

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UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/408,068	08/20/2021	Ahmnon D. Moskowitz	46440-0020005	4713

26191 7590 05/12/2023

FISH & RICHARDSON P.C. (TC)
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER	
NEGRELLIRODRIGUE, CHRISTINA	

ART UNIT	PAPER NUMBER
3773	

NOTIFICATION DATE	DELIVERY MODE
05/12/2023	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No. 17/408,068	Applicant(s) Moskowitz et al.	
	Examiner CHRISTINA NEGRELLI-RODRIGUEZ	Art Unit 3773	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 11/01/2021.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 21-40 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 21-22,30 and 36-40 is/are rejected.

8) ☑ Claim(s) 23-29 and 31-35 is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 08/20/2021 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP §

2146 *et seq.* for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The filing of a terminal disclaimer by itself is not a complete reply to a nonstatutory double patenting (NSDP) rejection. A complete reply requires that the terminal disclaimer be accompanied by a reply requesting reconsideration of the prior Office action. Even where the NSDP rejection is provisional the reply must be complete. See MPEP § 804, subsection I.B.1. For a reply to a non-final Office action, see 37 CFR 1.111(a). For a reply to final Office action, see 37 CFR 1.113(c). A request for reconsideration while not provided for in 37 CFR 1.113(c) may be filed after final for consideration. See MPEP §§ 706.07(e) and 714.13.

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The actual filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/ patents/apply/applying-online/eterminal-disclaimer.

Claims 21, 22, 30 and 36-40 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1, 2, 13 and 14 of U.S. Patent No. 10,426,633. Although the claims at issue are not identical, they are not patentably distinct from each other.

Independent claims 21 and 36 recite all of the elements of independent claim 1 of the patent. The difference between independent claims 21 and 36 of the application and independent claim 1 of the patent lies in the fact that the patent claim further recites " ". Thus the invention of claim 1 of the patent is in effect a "species" of the "generic" invention of claims 21 and 36 of

the application. It has been held that the generic invention is "anticipated" by the "species". See In re Goodman, 29 USPQ2d 2010 (Fed.Cir. 1993). Since claims 21 and 36 of the application is anticipated by respective claim 1 of the patent, they are not patentably distinct from claim 1.

Furthermore, dependent claims 22, 30 and 37-40 of the application recite all of the elements of dependent claims 1, 2, 13 and 14 of the patent.

Allowable Subject Matter

Claims 23-29 and 31-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Negrelli whose telephone number is 571-270-7389. The examiner can normally be reached on Monday-Friday, between 8:00am to 4:00pm. If attempts to reach the examiner by telephone are unsuccessful, ***please contact*** **the examiner's supervisor, Eduardo Robert, *at* (571) 272-4719**. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CHRISTINA NEGRELLI/

Examiner, Art Unit 3773

/EDUARDO C ROBERT/
Supervisory Patent Examiner, Art Unit 3773

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 17/408,068	Filing Date 08/20/2021	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $240 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	06/22/2023	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0		x $40 =	0
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0		x $192 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/TERRY BRYANT/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Doc Code: DIST.E.FILE **Document Description: Electronic Terminal Disclaimer - Filed**	PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT**
Application Number	17408068
Filing Date	20-Aug-2021
First Named Inventor	Ahmnon Moskowitz
Attorney Docket Number	46440-0020005
Title of Invention	EXPANDABLE INTERVERTEBRAL DEVICE

☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
Moskowitz Family LLC	100%

The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

10426633

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

◉ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.

○ I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.	
Applicant claims the following fee status: ◉ Small Entity ○ Micro Entity ○ Regular Undiscounted I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.	
THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES I certify, in accordance with 37 CFR 1.4(d)(4) that I am: ◉ An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application Registration Number 75476 ○ A sole inventor ○ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application ○ A joint inventor; all of whom are signing this request	
Signature	/Kiersten M. Batzli/
Name	Kiersten M. Batzli

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	17408068
Filing Date:	20-Aug-2021
Title of Invention:	EXPANDABLE INTERVERTEBRAL DEVICE
First Named Inventor/Applicant Name:	Ahmnon D. Moskowitz
Filer:	Kiersten M. Batzli/Emily Whitcomb
Attorney Docket Number:	46440-0020005

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	2814	1	170	170
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**170**

Doc Code: DISQ.E.FILE
Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 17408068

Filing Date: 20-Aug-2021

Applicant/Patent under Reexamination: Moskowitz

Electronic Terminal Disclaimer filed on June 22, 2023

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt	
EFS ID:	48192422
Application Number:	17408068
International Application Number:	
Confirmation Number:	4713
Title of Invention:	EXPANDABLE INTERVERTEBRAL DEVICE
First Named Inventor/Applicant Name:	Ahmnon D. Moskowitz
Customer Number:	26191
Filer:	Kiersten M. Batzli/Emily Whitcomb
Filer Authorized By:	Kiersten M. Batzli
Attorney Docket Number:	46440-0020005
Receipt Date:	22-JUN-2023
Filing Date:	20-AUG-2021
Time Stamp:	15:41:37
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$170
RAM confirmation Number	E20236LF41358550
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	41303 54c82cf71f4bddd406bfd6c0c3077efbfe3d3f62	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	38221 f96594a324c5799c6fd3fb01418e26c8dcedb3b8	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	79524		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor	:	Ahmnon D. Moskowitz	Art Unit	:	3773
Application No.	:	17/408,068	Examiner	:	Christina Negrellirodrigue
Filed	:	August 20, 2021			
			Conf. No.	:	4713
Title	:	EXPANDABLE INTERVERTEBRAL DEVICE			

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY TO ACTION OF MAY 12, 2023

Please consider the following reply.

Amendments to Claims:
Listing of Claims.

1-20. (Cancelled)

21. (Previously Presented) An expandable intervertebral device comprising:

a first body extending from a first end to a second end, wherein the first body has first and second end portions positioned at the first and second ends, respectively, and has first and second side portions extending between the first and second end portions, wherein the first body has a first vertebral body engagement surface and has a first interior surface positioned on an opposite side of the first body than the first vertebral body engagement surface, the first interior surface includes at least one angled housing surface protruding from the first interior surface;

a second body extending from a third end to a fourth end, wherein the second body has third and fourth end portions positioned at the third and fourth ends, respectively, and has third and fourth side portions extending between the third and fourth end portions, wherein the second body has a second vertebral body engagement surface and has a second interior surface positioned on an opposite side of the second body than the second vertebral body engagement surface; and

a wedge having an angled wedge surface, wherein the wedge is positioned between the first body and the second body with the angled wedge surface facing the first interior surface of the first body and the at least one angled housing surface of the first body is positioned to engage the angled wedge surface of the wedge, wherein the wedge is configured to slide within a space defined by the first body and second body in a direction toward the second and fourth ends of the first body and second body from a first wedge position in which the first body and the second body are in a substantially closed position to a second wedge position whereby the angled wedge surface presses against the first interior surface of the first body to move the first body relative to the second body from a compressed configuration to an expanded configuration, whereby the wedge

remains axially confined within the space defined by the first body and second body in the compressed and expanded configurations.

22. (Previously Presented) The expandable intervertebral device of claim 21, wherein the first body and second body are hingedly connected such that the first body can pivot with respect to the second body so as to move the first end of the first body away from the third end of the second body.

23. (Previously Presented) The expandable intervertebral device of claim 21, wherein the first vertebral body engagement surface comprises a plurality of ridges for interfacing with a vertebral body surface.

24. (Previously Presented) The expandable intervertebral device of claim 23, wherein in the expanded configuration of the expandable intervertebral device the plurality of ridges on the first vertebral body engagement surface are in contact with the vertebral body surface.

25. (Previously Presented) The expandable intervertebral device of claim 21, wherein a cavity configured to be filled with bone fusion materials is defined within the expandable intervertebral device.

26. (Previously Presented) The expandable intervertebral device of claim 25, wherein movement of the first body relative to the second body toward the expanded configuration of the expandable intervertebral device increases a volume of the cavity.

27. (Previously Presented) The expandable intervertebral device of claim 21, further comprising a locking mechanism for retaining the expandable intervertebral device in the expanded configuration.

28. (Previously Presented) The expandable intervertebral device of claim 27, further comprising means to promote segmental spinal fusion.

29. (Previously Presented) The expandable intervertebral device of claim 21, wherein the first body defines first and second bone cavities extending through the first vertebral body engagement surface with a wall of the first body at least partially separating the first and second bone cavities and wherein the first and second side portions of the first body have respective first and second outer side surfaces, wherein the third and fourth side portions of the second body have respective third and fourth inner side surfaces, and wherein the first body is positioned at least partially inside the second body with the first and second outer side surfaces positioned inward of and adjacent to the third and fourth inner side surfaces of the third and fourth side portions in the compressed configuration.

30. (Previously Presented) The expandable intervertebral device of claim 21, further comprising

wherein the wedge is actuated in response to a rotation of a threaded screw; and wherein the rotation of the threaded screw results in axial movement of the wedge within the space defined by the first body and the second body such that the at least one angled housing surface of the first body engages the angled wedge surface of the wedge to move the first body relative to the second body from the compressed configuration to the expanded configuration.

31. (Previously Presented) The expandable intervertebral device of claim 30, wherein the rotation of the threaded screw in a first direction actuates movement of the first body relative to the second body so as to expand the expandable intervertebral device vertically.

32. (Previously Presented) The expandable intervertebral device of claim 31, wherein the expandable intervertebral device further comprises indentations on opposing sides for engaging a positioning tool.

33. (Previously Presented) A system comprising:

the expandable intervertebral device of claim 32; and

a tool comprising:

an elongate shaft;

first and second prongs that are sized and positioned such that the first and second prongs engage the indentations on opposing sides of the expandable intervertebral device when the tool engages the expandable intervertebral device; and

a screwdriver sized and configured for operating the threaded screw.

34. (Previously Presented) The system of claim 33, wherein the screwdriver comprises an elongate member configured to extend within the elongate shaft of the tool.

35. (Previously Presented) The system of claim 33, the tool further comprising a handle positioned at a proximal end of the elongate shaft.

36. (Previously Presented) An expandable intervertebral device comprising:

a first body extending from a first end to a second end, wherein the first body has first and second end portions positioned at the first and second ends, respectively, and has first and second side portions extending between the first and second end portions, wherein the first body has a first vertebral body engagement surface having a first plurality of ridges formed therein and has a first interior surface positioned on an opposite side of the first body than the first vertebral body engagement surface;

a second body extending from a third end to a fourth end, wherein the second body has third and fourth end portions positioned at the third and fourth ends, respectively, and has third and fourth side portions extending between the third and fourth end portions, wherein the second body has a second vertebral body engagement surface having a second plurality of ridges formed therein and has a second interior surface positioned on an opposite side of the second body than the second vertebral body engagement surface, wherein the first body is aligned with the second body such that the first end of the first body is axially aligned with the third end of the second body and the second end of the first body is axially aligned with the fourth end of the second body,

wherein the first end portion of the first body and the third end portion of the second body are hingedly interconnected such that the first body can pivot with respect to the second body so as to move the second end portion of the first body away from the fourth end portion of the second body; and

a wedge extending from a fifth end to a sixth end and having an angled wedge surface extending along at least a portion of a distance between the fifth end and the sixth end, wherein the wedge is positioned between the first body and the second body with the angled wedge surface facing the first interior surface of the first body, wherein the first interior surface of the first body has an angled housing surface shaped to engage the angled wedge surface of the wedge, wherein the wedge is configured to slide within a space defined by the first body and second body in a direction toward the second and fourth ends of the first body and second body from a first wedge position that allows the first body and second body to pivot to a position that is substantially closed to a second wedge position whereby the angled wedge surface presses against the first interior surface of the first body to hingedly open the first body with respect to the second body whereby the wedge remains axially confined within the space defined by the first body and second body in the first and second wedge positions.

37. (Previously Presented) The expandable intervertebral device of claim 36, wherein a first length of the first body from the first end to the second end is substantially equal to a second length of the second body from the third end to the fourth end, and wherein the second end portion of the first body is smaller than the fourth end portion of the second body such that the second end portion of the first body is positionable between the third and fourth side portions of the second body at the fourth end of the second body.

38. (Previously Presented) The expandable intervertebral device of claim 37, wherein the first body defines a first bone material receiving area between the first and second end portions and the first and second side portions, and the second body defines a second bone material receiving area between the third and fourth end portions and the third and

fourth side portions, and wherein the first bone material receiving area is coupled to the second bone material receiving area when the wedge is in the second wedge position.

39. (Previously Presented) The expandable intervertebral device of claim 38, wherein a distance from the fifth end to the sixth end of the wedge is less than a distance from the first end to the second end of the first body and is less than a distance from the third end to the fourth end of the second body.

40. (Previously Presented) A method of operating the expandable intervertebral device of claim 36, the method comprising:

inserting the expandable intervertebral device in a target surgical location between two vertebrae of a human patient; and

turning a rotation screw to actuate a movement of the wedge to pivot the first body away from the second body while the device is positioned between the vertebrae of the human patient.

REMARKS

Claims 21-40 are pending; and claims 21 and 36 are independent. Applicant respectfully requests reconsideration of the claims and withdrawal of the rejections in view of the below remarks.

Double Patenting

Claims 21, 22, 30 and 36-40 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1, 2, 13 and 14 of U.S. Patent No. 10,426,633. Without conceding the merits of the rejection but to further prosecution, a terminal disclaimer is filed herewith to obviate the rejection. In view of the terminal disclaimer, the Applicant respectfully requests that this rejection be withdrawn.

Request for Reconsideration

The Applicant respectfully requests prompt consideration and a Notice of Allowance. In the event that no Notice of Allowance will be provided in the next communication, Applicant requests that the Examiner telephone the undersigned attorney (612-766-2015) prior to the next communication so that prosecution on the merits may be expedited. It is believed that all of the pending claims have been addressed. However, the absence of a reply on a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendments herein do not signify concession of unpatentability of any claims prior to this amendment. Applicant hereby specifically reserves the right to prosecute the previously presented subject matter in a continuing application. Also, Applicant expressly reserves the right to prosecute claims of different or broader scope in a continuing application. The Patent Office should infer no (i) adoption of a position with respect to patentability, (ii) change in the Applicant's position with

respect to any claim or subject matter of the invention, or (iii) acquiescence in any way to any position taken by the Office Action, based on the amendments made herein.

Applicant believes no fees are due with this amendment. However, if a fee is due, please apply the fee and any other necessary charges or credits to Deposit Account 06-1050, referencing the above attorney docket number.

Respectfully submitted,

Date: June 22, 2023

/Kiersten M. Batzli/
Kiersten M. Batzli, Reg. No. 75,476

Customer Number 26191
Fish & Richardson P.C.
Telephone: +1 (612) 766-2015
Facsimile: (877) 769-7945

100882823.doc

Electronic Acknowledgement Receipt	
EFS ID:	48193464
Application Number:	17408068
International Application Number:	
Confirmation Number:	4713
Title of Invention:	EXPANDABLE INTERVERTEBRAL DEVICE
First Named Inventor/Applicant Name:	Ahmnon D. Moskowitz
Customer Number:	26191
Filer:	Kiersten M. Batzli/Emily Whitcomb
Filer Authorized By:	Kiersten M. Batzli
Attorney Docket Number:	46440-0020005
Receipt Date:	22-JUN-2023
Filing Date:	20-AUG-2021
Time Stamp:	15:43:52
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		ReplytoOA.PDF	105959 320cf353ed64f354b5b23e27d0217681f485 2481	yes	9

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Request for Reconsideration-After Non-Final Rejection	1	1
	Claims	2	7
	Applicant Arguments/Remarks Made in an Amendment	8	9
Warnings:			
Information:			
	Total Files Size (in bytes):	105959	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

26191 7590 07/20/2023
FISH & RICHARDSON P.C. (TC)
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER	
NEGRELLIRODRIGUE, CHRISTINA	
ART UNIT	PAPER NUMBER
3773	

DATE MAILED: 07/20/2023

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/408,068	08/20/2021	Ahmnon D. Moskowitz	46440-0020005	4713

TITLE OF INVENTION: EXPANDABLE INTERVERTEBRAL DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0.00	$0.00	$480	10/20/2023

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

26191 7590 07/20/2023
FISH & RICHARDSON P.C. (TC)
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/408,068	08/20/2021	Ahmnon D. Moskowitz	46440-0020005	4713

TITLE OF INVENTION: EXPANDABLE INTERVERTEBRAL DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0.00	$0.00	$480	10/20/2023

EXAMINER	ART UNIT	CLASS-SUBCLASS
NEGRELLIRODRIGUE, CHRISTINA	3773	623-017150

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑ Issue Fee ❑ Publication Fee (if required)

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via Patent Center or EFS-Web ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

❑ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

❑ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/408,068	08/20/2021	Ahmnon D. Moskowitz	46440-0020005	4713

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EXAMINER	
NEGRELLIRODRIGUE, CHRISTINA	
ART UNIT	PAPER NUMBER
3773	

DATE MAILED: 07/20/2023

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 17/408,068	Applicant(s) Moskowitz et al.	
	Examiner CHRISTINA NEGRELLI-RODRIGUEZ	Art Unit 3773	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to 06/22/2023.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 21-40 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	/EDUARDO C ROBERT/ Supervisory Patent Examiner, Art Unit 3773

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	Art Unit
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

CPC - Searched*		
Symbol	**Date**	**Examiner**
A61F2/442, 4425, 2002/443, 4455	05/05/2023	CN
A61F2/442, 4425, 2002/443, 4455	07/05/2023	CN

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**
623	17.11-17.16	05/05/2023	CN
606	246-249	05/05/2023	CN

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	**Date**	**Examiner**
Inventor Name Search	05/05/2023	CN
Considered all references in circled areas in PE2E search (see PE2E printout)	05/05/2023	CN
Updated Inventor Name Search	07/05/2023	CN
Considered all references in circled areas in PE2E search (see PE2E printout)	07/05/2023	CN

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	Art Unit
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
	Interference Search History Printout	07/05/2023	CN

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	Art Unit
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

CPC								
Symbol							Type	Version
A61F	/	2	/	447			F	2013-01-01
A61B	/	17	/	0642			I	2013-01-01
A61F	/	2	/	4611			I	2013-01-01
A61B	/	17	/	7064			I	2013-01-01
A61F	/	2002	/	30261			A	2013-01-01
A61F	/	2002	/	30266			A	2013-01-01
A61F	/	2002	/	30281			A	2013-01-01
A61F	/	2002	/	30471			A	2013-01-01
A61F	/	2002	/	30525			A	2013-01-01
A61F	/	2002	/	30538			A	2013-01-01
A61F	/	2002	/	30556			A	2013-01-01
A61B	/	17	/	86			A	2013-01-01
A61B	/	2017	/	922			A	2013-01-01
A61F	/	2002	/	2835			A	2013-01-01
A61F	/	2002	/	30387			A	2013-01-01
A61F	/	2002	/	30448			A	2013-01-01
A61F	/	2002	/	30507			A	2013-01-01
A61F	/	2002	/	3055			A	2013-01-01
A61F	/	2002	/	30579			A	2013-01-01
A61F	/	2002	/	30604			A	2013-01-01
A61F	/	2002	/	30772			A	2013-01-01
A61F	/	2002	/	30878			A	2013-01-01
A61F	/	2002	/	448			A	2013-01-01
A61F	/	2002	/	4627			A	2013-01-01
A61F	/	2002	/	4681			A	2013-01-01
A61F	/	2002	/	4687			A	2013-01-01
A61F	/	2220	/	0025			A	2013-01-01
A61F	/	2220	/	005			A	2013-01-01
A61F	/	2230	/	0015			A	2013-01-01
A61F	/	2250	/	0007			A	2013-01-01
A61B	/	17	/	8875			A	2013-01-01

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	05 July 2023	Total Claims Allowed:	
(Assistant Examiner)	(Date)	20	
/EDUARDO C ROBERT/ Supervisory Patent Examiner, Art Unit 3773	10 July 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	21	6C

U.S. Patent and Trademark Office

Part of Paper No.: 20230705

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	**Art Unit**
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

CPC						
Symbol					**Type**	**Version**
A61B	/	2017	/	0256	A	2013-01-01
A61F	/	2002	/	30495	A	2013-01-01
A61F	/	2002	/	30593	A	2013-01-01

CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
	/		/					

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	05 July 2023	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/EDUARDO C ROBERT/ Supervisory Patent Examiner, Art Unit 3773	10 July 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	21	6C

U.S. Patent and Trademark Office — Part of Paper No.: 20230705

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	**Art Unit**
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

INTERNATIONAL CLASSIFICATION				
CLAIMED				
A61F	/	2	/	44

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
623	17.15

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	05 July 2023	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/EDUARDO C ROBERT/ Supervisory Patent Examiner, Art Unit 3773	10 July 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	21	6C

U.S. Patent and Trademark Office — Part of Paper No.: 20230705

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	**Art Unit**
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		10		19	8	28	17	37						
	2		11		20	9	29	18	38						
	3		12	1	21	10	30	19	39						
	4		13	2	22	11	31	20	40						
	5		14	3	23	12	32								
	6		15	4	24	13	33								
	7		16	5	25	14	34								
	8		17	6	26	15	35								
	9		18	7	27	16	36								

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	05 July 2023	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/EDUARDO C ROBERT/ Supervisory Patent Examiner, Art Unit 3773	10 July 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	21	6C

U.S. Patent and Trademark Office Part of Paper No.: 20230705

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	**Art Unit**
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	05/05/2023	07/05/2023							
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	20	-	-							
1	21	✓	=							
2	22	✓	=							
3	23	O	=							
4	24	O	=							
5	25	O	=							
6	26	O	=							
7	27	O	=							
8	28	O	=							
9	29	O	=							
10	30	✓	=							
11	31	O	=							
12	32	O	=							
13	33	O	=							
14	34	O	=							
15	35	O	=							
16	36	✓	=							
17	37	✓	=							
18	38	✓	=							
19	39	✓	=							
20	40	✓	=							

Last Name: Moskowitz
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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
11/943,334	8535379	150	11/20/2007	MOSKOWITZ, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
12/471,345	8257370	250	05/22/2009	MOSKOWITZ, Ahmnon D.	POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLES, STAPLING GUNS, AND DEVICES FOR SPINAL FUSION
12/846,822	[]	160	07/29/2010	MOSKOWITZ, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
12/983,107	9901455	150	12/31/2010	MOSKOWITZ, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
13/084,543	8353913	150	04/11/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/101,129	8784450	150	05/04/2011	MOSKOWITZ, Ahmnon D.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
13/108,982	9005293	150	05/16/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,150	9867719	150	08/15/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,157	9889022	150	08/15/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,162	9895238	150	08/15/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,168	9907674	150	08/15/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/621,243	[]	160	09/15/2012	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
13/741,361	9301854	150	01/14/2013	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION

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13/893,326	9056018	150	05/13/2013	MOSKOWITZ, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
14/049,743	10842357	150	10/09/2013	MOSKOWITZ, Ahmnon D.	ENDOSCOPIC SURGICAL SYSTEM
14/063,197	9848993	150	10/25/2013	MOSKOWITZ, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
14/150,758	[]	161	01/08/2014	MOSKOWITZ, Ahmnon D.	GAME WITH PARAMETERS AND VARIABLES CORRESPONDING TO UNITS OF TIME
14/257,650	9622875	150	04/21/2014	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
14/332,351	9898895	250	07/15/2014	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
14/336,909	[]	160	07/21/2014	MOSKOWITZ, Ahmnon D.	CERVICAL SPINOUS PROCESS STAPLE
14/337,210	10098672	150	07/21/2014	MOSKOWITZ, Ahmnon D.	CERVICAL SPINOUS PROCESS STAPLE
14/460,330	[]	161	08/14/2014	MOSKOWITZ, Ahmnon D.	SYSTEMS AND APPARATUSES FOR IMPROVED VISUALIZATION OF ENDOSCOPIC IMAGES
14/467,006	[]	161	08/23/2014	MOSKOWITZ, Ahmnon D.	LOTTERY GAME BASED ON DATES AND METHOD OF PLAYING A LOTTERY GAME BASED ON DATES
14/668,908	9824544	150	03/25/2015	MOSKOWITZ, Ahmnon D.	METHODS OF PLAYING WAGERING GAMES WITH THE KENO SYSTEM
14/685,374	[]	160	04/13/2015	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
14/739,327	9867712	250	06/15/2015	MOSKOWITZ, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/054,926	9848998	150	02/26/2016	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/162,541	9965924	150	05/23/2016	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING MULTI-ZONE 21
15/397,198	10098678	150	01/03/2017	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM

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15/470,066	[]	160	03/27/2017	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
15/490,107	10064738	150	04/18/2017	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
15/657,811	10186108	150	07/24/2017	MOSKOWITZ, Ahmnon D.	Wagering Game Apparatuses, Methods and Systems for Slot Games with a "21" Theme and Video Three Card Poker featuring Multiple Pay Lines with Progressive Jackpots
15/722,089	10930119	150	10/02/2017	MOSKOWITZ, Ahmnon D.	SYSTEMS AND A METHODS FOR PLAYING MULTI-ZONE TWENTY ONE (21) ACROSS ELECTORNIC GAMING SYSTEMS AND SCRATCH OFF TICKETS
15/945,561	10269206	150	04/04/2018	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
16/277,272	10713884	150	02/15/2019	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
16/457,946	11127261	150	06/29/2019	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
17/182,514	[]	71	02/23/2021	MOSKOWITZ, Ahmnon D.	SYSTEMS AND METHODS FOR PLAYING MULTI-ZONE TWENTY ONE (21) ACROSS ELECTRONIC GAMING SYSTEMS
17/474,410	[]	71	09/14/2021	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
18/141,731	[]	19	05/01/2023	MOSKOWITZ, Ahmnon D.	SYSTEMS AND METHODS FOR PLAYING MULTI-ZONE TWENTY ONE (21) ACROSS ELECTRONIC GAMING SYSTEMS
62/696,503	[]	159	07/11/2018	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
13/103,994	9603713	150	05/09/2011	Moskowitz, Ahmnon D	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
09/849,521	[]	161	05/07/2001	Moskowitz, Ahmnon D.	Hands free umbrella
11/842,855	7942903	150	08/21/2007	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
12/054,335	7972363	150	03/24/2008	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION

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12/471,340	8734516	150	05/22/2009	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
12/957,776	9888918	250	12/01/2010	Moskowitz, Ahmnon D.	HORIZONTAL-TRANSVERTEBRAL CURVILINEAR NAIL-SCREWS WITH INTER-LOCKING RIGID OR JOINTED FLEXIBLE RODS FOR SPINAL FUSION
13/101,135	9675385	150	05/04/2011	Moskowitz, Ahmnon D.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
13/401,829	9744052	150	02/21/2012	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,323	9814601	150	03/12/2012	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,335	9532821	150	03/12/2012	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/678,401	10238505	150	08/16/2017	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/693,594	10149703	150	09/01/2017	Moskowitz, Ahmnon D.	CERVICAL SPINOUS PROCESS STAPLE
15/707,684	10424166	150	09/18/2017	Moskowitz, Ahmnon D.	METHODS OF PLAYING WAGERING GAMES WITH THE KENO SYSTEM
15/791,484	10376383	150	10/24/2017	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/820,232	10016284	150	11/21/2017	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/862,016	10028740	150	01/04/2018	Moskowitz, Ahmnon D.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
15/870,406	10610371	150	01/12/2018	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/894,471	10390969	150	02/12/2018	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/904,617	10022238	150	02/26/2018	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
15/944,117	10537442	150	04/03/2018	Moskowitz, Ahmnon D.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM

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15/944,221	10376376	150	04/03/2018	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/976,340	10307268	150	05/10/2018	Moskowitz, Ahmnon D.	INTERVERTEBRAL EXPANDABLE IMPLANT
16/018,354	10376386	150	06/26/2018	Moskowitz, Ahmnon D.	SPINAL STAPLE
16/018,798	10369003	150	06/26/2018	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
16/025,667	10426633	150	07/02/2018	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/034,545	11116642	150	07/13/2018	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/042,163	10258329	150	07/23/2018	Moskowitz, Ahmnon D.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/100,410	10603183	150	08/10/2018	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/160,824	10842542	150	10/15/2018	Moskowitz, Ahmnon D.	SPINAL BONE FUSION SYSTEM
16/160,937	10722274	150	10/15/2018	Moskowitz, Ahmnon D.	Cervical Spinous Process Staple
16/280,684	10478319	150	02/20/2019	Moskowitz, Ahmnon D.	SYSTEM WITH TOOL ASSEMBLY AND EXPANDABLE SPINAL IMPLANT
16/362,294	10925753	150	03/22/2019	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/384,232	[]	161	04/15/2019	Moskowitz, Ahmnon D.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/532,033	11141288	150	08/05/2019	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/564,946	11024127	150	09/09/2019	Moskowitz, Ahmnon D.	METHODS OF PLAYING WAGERING GAMES WITH THE KENO SYSTEM
16/587,993	11096797	150	09/30/2019	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/744,755	11376136	150	01/16/2020	Moskowitz, Ahmnon D.	EXPANDABLE SPINAL IMPLANT AND TOOL SYSTEM
16/829,246	11229525	150	03/25/2020	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION

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16/841,355	11478359	150	04/06/2020	Moskowitz, Ahmnon D.	ARTIFICIAL DISC SYSTEM
16/952,241	[]	93	11/19/2020	Moskowitz, Ahmnon D.	SPINAL BONE FUSION SYSTEM
16/953,797	[]	61	11/20/2020	Moskowitz, Ahmnon D.	Endoscopic Surgical System
17/129,149	11083591	150	12/21/2020	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/180,021	[]	41	02/19/2021	Moskowitz, Ahmnon D.	SPINAL FUSION IMPLANT
17/181,706	[]	30	02/22/2021	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/393,672	[]	93	08/04/2021	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/408,068	[]	71	08/20/2021	Moskowitz, Ahmnon D.	EXPANDABLE INTERVERTEBRAL DEVICE
17/471,667	[]	30	09/10/2021	Moskowitz, Ahmnon D.	3-D PRINTED SPINAL IMPLANT
17/492,996	[]	30	10/04/2021	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/577,722	[]	30	01/18/2022	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
17/706,873	[]	41	03/29/2022	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
60/208,070	[]	159	05/31/2000	Moskowitz, Ahmnon D.	Hands free umbrella
61/264,648	[]	159	11/25/2009	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/265,752	[]	159	12/01/2009	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/306,926	[]	159	02/22/2010	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/419,679	[]	159	12/03/2010	Moskowitz, Ahmnon D.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
61/425,749	[]	159	12/21/2010	Moskowitz, Ahmnon D.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
61/445,034	[]	159	02/21/2011	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
61/451,579	[]	159	03/10/2011	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL LEAF SPRING- RATCHET SCREW LOCKING MECHANISM

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61/451,582	[]	159	03/10/2011	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
61/712,251	[]	159	10/10/2012	Moskowitz, Ahmnon D.	ENDOSCOPIC SURGICAL SYSTEM
61/718,707	[]	159	10/25/2012	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/750,350	[]	159	01/08/2013	Moskowitz, Ahmnon D.	GAME WITH PARAMETERS AND VARIABLES CORRESPONDING TO UNITS OF TIME
61/801,783	[]	159	03/15/2013	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/846,608	[]	159	07/15/2013	Moskowitz, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
61/866,038	[]	159	08/14/2013	Moskowitz, Ahmnon D.	ENDOSCOPIC VIEWING APPARATUSES
61/869,645	[]	159	08/23/2013	Moskowitz, Ahmnon D.	LOTTERY GAME BASED ON DATES AND METHOD OF PLAYING A LOTTERY GAME BASED ON DATES
61/970,249	[]	159	03/25/2014	Moskowitz, Ahmnon D.	Methods of playing wagering games with the Keno system
62/165,870	[]	159	05/22/2015	Moskowitz, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING MULTI-ZONE 21
62/403,195	[]	159	10/02/2016	Moskowitz, Ahmnon D.	SYSTEM AND A METHOD FOR PLAYING NUMERICAL CARD GAMES

*all references in circled areas have been considered

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	1	"17408068"	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 10:35 AM
L2	5	"16025667"	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 10:59 AM
L3	1504	(expand$4) AND 606/246-249.ccls.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:40 PM
L4	1093	(expand$4) AND 623/17.11-17.16	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:40 PM
L6	4486	(expand$4) AND A61F2/442.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:40 PM
L7	1962	(expand$4) AND A61F2/4425.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:40 PM
L8	1121	(expand$4) AND A61F2002/443.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:41 PM
L9	4824	(expand$4) AND A61F2/4455.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:41 PM
L10	45	(Moskowitz Family).as.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/05/05 12:41 PM
L11	326	(Ahmnon NEAR2 Moskowitz).in. OR (Mosheh NEAR2 Moskowitz).in. OR (Pablo NEAR2 Alvarado).in. OR (Eric NEAR2 Sugalski).in. OR (Nathan NEAR2 Moskowitz).in. OR (David NEAR2 Schoon).in.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/05/05 12:44 PM
L12	1	"17408068"	(US-PGPUB; USPAT)	OR	ON	ON	2023/07/05 02:50 PM
L13	18	"10426633"	(US-PGPUB; USPAT)	OR	ON	ON	2023/07/05 02:52 PM
L14	1	"10426633".pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/07/05 02:52 PM
L15	13990	A61F2/442.cpc. OR A61F2/4425.cpc. OR A61F2002/443.cpc. OR A61F2/4455.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/07/05 03:31 PM
L16	119	L15 AND @pd>"20230505"	(US-PGPUB; USPAT)	OR	ON	ON	2023/07/05 03:31 PM
L17	45	(Moskowitz Family).as.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/07/05 03:32 PM
L18	327	(Ahmnon NEAR2 Moskowitz).in. OR (Mosheh NEAR2 Moskowitz).in. OR (Pablo NEAR2	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/07/05 03:33 PM

		Alvarado).in. OR (Eric NEAR2 Sugalski).in. OR (Nathan NEAR2 Moskowitz).in. OR (David NEAR2 Schoon).in.					

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N6	1	(expandable intervertebral device) AND (angled wedge surface) AND (second wedge position) AND (angled housing surface protruding from first interior surface).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/07/05 03:58 PM
N7	0	(expandable intervertebral device) AND (angled wedge surface) AND (second wedge position) AND (angled housing surface shaped to engage angled wedge surface).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/07/05 04:04 PM

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
11/737,846	7854765	250	04/20/2007	MOSKOWITZ, Mosheh T.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
11/943,334	8535379	150	11/20/2007	MOSKOWITZ, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
12/347,990	7951180	250	12/31/2008	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
12/846,822	[]	160	07/29/2010	MOSKOWITZ, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
12/945,835	9492282	250	11/13/2010	MOSKOWITZ, Mosheh T.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
12/983,107	9901455	150	12/31/2010	MOSKOWITZ, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
13/084,543	8353913	150	04/11/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/101,129	8784450	150	05/04/2011	MOSKOWITZ, Mosheh T.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
13/101,135	9675385	150	05/04/2011	MOSKOWITZ, Mosheh T.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
13/108,982	9005293	150	05/16/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,150	9867719	150	08/15/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,157	9889022	150	08/15/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,162	9895238	150	08/15/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/210,168	9907674	150	08/15/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/596,038	9801728	250	08/27/2012	MOSKOWITZ, Mosheh T.	TOOLS FOR IMPLANTATION AND EXTRACTION OF ARTICIAL DISCS
13/621,243	[]	160	09/15/2012	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
13/741,361	9301854	150	01/14/2013	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/893,326	9056018	150	05/13/2013	MOSKOWITZ, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
14/049,743	10842357	150	10/09/2013	MOSKOWITZ, Mosheh T.	ENDOSCOPIC SURGICAL SYSTEM
14/063,197	9848993	150	10/25/2013	MOSKOWITZ, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
14/257,650	9622875	150	04/21/2014	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
14/299,711	10016225	150	06/09/2014	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
14/336,909	[]	160	07/21/2014	MOSKOWITZ, Mosheh T.	CERVICAL SPINOUS PROCESS STAPLE
14/337,210	10098672	150	07/21/2014	MOSKOWITZ, Mosheh T.	CERVICAL SPINOUS PROCESS STAPLE
14/460,330	[]	161	08/14/2014	MOSKOWITZ, Mosheh T.	SYSTEMS AND APPARATUSES FOR IMPROVED VISUALIZATION OF ENDOSCOPIC IMAGES
14/685,374	[]	160	04/13/2015	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION

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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
14/739,327	9867712	250	06/15/2015	MOSKOWITZ, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/054,926	9848998	150	02/26/2016	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/350,352	10123881	150	11/14/2016	MOSKOWITZ, Mosheh T.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
15/397,198	10098678	150	01/03/2017	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/470,066	[]	160	03/27/2017	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
15/490,107	10064738	150	04/18/2017	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
11/019,351	7083650	250	12/23/2004	Moskowitz, Mosheh	ARTIFICIAL EXPANSILE TOTAL LUMBAR AND THORACIC DISCS FOR POSTERIOR PLACEMENT WITHOUT SUPPLEMENTAL INSTRUMENTATION AND ITS ADAPTATION FOR ANTERIOR PLACEMENT OF ARTIFICIAL CERVICAL, THORACIC AND LUMBAR DISCS
15/678,401	10238505	150	08/16/2017	Moskowitz, Mosheh	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
09/849,521	[]	161	05/07/2001	Moskowitz, Mosheh T.	Hands free umbrella
10/964,633	[]	161	10/15/2004	Moskowitz, Mosheh T.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs
11/208,644	7704279	250	08/23/2005	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
11/487,415	7854766	250	07/17/2006	Moskowitz, Mosheh T.	ARTIFICIAL TOTAL LUMBAR DISC FOR UNILATERAL SAFE AND SIMPLE POSTERIOR PLACEMENT IN THE LUMBAR SPINE, AND REMOVABLE BIFUNCTIONAL SCREW WHICH DRIVES VERTICAL SLIDING EXPANSILE PLATE EXPANSION, AND INTERPLATE WIDENING,AND ANGLED TRACTION SPIKES
11/536,815	7846188	250	09/29/2006	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
11/684,787	8251891	250	03/12/2007	Moskowitz, Mosheh T.	TOTALLY WIRELESS ELECTRONICALLY EMBEDDED ACTION-ENDED ENDOSCOPE UTILIZING DIFFERENTIAL DIRECTIONAL ILLUMINATION WITH DIGITALLY CONTROLLED MIRRORS AND/OR PRISMS
11/842,855	7942903	150	08/21/2007	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
12/054,335	7972363	150	03/24/2008	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
12/471,340	8734516	150	05/22/2009	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
12/471,345	8257370	250	05/22/2009	Moskowitz, Mosheh T.	POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLES, STAPLING GUNS, AND DEVICES FOR SPINAL FUSION
12/868,451	8747444	250	08/25/2010	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
12/889,328	10130493	150	09/23/2010	Moskowitz, Mosheh T.	ARTIFICIAL TOTAL LUMBAR DISC FOR UNILATERAL SAFE AND SIMPLE POSTERIOR PLACEMENT IN THE LUMBAR SPINE, AND REMOVEABLE BIFUNCTIONAL SCREW WHICH DRIVES VERTICAL SLIDING EXPANSILE PLATE EXPANSION, AND INTERPLATE WIDENING, AND ANGLED TRACTION SPIKES
12/957,776	9888918	250	12/01/2010	Moskowitz, Mosheh T.	HORIZONTAL-TRANSVERTEBRAL CURVILINEAR NAIL-SCREWS WITH INTER-LOCKING RIGID OR JOINTED FLEXIBLE RODS FOR SPINAL FUSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/093,812	9924940	150	04/25/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
13/103,994	9603713	150	05/09/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
13/401,829	9744052	150	02/21/2012	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,323	9814601	150	03/12/2012	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,335	9532821	150	03/12/2012	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/693,594	10149703	150	09/01/2017	Moskowitz, Mosheh T.	CERVICAL SPINOUS PROCESS STAPLE
15/724,015	10695187	150	10/03/2017	Moskowitz, Mosheh T.	HAND MANIPULATED ENDOSCOPIC MEDICAL DEVICE
15/791,484	10376383	150	10/24/2017	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/820,232	10016284	150	11/21/2017	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/862,016	10028740	150	01/04/2018	Moskowitz, Mosheh T.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
15/870,406	10610371	150	01/12/2018	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/894,471	10390969	150	02/12/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/896,130	10076367	150	02/14/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
15/904,617	10022238	150	02/26/2018	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
15/934,614	10537367	150	03/23/2018	Moskowitz, Mosheh T.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/934,622	10251643	150	03/23/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
15/944,117	10537442	150	04/03/2018	Moskowitz, Mosheh T.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/944,221	10376376	150	04/03/2018	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/976,340	10307268	150	05/10/2018	Moskowitz, Mosheh T.	INTERVERTEBRAL EXPANDABLE IMPLANT
16/018,354	10376386	150	06/26/2018	Moskowitz, Mosheh T.	SPINAL STAPLE
16/018,798	10369003	150	06/26/2018	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
16/018,904	10238383	150	06/26/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
16/025,667	10426633	150	07/02/2018	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/034,545	11116642	150	07/13/2018	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/042,163	10258329	150	07/23/2018	Moskowitz, Mosheh T.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/100,410	10603183	150	08/10/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/134,364	10952867	150	09/18/2018	Moskowitz, Mosheh T.	Electronically Assisted Medical Device
16/160,824	10842542	150	10/15/2018	Moskowitz, Mosheh T.	SPINAL BONE FUSION SYSTEM
16/160,937	10722274	150	10/15/2018	Moskowitz, Mosheh T.	Cervical Spinous Process Staple
16/194,976	11135072	150	11/19/2018	Moskowitz, Mosheh T.	ARTIFICIAL DISC SYSTEM
16/280,684	10478319	150	02/20/2019	Moskowitz, Mosheh T.	SYSTEM WITH TOOL ASSEMBLY AND EXPANDABLE SPINAL IMPLANT

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
16/362,152	10952723	150	03/22/2019	Moskowitz, Mosheh T.	ARTIFICIAL INTERVERTEBRAL IMPLANT
16/362,294	10925753	150	03/22/2019	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/384,232	[]	161	04/15/2019	Moskowitz, Mosheh T.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/532,033	11141288	150	08/05/2019	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/587,993	11096797	150	09/30/2019	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/673,806	[]	41	11/04/2019	Moskowitz, Mosheh T.	SYSTEMS AND METHODS FOR AUTONOMOUS ROBOTIC SURGERY
16/744,716	11357551	150	01/16/2020	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
16/744,755	11376136	150	01/16/2020	Moskowitz, Mosheh T.	EXPANDABLE SPINAL IMPLANT AND TOOL SYSTEM
16/829,246	11229525	150	03/25/2020	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/841,355	11478359	150	04/06/2020	Moskowitz, Mosheh T.	ARTIFICIAL DISC SYSTEM
16/952,241	[]	93	11/19/2020	Moskowitz, Mosheh T.	SPINAL BONE FUSION SYSTEM
16/953,797	[]	61	11/20/2020	Moskowitz, Mosheh T.	Endoscopic Surgical System
17/129,149	11083591	150	12/21/2020	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/180,021	[]	41	02/19/2021	Moskowitz, Mosheh T.	SPINAL FUSION IMPLANT
17/181,706	[]	30	02/22/2021	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/208,640	[]	82	03/22/2021	Moskowitz, Mosheh T.	ARTIFICIAL EXPANSIBLE IMPLANT SYSTEMS
17/208,669	11491021	150	03/22/2021	Moskowitz, Mosheh T.	ELECTRONICALLY ASSISTED MEDICAL DEVICE
17/393,672	[]	93	08/04/2021	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/408,068	[]	71	08/20/2021	Moskowitz, Mosheh T.	EXPANDABLE INTERVERTEBRAL DEVICE
17/471,667	[]	30	09/10/2021	Moskowitz, Mosheh T.	3-D PRINTED SPINAL IMPLANT
17/487,360	[]	93	09/28/2021	Moskowitz, Mosheh T.	ARTIFICIAL DISC SYSTEM

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
17/492,996	[]	30	10/04/2021	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/577,722	[]	30	01/18/2022	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
17/681,231	11452619	150	02/25/2022	Moskowitz, Mosheh T.	ARTIFICIAL DISC SYSTEM
17/706,873	[]	41	03/29/2022	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
17/752,330	[]	30	05/24/2022	Moskowitz, Mosheh T.	Intervertebral spinal implant systems
17/981,686	[]	30	11/07/2022	Moskowitz, Mosheh T.	ELECTRONICALLY ASSISTED MEDICAL DEVICE
60/208,070	[]	159	05/31/2000	Moskowitz, Mosheh T.	Hands free umbrella
60/670,231	[]	159	04/12/2005	Moskowitz, Mosheh T.	Stand-alone expansile intervertebral body fusion device utilizing bi-directional fixating transvertebral body screws or pneumatically driven expansile spiked telescoping cylinders with optional motion-calibrating interarticulating joint stapling device
60/673,761	[]	159	04/22/2005	Moskowitz, Mosheh T.	Spinal disc microchip implant providing dynamic disc motion in response to variable axial loading forces
60/788,720	[]	159	04/04/2006	Moskowitz, Mosheh T.	Posteriorly placed total lumbar atrificial disc with novel removeable bifunctional screw which drives vertical sliding expansile plate expansion, and interplate widening, and novel angled traction spikes, and interchangeable cores
60/793,329	[]	159	04/20/2006	Moskowitz, Mosheh T.	Electronically controlled artificial intervertebral disc with linear actuation systems and an active closed-loop microchip responding to variable human locomotor activity and spinal motion
61/264,648	[]	159	11/25/2009	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/265,752	[]	159	12/01/2009	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/306,926	[]	159	02/22/2010	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/419,679	[]	159	12/03/2010	Moskowitz, Mosheh T.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
61/425,749	[]	159	12/21/2010	Moskowitz, Mosheh T.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
61/445,034	[]	159	02/21/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
61/451,579	[]	159	03/10/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL LEAF SPRING- RATCHET SCREW LOCKING MECHANISM

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
61/451,582	[]	159	03/10/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
61/712,251	[]	159	10/10/2012	Moskowitz, Mosheh T.	ENDOSCOPIC SURGICAL SYSTEM
61/718,707	[]	159	10/25/2012	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/801,783	[]	159	03/15/2013	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/866,038	[]	159	08/14/2013	Moskowitz, Mosheh T.	ENDOSCOPIC VIEWING APPARATUSES
62/815,605	[]	159	03/08/2019	Moskowitz, Mosheh T.	Systems and Methods for Autonomous Robotic Surgery
63/411,943	[]	20	09/30/2022	Moskowitz, Mosheh T.	ASSISTIVE DEVICE AND METHOD

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/210,168	9907674	150	08/15/2011	ALVARADO, Pablo A Valdivia Y	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/741,361	9301854	150	01/14/2013	ALVARADO, Pablo A Valdivia Y	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/893,326	9056018	150	05/13/2013	ALVARADO, Pablo A Valdivia Y	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/054,926	9848998	150	02/26/2016	ALVARADO, Pablo A Valdivia Y	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/084,543	8353913	150	04/11/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/108,982	9005293	150	05/16/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,150	9867719	150	08/15/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,157	9889022	150	08/15/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,162	9895238	150	08/15/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/401,829	9744052	150	02/21/2012	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,335	9532821	150	03/12/2012	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
14/063,197	9848993	150	10/25/2013	ALVARADO, Pablo A. Valdivia Y.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
14/257,650	9622875	150	04/21/2014	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
14/685,374	[]	160	04/13/2015	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
14/739,327	9867712	250	06/15/2015	ALVARADO, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/490,107	10064738	150	04/18/2017	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
13/801,558	9426430	150	03/13/2013	ALVARADO-MOYA, Pablo	REMOTE SURVEILLANCE SENSOR APPARATUS
13/801,627	8957783	150	03/13/2013	ALVARADO-MOYA, Pablo	REMOTE SURVEILLANCE SYSTEM
13/801,649	9479697	150	03/13/2013	ALVARADO-MOYA, Pablo	SYSTEMS, METHODS AND MEDIA FOR GENERATING A PANORAMIC VIEW
18/343,485	[]	19	[]	ALVARADO-MOYA, Pablo	IMAGING SYSTEMS AND METHODS
61/445,034	[]	159	02/21/2011	Alvarado, Pablo A. Valdivia Y	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
61/451,579	[]	159	03/10/2011	Alvarado, Pablo A. Valdivia Y	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL LEAF SPRING- RATCHET SCREW LOCKING MECHANISM
61/451,582	[]	159	03/10/2011	Alvarado, Pablo A. Valdivia Y	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
61/718,707	[]	159	10/25/2012	Alvarado, Pablo A. Valdivia Y	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/801,783	[]	159	03/15/2013	Alvarado, Pablo A. Valdivia Y	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
11/842,855	7942903	150	08/21/2007	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
12/471,345	8257370	250	05/22/2009	Alvarado, Pablo A. Valdivia Y.	POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLES, STAPLING GUNS, AND DEVICES FOR SPINAL FUSION
13/418,323	9814601	150	03/12/2012	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/678,401	10238505	150	08/16/2017	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/791,484	10376383	150	10/24/2017	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/820,232	10016284	150	11/21/2017	Alvarado, Pablo A. Valdivia Y.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/870,406	10610371	150	01/12/2018	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/894,471	10390969	150	02/12/2018	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/944,117	10537442	150	04/03/2018	Alvarado, Pablo A. Valdivia Y.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/944,221	10376376	150	04/03/2018	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/976,340	10307268	150	05/10/2018	Alvarado, Pablo A. Valdivia Y.	INTERVERTEBRAL EXPANDABLE IMPLANT
16/018,354	10376386	150	06/26/2018	Alvarado, Pablo A. Valdivia Y.	SPINAL STAPLE
16/018,798	10369003	150	06/26/2018	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
16/025,667	10426633	150	07/02/2018	Alvarado, Pablo A. Valdivia Y.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/100,410	10603183	150	08/10/2018	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/160,824	10842542	150	10/15/2018	Alvarado, Pablo A. Valdivia Y.	SPINAL BONE FUSION SYSTEM

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
16/280,684	10478319	150	02/20/2019	Alvarado, Pablo A. Valdivia Y.	SYSTEM WITH TOOL ASSEMBLY AND EXPANDABLE SPINAL IMPLANT
16/362,294	10925753	150	03/22/2019	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/532,033	11141288	150	08/05/2019	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/587,993	11096797	150	09/30/2019	Alvarado, Pablo A. Valdivia Y.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/744,755	11376136	150	01/16/2020	Alvarado, Pablo A. Valdivia Y.	EXPANDABLE SPINAL IMPLANT AND TOOL SYSTEM
16/829,246	11229525	150	03/25/2020	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/841,355	11478359	150	04/06/2020	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL DISC SYSTEM
16/952,241	[]	93	11/19/2020	Alvarado, Pablo A. Valdivia Y.	SPINAL BONE FUSION SYSTEM
17/129,149	11083591	150	12/21/2020	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/181,706	[]	30	02/22/2021	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/393,672	[]	93	08/04/2021	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/408,068	[]	71	08/20/2021	Alvarado, Pablo A. Valdivia Y.	EXPANDABLE INTERVERTEBRAL DEVICE
17/492,996	[]	30	10/04/2021	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/577,722	[]	30	01/18/2022	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
17/706,873	[]	41	03/29/2022	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
11/838,869	[]	161	08/14/2007	Alvarado-Moya, Pablo	SYSTEM AND METHOD FOR INSERTING BREAK-IN SIGNALS IN COMMUNICATION SYSTEMS
12/100,081	9806833	150	04/09/2008	Alvarado-Moya, Pablo	SYSTEM AND METHOD FOR INSERTING BREAK-IN SIGNALS IN COMMUNICATION SYSTEMS
14/495,082	10019632	150	09/24/2014	Alvarado-Moya, Pablo	REMOTE SURVEILLANCE SENSOR APPARATUS
14/921,865	10091418	150	10/23/2015	Alvarado-Moya, Pablo	IMAGING SYSTEMS AND METHODS

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
15/606,907	[]	160	05/26/2017	Alvarado-Moya, Pablo	SYSTEM AND METHOD FOR INSERTING BREAK-IN SIGNALS IN COMMUNICATION SYSTEMS
16/118,303	10771692	150	08/30/2018	Alvarado-Moya, Pablo	IMAGING SYSTEMS AND METHODS
16/944,539	[]	95	07/31/2020	Alvarado-Moya, Pablo	IMAGING SYSTEMS AND METHODS
62/068,054	[]	159	10/24/2014	Alvarado-Moya, Pablo	Image Processing
62/173,029	[]	159	06/09/2015	Alvarado-Moya, Pablo	Image Processing

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Verified and Acknowledged: /CHRISTINA NEGRELLIRODRIGUEZ/ (Examiner's Signature) (Initials)

Title: EXPANDABLE INTERVERTEBRAL DEVICE

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
08/20/2021	623	3773	46440-0020005
RULE			

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CONTINUING DATA

This application is a CON of 16587993 09/30/2019 PAT 11096797

16587993 is a CON of 16025667 07/02/2018 PAT 10426633

16025667 is a CON of 15820232 11/21/2017 PAT 10016284

15820232 is a CON of 14063197 10/25/2013 PAT 9848993

14063197 has PRO of 61801783 03/15/2013

14063197 is a CIP of 13741361 01/14/2013 PAT 9301854

14063197 has PRO of 61718707 10/25/2012

14063197 is a CIP of 13210150 08/15/2011 PAT 9867719

14063197 is a CIP of 13210157 08/15/2011 PAT 9889022

14063197 is a CIP of 13210168 08/15/2011 PAT 9907674

14063197 is a CIP of 13210162 08/15/2011 PAT 9895238

13741361 is a CON of 13108982 05/16/2011 PAT 9005293

13210150 is a CON of 13108982 05/16/2011 PAT 9005293

13210157 is a CON of 13108982 05/16/2011 PAT 9005293

13210162 is a CON of 13108982 05/16/2011 PAT 9005293

13210168 is a CON of 13108982 05/16/2011 PAT 9005293

13210162 is a CON of 13084543 04/11/2011 PAT 8353913

13741361 is a CON of 13084543 04/11/2011 PAT 8353913

13210157 is a CON of 13084543 04/11/2011 PAT 8353913

13210168 is a CON of 13084543 04/11/2011 PAT 8353913

13210150 is a CON of 13084543 04/11/2011 PAT 8353913

13108982 is a CON of 11842855 08/21/2007 PAT 7942903

13084543 is a CON of 11842855 08/21/2007 PAT 7942903

11842855 is a CIP of 11536815 09/29/2006 PAT 7846188

11536815 is a CIP of 11208644 08/23/2005 PAT 7704279

11208644 has PRO of 60670231 04/12/2005

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

08/30/2021

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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
11/536,278	8061305	250	09/28/2006	SUGALSKI, ERIC	LEASH HANDLE WITH AN INTEGRATED COMPARTMENT
12/846,822	[]	160	07/29/2010	SUGALSKI, Eric	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
12/983,107	9901455	150	12/31/2010	SUGALSKI, Eric	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
14/063,197	9848993	150	10/25/2013	SUGALSKI, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
14/597,798	9700324	150	01/15/2015	SUGALSKI, Eric	SURGICAL CLIP APPLICATOR
16/205,674	11191939	150	11/30/2018	SUGALSKI, Eric	STABILIZING CONNECTOR DEVICES FOR VASCULAR ACCESS AND METHODS OF USING THE SAME
29/537,472	[]	161	08/26/2015	SUGALSKI, Eric	WALL MOUNTED PANEL FOR PURIFICATION
61/928,171	[]	159	01/16/2014	SUGALSKI, Eric	SURGICAL CLIP APPLICATOR
62/238,858	[]	159	10/08/2015	SUGALSKI, Eric	WALL PURIFICATION SYSTEMS, METHODS AND KITS
62/631,208	[]	159	02/15/2018	SUGALSKI, Eric	STABILIZING CONNECTOR DEVICES FOR VASCULAR ACCESS AND METHODS OF USING THE SAME
10/551,169	7228589	150	09/28/2005	Sugalski, Eric	UNATTENDED SPOT CLEANING APPARATUS
10/603,568	[]	161	06/25/2003	Sugalski, Eric	Removable light
11/393,373	[]	161	03/30/2006	Sugalski, Eric	Liquid dispensing devices including an attached cleaning element
11/455,952	7481406	150	06/20/2006	Sugalski, Eric	PLASTIC PEGBOARD ASSEMBLY
12/144,338	[]	161	06/23/2008	Sugalski, Eric	GRILL LIGHT WITH AUTOMATIC SWITCH
12/349,019	[]	161	01/06/2009	Sugalski, Eric	Plastic Pegboard Assembly
12/565,367	8545513	150	09/23/2009	Sugalski, Eric	Uterine Manipulator Assemblies and Related Components and Methods
12/842,327	8663270	150	07/23/2010	Sugalski, Eric	Jaw Movement Mechanism and Method for a Surgical Tool
12/842,399	[]	161	07/23/2010	Sugalski, Eric	Surgical Tool with Crossbar Lever
13/138,209	10933191	150	02/01/2012	Sugalski, Eric	INFUSION SET
13/613,927	10018364	150	09/13/2012	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
13/614,068	9255712	150	09/13/2012	Sugalski, Eric	OVEN APPLIANCE WITH DOORS HAVING A TONGUE AND GROOVE INTERFACE
13/614,274	9651265	150	09/13/2012	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
13/614,482	8944536	150	09/13/2012	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/013,216	8740916	150	08/29/2013	Sugalski, Eric	Uterine Manipulator Assemblies and Related Components and Methods
14/578,687	9188346	150	12/22/2014	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/727,896	9562818	250	06/02/2015	Sugalski, Eric	Manipulation Device with Force Read-Out
14/874,766	9328929	150	10/05/2015	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/974,896	9900735	150	12/18/2015	Sugalski, Eric	COMMUNICATION SYSTEMS
15/083,329	9494323	150	03/29/2016	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/291,223	9644848	150	10/12/2016	Sugalski, Eric	AN OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/499,092	9890957	150	04/27/2017	Sugalski, Eric	Oven Appliance with Dual Opening and Closing Doors

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
15/820,232	10016284	150	11/21/2017	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/892,461	10508817	150	02/09/2018	Sugalski, Eric	Oven Appliance with Dual Opening and Closing Doors
15/904,617	10022238	150	02/26/2018	Sugalski, Eric	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/025,667	10426633	150	07/02/2018	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/034,545	11116642	150	07/13/2018	Sugalski, Eric	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/079,701	11253013	150	08/24/2018	Sugalski, Eric	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
16/587,993	11096797	150	09/30/2019	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
17/167,565	[]	71	02/04/2021	Sugalski, Eric	INFUSION SET
17/167,651	11690953	150	02/04/2021	Sugalski, Eric	INFUSION SET
17/167,692	[]	95	02/04/2021	Sugalski, Eric	INFUSION SET
17/408,068	[]	71	08/20/2021	Sugalski, Eric	EXPANDABLE INTERVERTEBRAL DEVICE
17/471,667	[]	30	09/10/2021	Sugalski, Eric	3-D PRINTED SPINAL IMPLANT
17/512,452	[]	41	10/27/2021	Sugalski, Eric	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
17/517,368	[]	30	11/02/2021	Sugalski, Eric	Stabilizing Connector Devices for Vascular Access and Methods of Using the Same
60/667,187	[]	159	03/30/2005	Sugalski, Eric	Liquid dispensing devices including an attached cleaning element
60/721,553	[]	159	09/29/2005	Sugalski, Eric	Leash handle with integrated compartment
60/757,740	[]	159	01/09/2006	Sugalski, Eric	Pet perch
61/108,211	[]	159	10/24/2008	Sugalski, Eric	Uterine Manipulator Assemblies and Related Components and Methods
61/202,019	[]	159	01/21/2009	Sugalski, Eric	Infusion set
61/718,707	[]	159	10/25/2012	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/801,783	[]	159	03/15/2013	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
62/301,157	[]	159	02/29/2016	Sugalski, Eric	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
62/592,684	[]	159	11/30/2017	Sugalski, Eric	STABILIZING CONNECTOR DEVICES FOR VASCULAR ACCESS AND METHODS OF USING THE SAME
60/845,730	[]	159	09/19/2006	Sugalski, Eric C.	Stroller toy apparatus

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
10/933,381	7462187	150	09/03/2004	Sugalski, Eric Christopher	POWERED SURGICAL APPARATUS, METHOD OF MANUFACTURING POWERED SURGICAL APPARATUS, AND METHOD OF USING POWERED SURGICAL APPARATUS
11/045,135	8454640	150	01/31/2005	Sugalski, Eric Christopher	Powered surgical apparatus, method of manufacturing powered surgical apparatus, and method of using powered surgical apparatus
11/045,138	[]	161	01/31/2005	Sugalski, Eric Christopher	Powered surgical apparatus, method of manufacturing powered surgical apparatus, and method of using powered surgical apparatus
11/045,255	7473263	150	01/31/2005	Sugalski, Eric Christopher	POWERED SURGICAL APPARATUS, METHOD OF MANUFACTURING POWERED SURGICAL APPARATUS, AND METHOD OF USING POWERED SURGICAL APPARATUS
11/045,256	7799044	250	01/31/2005	Sugalski, Eric Christopher	POWERED SURGICAL APPARATUS, METHOD OF MANUFACTURING POWERED SURGICAL APPARATUS, AND METHOD OF USING POWERED SURGICAL APPARATUS
11/508,063	8616932	150	08/22/2006	Sugalski, Eric Christopher	Collapsible umbrella gym
11/711,787	7416539	150	02/28/2007	Sugalski, Eric Christopher	POWERED SURGICAL APPARATUS, METHOD OF MANUFACTURING POWERED SURGICAL APPARATUS, AND METHOD OF USING POWERED SURGICAL APPARATUS
12/007,756	[]	161	01/15/2008	Sugalski, Eric Christopher	Powered surgical apparatus, method of manufacturing powered surgical apparatus, and method of using powered surgical apparatus
16/834,953	[]	41	03/30/2020	Sugalski, Eric Christopher	CONTROLLED-DOSE MEDICINAL LIQUID VAPING DEVICE
60/366,224	[]	159	03/22/2002	Sugalski, Eric Christopher	Powered surgical apparatus, method of manufacturing powered surgical apparatus, and method of using powered surgical apparatus
62/825,935	[]	159	03/29/2019	Sugalski, Eric Christopher	CONTROLLED-DOSE MEDICINAL OIL VAPING DEVICE

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/596,038	9801728	250	08/27/2012	MOSKOWITZ, Nathan	TOOLS FOR IMPLANTATION AND EXTRACTION OF ARTICIAL DISCS
11/943,334	8535379	150	11/20/2007	MOSKOWITZ, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
12/347,990	7951180	250	12/31/2008	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
12/846,822	[]	160	07/29/2010	MOSKOWITZ, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
12/983,107	9901455	150	12/31/2010	MOSKOWITZ, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
13/084,543	8353913	150	04/11/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/101,129	8784450	150	05/04/2011	MOSKOWITZ, Nathan C.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
13/108,982	9005293	150	05/16/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,150	9867719	150	08/15/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,157	9889022	150	08/15/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,162	9895238	150	08/15/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,168	9907674	150	08/15/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/621,243	[]	160	09/15/2012	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/741,361	9301854	150	01/14/2013	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/893,326	9056018	150	05/13/2013	MOSKOWITZ, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
14/049,743	10842357	150	10/09/2013	MOSKOWITZ, Nathan C.	ENDOSCOPIC SURGICAL SYSTEM
14/063,197	9848993	150	10/25/2013	MOSKOWITZ, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
14/257,650	9622875	150	04/21/2014	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
14/299,711	10016225	150	06/09/2014	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
14/336,909	[]	160	07/21/2014	MOSKOWITZ, Nathan C.	CERVICAL SPINOUS PROCESS STAPLE
14/337,210	10098672	150	07/21/2014	MOSKOWITZ, Nathan C.	CERVICAL SPINOUS PROCESS STAPLE
14/460,330	[]	161	08/14/2014	MOSKOWITZ, Nathan C.	SYSTEMS AND APPARATUSES FOR IMPROVED VISUALIZATION OF ENDOSCOPIC IMAGES
14/685,374	[]	160	04/13/2015	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
14/739,327	9867712	250	06/15/2015	MOSKOWITZ, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/054,926	9848998	150	02/26/2016	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/350,352	10123881	150	11/14/2016	MOSKOWITZ, Nathan C.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
15/397,198	10098678	150	01/03/2017	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/470,066	[]	160	03/27/2017	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
15/490,107	10064738	150	04/18/2017	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
11/487,415	7854766	250	07/17/2006	Moskowitz, Nathan	ARTIFICIAL TOTAL LUMBAR DISC FOR UNILATERAL SAFE AND SIMPLE POSTERIOR PLACEMENT IN THE LUMBAR SPINE, AND REMOVABLE BIFUNCTIONAL SCREW WHICH DRIVES VERTICAL SLIDING EXPANSILE PLATE EXPANSION, AND INTERPLATE WIDENING,AND ANGLED TRACTION SPIKES
11/684,787	8251891	250	03/12/2007	Moskowitz, Nathan	TOTALLY WIRELESS ELECTRONICALLY EMBEDDED ACTION-ENDED ENDOSCOPE UTILIZING DIFFERENTIAL DIRECTIONAL ILLUMINATION WITH DIGITALLY CONTROLLED MIRRORS AND/OR PRISMS
12/868,451	8747444	250	08/25/2010	Moskowitz, Nathan	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
12/889,328	10130493	150	09/23/2010	Moskowitz, Nathan	ARTIFICIAL TOTAL LUMBAR DISC FOR UNILATERAL SAFE AND SIMPLE POSTERIOR PLACEMENT IN THE LUMBAR SPINE, AND REMOVEABLE BIFUNCTIONAL SCREW WHICH DRIVES VERTICAL SLIDING EXPANSILE PLATE EXPANSION, AND INTERPLATE WIDENING, AND ANGLED TRACTION SPIKES
60/788,720	[]	159	04/04/2006	Moskowitz, Nathan	Posteriorly placed total lumbar atrificial disc with novel removeable bifunctional screw which drives vertical sliding expansile plate expansion, and interplate widening, and novel angled traction spikes, and interchangeable cores
60/793,329	[]	159	04/20/2006	Moskowitz, Nathan	Electronically controlled artificial intervertebral disc with linear actuation systems and an active closed-loop microchip responding to variable human locomotor activity and spinal motion
09/849,521	[]	161	05/07/2001	Moskowitz, Nathan C.	Hands free umbrella
10/964,633	[]	161	10/15/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
11/019,351	7083650	250	12/23/2004	Moskowitz, Nathan C.	ARTIFICIAL EXPANSILE TOTAL LUMBAR AND THORACIC DISCS FOR POSTERIOR PLACEMENT WITHOUT SUPPLEMENTAL INSTRUMENTATION AND ITS ADAPTATION FOR ANTERIOR PLACEMENT OF ARTIFICIAL CERVICAL, THORACIC AND LUMBAR DISCS
11/208,644	7704279	250	08/23/2005	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
11/536,815	7846188	250	09/29/2006	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
11/737,846	7854765	250	04/20/2007	Moskowitz, Nathan C.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
11/842,855	7942903	150	08/21/2007	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
12/054,335	7972363	150	03/24/2008	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
12/471,340	8734516	150	05/22/2009	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
12/945,835	9492282	250	11/13/2010	Moskowitz, Nathan C.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
12/957,776	9888918	250	12/01/2010	Moskowitz, Nathan C.	HORIZONTAL-TRANSVERTEBRAL CURVILINEAR NAIL-SCREWS WITH INTER-LOCKING RIGID OR JOINTED FLEXIBLE RODS FOR SPINAL FUSION
13/093,812	9924940	150	04/25/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/101,135	9675385	150	05/04/2011	Moskowitz, Nathan C.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
13/103,994	9603713	150	05/09/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
13/401,829	9744052	150	02/21/2012	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,323	9814601	150	03/12/2012	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,335	9532821	150	03/12/2012	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/678,401	10238505	150	08/16/2017	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/693,594	10149703	150	09/01/2017	Moskowitz, Nathan C.	CERVICAL SPINOUS PROCESS STAPLE
15/724,015	10695187	150	10/03/2017	Moskowitz, Nathan C.	HAND MANIPULATED ENDOSCOPIC MEDICAL DEVICE
15/791,484	10376383	150	10/24/2017	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/820,232	10016284	150	11/21/2017	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/862,016	10028740	150	01/04/2018	Moskowitz, Nathan C.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
15/870,406	10610371	150	01/12/2018	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/894,471	10390969	150	02/12/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/896,130	10076367	150	02/14/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION

Last Name: Moskowitz
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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
15/904,617	10022238	150	02/26/2018	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
15/934,614	10537367	150	03/23/2018	Moskowitz, Nathan C.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/934,622	10251643	150	03/23/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
15/944,117	10537442	150	04/03/2018	Moskowitz, Nathan C.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/944,221	10376376	150	04/03/2018	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/976,340	10307268	150	05/10/2018	Moskowitz, Nathan C.	INTERVERTEBRAL EXPANDABLE IMPLANT
16/018,354	10376386	150	06/26/2018	Moskowitz, Nathan C.	SPINAL STAPLE
16/018,798	10369003	150	06/26/2018	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
16/018,904	10238383	150	06/26/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
16/025,667	10426633	150	07/02/2018	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/034,545	11116642	150	07/13/2018	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/042,163	10258329	150	07/23/2018	Moskowitz, Nathan C.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/100,410	10603183	150	08/10/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/134,364	10952867	150	09/18/2018	Moskowitz, Nathan C.	Electronically Assisted Medical Device
16/160,824	10842542	150	10/15/2018	Moskowitz, Nathan C.	SPINAL BONE FUSION SYSTEM
16/160,937	10722274	150	10/15/2018	Moskowitz, Nathan C.	Cervical Spinous Process Staple
16/194,976	11135072	150	11/19/2018	Moskowitz, Nathan C.	ARTIFICIAL DISC SYSTEM

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
16/280,684	10478319	150	02/20/2019	Moskowitz, Nathan C.	SYSTEM WITH TOOL ASSEMBLY AND EXPANDABLE SPINAL IMPLANT
16/362,152	10952723	150	03/22/2019	Moskowitz, Nathan C.	ARTIFICIAL INTERVERTEBRAL IMPLANT
16/362,294	10925753	150	03/22/2019	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/384,232	[]	161	04/15/2019	Moskowitz, Nathan C.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/532,033	11141288	150	08/05/2019	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/587,993	11096797	150	09/30/2019	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/673,806	[]	41	11/04/2019	Moskowitz, Nathan C.	SYSTEMS AND METHODS FOR AUTONOMOUS ROBOTIC SURGERY
16/744,716	11357551	150	01/16/2020	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
16/744,755	11376136	150	01/16/2020	Moskowitz, Nathan C.	EXPANDABLE SPINAL IMPLANT AND TOOL SYSTEM
16/829,246	11229525	150	03/25/2020	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/841,355	11478359	150	04/06/2020	Moskowitz, Nathan C.	ARTIFICIAL DISC SYSTEM
16/952,241	[]	93	11/19/2020	Moskowitz, Nathan C.	SPINAL BONE FUSION SYSTEM
16/953,797	[]	61	11/20/2020	Moskowitz, Nathan C.	Endoscopic Surgical System
17/129,149	11083591	150	12/21/2020	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/180,021	[]	41	02/19/2021	Moskowitz, Nathan C.	SPINAL FUSION IMPLANT
17/181,706	[]	30	02/22/2021	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/208,640	[]	82	03/22/2021	Moskowitz, Nathan C.	ARTIFICIAL EXPANSIBLE IMPLANT SYSTEMS
17/208,669	11491021	150	03/22/2021	Moskowitz, Nathan C.	ELECTRONICALLY ASSISTED MEDICAL DEVICE
17/393,672	[]	93	08/04/2021	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/408,068	[]	71	08/20/2021	Moskowitz, Nathan C.	EXPANDABLE INTERVERTEBRAL DEVICE
17/471,667	[]	30	09/10/2021	Moskowitz, Nathan C.	3-D PRINTED SPINAL IMPLANT
17/487,360	[]	93	09/28/2021	Moskowitz, Nathan C.	ARTIFICIAL DISC SYSTEM

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
17/492,996	[]	30	10/04/2021	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/577,722	[]	30	01/18/2022	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
17/681,231	11452619	150	02/25/2022	Moskowitz, Nathan C.	ARTIFICIAL DISC SYSTEM
17/706,873	[]	41	03/29/2022	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
17/752,330	[]	30	05/24/2022	Moskowitz, Nathan C.	Intervertebral spinal implant systems
17/981,686	[]	30	11/07/2022	Moskowitz, Nathan C.	ELECTRONICALLY ASSISTED MEDICAL DEVICE
60/208,070	[]	159	05/31/2000	Moskowitz, Nathan C.	Hands free umbrella
60/570,098	[]	159	05/12/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement
60/570,837	[]	159	05/14/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation (adaptation for anterior cervical, thoracic and lumbar devices available)
60/572,468	[]	159	05/20/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs
60/573,346	[]	159	05/24/2004	Moskowitz, Nathan C.	Artificial expansible total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs
60/578,319	[]	159	06/10/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs
60/670,231	[]	159	04/12/2005	Moskowitz, Nathan C.	Stand-alone expansile intervertebral body fusion device utilizing bi-directional fixating transvertebral body screws or pneumatically driven expansile spiked telescoping cylinders with optional motion-calibrating interarticulating joint stapling device
60/673,761	[]	159	04/22/2005	Moskowitz, Nathan C.	Spinal disc microchip implant providing dynamic disc motion in response to variable axial loading forces
61/264,648	[]	159	11/25/2009	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/265,752	[]	159	12/01/2009	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/306,926	[]	159	02/22/2010	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/419,679	[]	159	12/03/2010	Moskowitz, Nathan C.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION

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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
61/425,749	[]	159	12/21/2010	Moskowitz, Nathan C.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
61/445,034	[]	159	02/21/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
61/451,579	[]	159	03/10/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL LEAF SPRING- RATCHET SCREW LOCKING MECHANISM
61/451,582	[]	159	03/10/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
61/712,251	[]	159	10/10/2012	Moskowitz, Nathan C.	ENDOSCOPIC SURGICAL SYSTEM
61/718,707	[]	159	10/25/2012	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/801,783	[]	159	03/15/2013	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/866,038	[]	159	08/14/2013	Moskowitz, Nathan C.	ENDOSCOPIC VIEWING APPARATUSES
62/815,605	[]	159	03/08/2019	Moskowitz, Nathan C.	Systems and Methods for Autonomous Robotic Surgery
63/411,943	[]	20	09/30/2022	Moskowitz, Nathan C.	ASSISTIVE DEVICE AND METHOD

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
07/568,908	5054893	250	08/17/1990	SCHOON, DAVID	ELECTRO-OPTIC CELL LINEAR ARRAY
06/045,821	4242565	150	06/05/1979	SCHOON, DAVID J.	THERMAL PRINT HEAD
06/434,189	4541061	150	10/13/1982	SCHOON, DAVID J.	DATA CLOCKING CIRCUITRY FOR A SCANNING APPARATUS
06/470,489	4631726	250	02/28/1983	SCHOON, DAVID J.	LASER DIODE CONTROL CIRCUITRY
06/574,066	4571623	150	01/26/1984	SCHOON, DAVID J.	DATA CLOCKING CIRCUITRY
06/586,204	4630223	250	03/05/1984	SCHOON, DAVID J.	SCANNER AMPLITUDE STABILIZATION SYSTEM
06/589,772	4586057	150	03/15/1984	SCHOON, DAVID J.	COMPENSATION CIRCUITRY FOR A LASER PRINTER USING A SELF-RESONANT SCANNER
06/594,211	4683551	250	03/28/1984	SCHOON, DAVID J.	RAM CLOCK SWITCHING CIRCUITRY FOR A LASER BEAM PRINTER
06/820,231	4686363	250	01/21/1986	SCHOON, DAVID J.	SELF-RESONANT SCANNER BIASING SYSTEM
07/096,959	4857904	250	09/15/1987	SCHOON, DAVID J.	COMBINATION OF TRANSITION-ENCODED FONT INFORMATION FOR GENERATION OF SUPERIMPOSED FONT IMAGES
07/096,960	4847607	250	09/15/1987	SCHOON, DAVID J.	IMAGE GENERATION FROM TRANSITION-ENCODED FONT INFORMATION
07/096,961	4870498	250	09/15/1987	SCHOON, DAVID J.	DECOMPRESSING RUN-LENGTH-ENCODED TO TRANSITION-ENCODED FONT IMAGE INFORMATION IN AN IMAGE GENERATOR
07/542,957	5225851	250	06/25/1990	SCHOON, DAVID J.	BAND IMAGING DEVICE
07/811,797	[]	161	12/20/1991	SCHOON, DAVID J.	FAULT TOLERANT IMAGING DEVICE
07/811,806	[]	161	12/20/1991	SCHOON, DAVID J.	HIGH RESOLUTION IMAGING DEVICE
07/811,807	[]	161	12/20/1991	SCHOON, DAVID J.	IMAGING DEVICE
07/827,061	[]	161	01/28/1992	SCHOON, DAVID J.	BANDWISE IMAGING DEVICE
07/828,021	[]	161	01/30/1992	SCHOON, DAVID J.	COLOR IMAGING DEVICE
07/884,408	5434600	250	05/18/1992	SCHOON, DAVID J.	ILLUMINATION MODULE FOR BANDWISE IMAGING DEVICE
07/914,450	5250982	250	07/15/1992	SCHOON, DAVID J.	APPARATUS AND METHOD OF IMAGING UV-SENSITIVE MEDIA
08/175,716	[]	161	12/29/1993	SCHOON, DAVID J.	SPATIAL STABILIZATION FOR BANDWISE IMAGING DEVICE
08/181,573	5481398	250	01/13/1994	SCHOON, DAVID J.	TEMPERATURE STABILIZATION MEANS FOR IMAGING OUTPUT RECORDER
08/181,574	5565906	250	01/13/1994	SCHOON, DAVID J.	CLOCKING MEANS FOR BANDWISE IMAGING DEVICE
08/594,017	5684620	250	01/30/1996	SCHOON, DAVID J.	HIGH RESOLUTION IMAGING SYSTEM AND METHOD OF IMAGING USING THE SAME
09/276,007	6148134	250	03/25/1999	SCHOON, DAVID J.	FIBER MOUNTS FOR FIBER OPTIC HARNESS IN A FIBER OPTIC-BASED IMAGING SYSTEM
09/276,433	[]	161	03/25/1999	SCHOON, DAVID J.	LIGHT DISTRIBUTION DEVICE FOR FIBER OPTIC-BASED IMAGING SYSTEM
14/597,798	9700324	150	01/15/2015	SCHOON, David	SURGICAL CLIP APPLICATOR
61/928,171	[]	159	01/16/2014	SCHOON, David	SURGICAL CLIP APPLICATOR
08/020,951	5281248	250	02/22/1993	SCHOONMAKER, DAVID E.	VAD PROCESS IMPROVEMENTS
08/057,911	5376247	250	05/07/1993	SCHOONOVER, DAVID E.	CONTROL OF CARBON BALANCE IN A SILICON SMELTING FURNACE BY MONITORING CALCUIM

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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
06/127,724	4329149	150	03/06/1980	SCHOONOVER, DAVID J.	METHOD FOR SPECTROPHOTOMETRIC COMPENSATION FOR COLORIMETRIC REAGENT VARIATION
06/660,784	4557899	250	10/15/1984	SCHOONOVER, DAVID J.	WATER-IN-OIL TESTING APPARATUS
06/660,785	[]	161	10/15/1984	SCHOONOVER, DAVID J.	WATER-IN-OIL TESTING
13/613,927	10018364	150	09/13/2012	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
13/614,068	9255712	150	09/13/2012	Schoon, David	OVEN APPLIANCE WITH DOORS HAVING A TONGUE AND GROOVE INTERFACE
13/614,274	9651265	150	09/13/2012	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
13/614,482	8944536	150	09/13/2012	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/578,687	9188346	150	12/22/2014	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/874,766	9328929	150	10/05/2015	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/083,329	9494323	150	03/29/2016	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/291,223	9644848	150	10/12/2016	Schoon, David	AN OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/499,092	9890957	150	04/27/2017	Schoon, David	Oven Appliance with Dual Opening and Closing Doors
15/762,925	10939711	150	03/23/2018	Schoon, David	NOISE SUPPRESSION DEVICE FOR A PERSONAL IMPACT PROTECTION SYSTEM
15/892,461	10508817	150	02/09/2018	Schoon, David	Oven Appliance with Dual Opening and Closing Doors
16/079,701	11253013	150	08/24/2018	Schoon, David	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
16/587,993	11096797	150	09/30/2019	Schoon, David	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
17/408,068	[]	71	08/20/2021	Schoon, David	EXPANDABLE INTERVERTEBRAL DEVICE
17/512,452	[]	41	10/27/2021	Schoon, David	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
62/232,872	[]	159	09/25/2015	Schoon, David	NOISE SUPPRESSION DEVICE FOR A PERSONAL IMPACT PROTECTION SYSTEM
62/301,157	[]	159	02/29/2016	Schoon, David	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
09/657,419	[]	161	09/08/2000	Schoon, David Jacob	Modular imager
09/657,485	[]	161	09/08/2000	Schoon, David Jacob	High resolution imager
29/205,461	D506904	150	05/17/2004	Schoonejans, David Paul	CANNED FOOD STRAINER
10/083,856	6844102	250	02/27/2002	Schoonmaker, David A.	AQUEOUS BASED ELECTROLYTE SLURRY FOR MCFC AND METHOD OF USE
10/345,073	[]	161	01/15/2003	Schoonmaker, David A.	Aqueous electrode binder and electrodes and fuel cells including same
63/150,600	[]	159	02/18/2021	Schoonmaker, David N.	CATALYST COATED REACTION MEDIA FOR USE IN THE PRODUCTION OF HYDROGEN IN A STEAM REFORMING REACTOR

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/408,068	08/20/2021	Ahmnon D. Moskowitz	46440-0020005	4713

26191 7590 10/05/2023

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ART UNIT	PAPER NUMBER
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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR/ PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
17/408,068	08/20/2021	Moskowitz et al.	46440-0020005

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	ART UNIT	PAPER
	3700	20231004

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Telephone inquiries should be directed to Supervisory Patent Examiner Eduardo Robert at 571-272-4719.

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In re Application of Moskowitz Family LLC	:	
Appl. No.: 17/408,068	:	**WITHDRAWAL FROM ISSUE**
Filed: 20 Aug 2021	:	*37 CFR 1.313*
For: EXPANDABLE INTERVERTEBRAL DEVICE	:	
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The purpose of this communication is to inform you that the above identified application is being withdrawn from issue pursuant to 37 CFR 1.313.

The application is being withdrawn to permit reopening of prosecution. The reasons therefor will be communicated to you by the examiner.

U.S. Patent and Trademark Office records reveal that the issue fee and the publication fee have not been paid. If the issue fee and the publication fee have been submitted, the applicant may request a refund, or may request that the fee be credited to a deposit account. However, applicant may wait until the application is either again found allowable or held abandoned. If the application is allowed, upon receipt of a new Notice of Allowance and Fees Due, applicant may request that the previously submitted issue fee and publication fee be applied toward payment of the issue fee and publication fee in the amount identified on the new Notice of Allowance and Issue and Publication Fee Due. If the application is abandoned, applicant may request either a refund or a credit to a specified Deposit Account.

The application is being forwarded to the examiner for action.

/KIESHA R BRYANT/
Director, Art Unit 3700

Kiesha Bryant, Director
Patent Examining Technology Center 3700

FISH & RICHARDSON P.C. (TC)
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

Notice of References Cited	Application/Control No. 17/408,068	Applicant(s)/Patent Under Reexamination Moskowitz et al.	
	Examiner CHRISTINA NEGRELLI-RODRIGUEZ	Art Unit 3773	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date YYYY-MM-DD	Name	CPC Classification	US Classification
*	A	US-10016284-B2	2018-07-10	Moskowitz; Ahmnon D.	A61B17/0642	1/1
*	B	US-20110319997-A1	2011-12-29	Glerum; Chad	A61F2/442	623/17.11
	C					
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
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	M					

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date YYYY-MM-DD	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in YYYY-MM-DD format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	Art Unit
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	05/05/2023	07/05/2023	01/11/2024						
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	22	✓	=	O						
	23	O	=	O						
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	30	✓	=	O						
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	36	✓	=	=						
	37	✓	=	=						
	38	✓	=	=						
	39	✓	=	=						
	40	✓	=	=						

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	Art Unit
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

CPC - Searched*		
Symbol	**Date**	**Examiner**
A61F2/442, 4425, 2002/443, 4455	05/05/2023	CN
A61F2/442, 4425, 2002/443, 4455	07/05/2023	CN
A61F2/442, 4425, 2002/443, 4455	01/11/2024	CN

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**
623	17.11-17.16	05/05/2023	CN
606	246-249	05/05/2023	CN

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	**Art Unit**
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

Search Notes		
Search Notes	**Date**	**Examiner**
Inventor Name Search	05/05/2023	CN
Considered all references in circled areas in PE2E search (see PE2E printout)	05/05/2023	CN
Updated Inventor Name Search	07/05/2023	CN
Considered all references in circled areas in PE2E search (see PE2E printout)	07/05/2023	CN
Updated Inventor Name Search	01/11/2024	CN
Considered all references in circled areas in PE2E search (see PE2E printout)	01/11/2024	CN
Updated Inventor Name Search	01/11/2024	CN

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
	Interference Search History Printout	07/05/2023	CN

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	

Last Name: Sugalski
First Name: Eric

Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
11/536,278	8061305	250	09/28/2006	SUGALSKI, ERIC	LEASH HANDLE WITH AN INTEGRATED COMPARTMENT
12/846,822	[]	160	07/29/2010	SUGALSKI, Eric	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
12/983,107	9901455	150	12/31/2010	SUGALSKI, Eric	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
14/063,197	9848993	150	10/25/2013	SUGALSKI, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
14/597,798	9700324	150	01/15/2015	SUGALSKI, Eric	SURGICAL CLIP APPLICATOR
16/205,674	11191939	150	11/30/2018	SUGALSKI, Eric	STABILIZING CONNECTOR DEVICES FOR VASCULAR ACCESS AND METHODS OF USING THE SAME
29/537,472	[]	161	08/26/2015	SUGALSKI, Eric	WALL MOUNTED PANEL FOR PURIFICATION
61/928,171	[]	159	01/16/2014	SUGALSKI, Eric	SURGICAL CLIP APPLICATOR
62/238,858	[]	159	10/08/2015	SUGALSKI, Eric	WALL PURIFICATION SYSTEMS, METHODS AND KITS
62/631,208	[]	159	02/15/2018	SUGALSKI, Eric	STABILIZING CONNECTOR DEVICES FOR VASCULAR ACCESS AND METHODS OF USING THE SAME
10/551,169	7228589	150	09/28/2005	Sugalski, Eric	UNATTENDED SPOT CLEANING APPARATUS
10/603,568	[]	161	06/25/2003	Sugalski, Eric	Removable light
11/393,373	[]	161	03/30/2006	Sugalski, Eric	Liquid dispensing devices including an attached cleaning element
11/455,952	7481406	150	06/20/2006	Sugalski, Eric	PLASTIC PEGBOARD ASSEMBLY
12/144,338	[]	161	06/23/2008	Sugalski, Eric	GRILL LIGHT WITH AUTOMATIC SWITCH
12/349,019	[]	161	01/06/2009	Sugalski, Eric	Plastic Pegboard Assembly
12/565,367	8545513	150	09/23/2009	Sugalski, Eric	Uterine Manipulator Assemblies and Related Components and Methods
12/842,327	8663270	150	07/23/2010	Sugalski, Eric	Jaw Movement Mechanism and Method for a Surgical Tool
12/842,399	[]	161	07/23/2010	Sugalski, Eric	Surgical Tool with Crossbar Lever
13/138,209	10933191	150	02/01/2012	Sugalski, Eric	INFUSION SET
13/613,927	10018364	150	09/13/2012	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
13/614,068	9255712	150	09/13/2012	Sugalski, Eric	OVEN APPLIANCE WITH DOORS HAVING A TONGUE AND GROOVE INTERFACE
13/614,274	9651265	150	09/13/2012	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
13/614,482	8944536	150	09/13/2012	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/013,216	8740916	150	08/29/2013	Sugalski, Eric	Uterine Manipulator Assemblies and Related Components and Methods
14/578,687	9188346	150	12/22/2014	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/727,896	9562818	250	06/02/2015	Sugalski, Eric	Manipulation Device with Force Read-Out
14/874,766	9328929	150	10/05/2015	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/974,896	9900735	150	12/18/2015	Sugalski, Eric	COMMUNICATION SYSTEMS
15/083,329	9494323	150	03/29/2016	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/291,223	9644848	150	10/12/2016	Sugalski, Eric	AN OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/499,092	9890957	150	04/27/2017	Sugalski, Eric	Oven Appliance with Dual Opening and Closing Doors

Last Name: Sugalski
First Name: Eric

Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
15/820,232	10016284	150	11/21/2017	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/892,461	10508817	150	02/09/2018	Sugalski, Eric	Oven Appliance with Dual Opening and Closing Doors
15/904,617	10022238	150	02/26/2018	Sugalski, Eric	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/025,667	10426633	150	07/02/2018	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/034,545	11116642	150	07/13/2018	Sugalski, Eric	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/079,701	11253013	150	08/24/2018	Sugalski, Eric	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
16/587,993	11096797	150	09/30/2019	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
17/167,565	[]	61	02/04/2021	Sugalski, Eric	INFUSION SET
17/167,651	11690953	150	02/04/2021	Sugalski, Eric	INFUSION SET
17/167,692	11712517	150	02/04/2021	Sugalski, Eric	INFUSION SET
17/408,068	[]	71	08/20/2021	Sugalski, Eric	EXPANDABLE INTERVERTEBRAL DEVICE
17/471,667	[]	30	09/10/2021	Sugalski, Eric	3-D PRINTED SPINAL IMPLANT
17/512,452	[]	83	10/27/2021	Sugalski, Eric	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
17/517,368	[]	30	11/02/2021	Sugalski, Eric	Stabilizing Connector Devices for Vascular Access and Methods of Using the Same
60/667,187	[]	159	03/30/2005	Sugalski, Eric	Liquid dispensing devices including an attached cleaning element
60/721,553	[]	159	09/29/2005	Sugalski, Eric	Leash handle with integrated compartment
60/757,740	[]	159	01/09/2006	Sugalski, Eric	Pet perch
61/108,211	[]	159	10/24/2008	Sugalski, Eric	Uterine Manipulator Assemblies and Related Components and Methods
61/202,019	[]	159	01/21/2009	Sugalski, Eric	Infusion set
61/718,707	[]	159	10/25/2012	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/801,783	[]	159	03/15/2013	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
62/301,157	[]	159	02/29/2016	Sugalski, Eric	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
62/592,684	[]	159	11/30/2017	Sugalski, Eric	STABILIZING CONNECTOR DEVICES FOR VASCULAR ACCESS AND METHODS OF USING THE SAME
60/845,730	[]	159	09/19/2006	Sugalski, Eric C.	Stroller toy apparatus
63/586,260	[]	20	09/28/2023	Sugalski, Eric C.	TRANSDUCER ARRAY HAVING SUBARRAYS AND METHODS OF PRODUCTION AND USE THEREOF

Last Name: Sugalski Examiner: NEGRELLIRODRIGUE, CHRISTINA

First Name: Eric

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
10/933,381	7462187	150	09/03/2004	Sugalski, Eric Christopher	POWERED SURGICAL APPARATUS, METHOD OF MANUFACTURING POWERED SURGICAL APPARATUS, AND METHOD OF USING POWERED SURGICAL APPARATUS
11/045,135	8454640	150	01/31/2005	Sugalski, Eric Christopher	Powered surgical apparatus, method of manufacturing powered surgical apparatus, and method of using powered surgical apparatus
11/045,138	[]	161	01/31/2005	Sugalski, Eric Christopher	Powered surgical apparatus, method of manufacturing powered surgical apparatus, and method of using powered surgical apparatus
11/045,255	7473263	150	01/31/2005	Sugalski, Eric Christopher	POWERED SURGICAL APPARATUS, METHOD OF MANUFACTURING POWERED SURGICAL APPARATUS, AND METHOD OF USING POWERED SURGICAL APPARATUS
11/045,256	7799044	250	01/31/2005	Sugalski, Eric Christopher	POWERED SURGICAL APPARATUS, METHOD OF MANUFACTURING POWERED SURGICAL APPARATUS, AND METHOD OF USING POWERED SURGICAL APPARATUS
11/508,063	8616932	150	08/22/2006	Sugalski, Eric Christopher	Collapsible umbrella gym
11/711,787	7416539	150	02/28/2007	Sugalski, Eric Christopher	POWERED SURGICAL APPARATUS, METHOD OF MANUFACTURING POWERED SURGICAL APPARATUS, AND METHOD OF USING POWERED SURGICAL APPARATUS
12/007,756	[]	161	01/15/2008	Sugalski, Eric Christopher	Powered surgical apparatus, method of manufacturing powered surgical apparatus, and method of using powered surgical apparatus
16/834,953	[]	161	03/30/2020	Sugalski, Eric Christopher	CONTROLLED-DOSE MEDICINAL LIQUID VAPING DEVICE
60/366,224	[]	159	03/22/2002	Sugalski, Eric Christopher	Powered surgical apparatus, method of manufacturing powered surgical apparatus, and method of using powered surgical apparatus
62/825,935	[]	159	03/29/2019	Sugalski, Eric Christopher	CONTROLLED-DOSE MEDICINAL OIL VAPING DEVICE

*all references in circled areas below have been considered

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	1	"17408068"	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 10:35 AM
L2	5	"16025667"	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 10:59 AM
L3	1504	(expand$4) AND 606/246-249.ccls.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:40 PM
L4	1093	(expand$4) AND 623/17.11-17.16	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:40 PM
L6	4486	(expand$4) AND A61F2/442.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:40 PM
L7	1962	(expand$4) AND A61F2/4425.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:40 PM
L8	1121	(expand$4) AND A61F2002/443.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:41 PM
L9	4824	(expand$4) AND A61F2/4455.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:41 PM
L10	45	(Moskowitz Family).as.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/05/05 12:41 PM
L11	326	(Ahmnon NEAR2 Moskowitz).in. OR (Mosheh NEAR2 Moskowitz).in. OR (Pablo NEAR2 Alvarado).in. OR (Eric NEAR2 Sugalski).in. OR (Nathan NEAR2 Moskowitz).in. OR (David NEAR2 Schoon).in.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/05/05 12:44 PM
L12	1	"17408068"	(US-PGPUB; USPAT)	OR	ON	ON	2023/07/05 02:50 PM
L13	18	"10426633"	(US-PGPUB; USPAT)	OR	ON	ON	2023/07/05 02:52 PM
L14	1	"10426633".pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/07/05 02:52 PM
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L16	119	L15 AND @pd>"20230505"	(US-PGPUB; USPAT)	OR	ON	ON	2023/07/05 03:31 PM
L17	45	(Moskowitz Family).as.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/07/05 03:32 PM
L18	327	(Ahmnon NEAR2 Moskowitz).in. OR (Mosheh NEAR2 Moskowitz).in. OR	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/07/05 03:33 PM

		(Pablo NEAR2 Alvarado).in. OR (Eric NEAR2 Sugalski).in. OR (Nathan NEAR2 Moskowitz).in. OR (David NEAR2 Schoon).in.					
L21	47	"20110319997"	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/11 10:27 AM
L22	1	"10016284".pn.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/11 12:58 PM
L23	14359	A61F2/442.cpc. OR A61F2/4425.cpc. OR A61F2002/443.cpc. OR A61F2/4455.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/11 02:44 PM
L24	347	L23 AND @pd>"20230705"	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/11 02:45 PM
L25	335	(Ahmnon NEAR2 Moskowitz).in. OR (Mosheh NEAR2 Moskowitz).in. OR (Pablo NEAR2 Alvarado).in. OR (Eric NEAR2 Sugalski).in. OR (Nathan NEAR2 Moskowitz).in. OR (David NEAR2 Schoon).in.	(US-PGPUB; USPAT)	ADJ	ON	ON	2024/01/11 02:45 PM
L26	49	(Moskowitz Family).as.	(US-PGPUB; USPAT)	ADJ	ON	ON	2024/01/11 02:45 PM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N8	0	(expandable intervertebral device) AND (angled wedge surface) AND (second wedge position) AND (angled housing surface shaped to engage angled wedge surface).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2024/01/11 02:45 PM
N9	0	(expandable intervertebral device) AND (angled wedge surface) AND (second wedge position) AND (angled housing surface shaped to engage angled wedge surface).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2024/01/11 02:45 PM

Last Name: Schoon
First Name: David

Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
07/568,908	5054893	250	08/17/1990	SCHOON, DAVID	ELECTRO-OPTIC CELL LINEAR ARRAY
06/045,821	4242565	150	06/05/1979	SCHOON, DAVID J.	THERMAL PRINT HEAD
06/434,189	4541061	150	10/13/1982	SCHOON, DAVID J.	DATA CLOCKING CIRCUITRY FOR A SCANNING APPARATUS
06/470,489	4631726	250	02/28/1983	SCHOON, DAVID J.	LASER DIODE CONTROL CIRCUITRY
06/574,066	4571623	150	01/26/1984	SCHOON, DAVID J.	DATA CLOCKING CIRCUITRY
06/586,204	4630223	250	03/05/1984	SCHOON, DAVID J.	SCANNER AMPLITUDE STABILIZATION SYSTEM
06/589,772	4586057	150	03/15/1984	SCHOON, DAVID J.	COMPENSATION CIRCUITRY FOR A LASER PRINTER USING A SELF-RESONANT SCANNER
06/594,211	4683551	250	03/28/1984	SCHOON, DAVID J.	RAM CLOCK SWITCHING CIRCUITRY FOR A LASER BEAM PRINTER
06/820,231	4686363	250	01/21/1986	SCHOON, DAVID J.	SELF-RESONANT SCANNER BIASING SYSTEM
07/096,959	4857904	250	09/15/1987	SCHOON, DAVID J.	COMBINATION OF TRANSITION-ENCODED FONT INFORMATION FOR GENERATION OF SUPERIMPOSED FONT IMAGES
07/096,960	4847607	250	09/15/1987	SCHOON, DAVID J.	IMAGE GENERATION FROM TRANSITION-ENCODED FONT INFORMATION
07/096,961	4870498	250	09/15/1987	SCHOON, DAVID J.	DECOMPRESSING RUN-LENGTH-ENCODED TO TRANSITION-ENCODED FONT IMAGE INFORMATION IN AN IMAGE GENERATOR
07/542,957	5225851	250	06/25/1990	SCHOON, DAVID J.	BAND IMAGING DEVICE
07/811,797	[]	161	12/20/1991	SCHOON, DAVID J.	FAULT TOLERANT IMAGING DEVICE
07/811,806	[]	161	12/20/1991	SCHOON, DAVID J.	HIGH RESOLUTION IMAGING DEVICE
07/811,807	[]	161	12/20/1991	SCHOON, DAVID J.	IMAGING DEVICE
07/827,061	[]	161	01/28/1992	SCHOON, DAVID J.	BANDWISE IMAGING DEVICE
07/828,021	[]	161	01/30/1992	SCHOON, DAVID J.	COLOR IMAGING DEVICE
07/884,408	5434600	250	05/18/1992	SCHOON, DAVID J.	ILLUMINATION MODULE FOR BANDWISE IMAGING DEVICE
07/914,450	5250982	250	07/15/1992	SCHOON, DAVID J.	APPARATUS AND METHOD OF IMAGING UV-SENSITIVE MEDIA
08/175,716	[]	161	12/29/1993	SCHOON, DAVID J.	SPATIAL STABILIZATION FOR BANDWISE IMAGING DEVICE
08/181,573	5481398	250	01/13/1994	SCHOON, DAVID J.	TEMPERATURE STABILIZATION MEANS FOR IMAGING OUTPUT RECORDER
08/181,574	5565906	250	01/13/1994	SCHOON, DAVID J.	CLOCKING MEANS FOR BANDWISE IMAGING DEVICE
08/594,017	5684620	250	01/30/1996	SCHOON, DAVID J.	HIGH RESOLUTION IMAGING SYSTEM AND METHOD OF IMAGING USING THE SAME
09/276,007	6148134	250	03/25/1999	SCHOON, DAVID J.	FIBER MOUNTS FOR FIBER OPTIC HARNESS IN A FIBER OPTIC-BASED IMAGING SYSTEM
09/276,433	[]	161	03/25/1999	SCHOON, DAVID J.	LIGHT DISTRIBUTION DEVICE FOR FIBER OPTIC-BASED IMAGING SYSTEM
14/597,798	9700324	150	01/15/2015	SCHOON, David	SURGICAL CLIP APPLICATOR
61/928,171	[]	159	01/16/2014	SCHOON, David	SURGICAL CLIP APPLICATOR
13/613,927	10018364	150	09/13/2012	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
13/614,068	9255712	150	09/13/2012	Schoon, David	OVEN APPLIANCE WITH DOORS HAVING A TONGUE AND GROOVE INTERFACE
13/614,274	9651265	150	09/13/2012	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS

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13/614,482	8944536	150	09/13/2012	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/578,687	9188346	150	12/22/2014	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/874,766	9328929	150	10/05/2015	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/083,329	9494323	150	03/29/2016	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/291,223	9644848	150	10/12/2016	Schoon, David	AN OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/499,092	9890957	150	04/27/2017	Schoon, David	Oven Appliance with Dual Opening and Closing Doors
15/762,925	10939711	150	03/23/2018	Schoon, David	NOISE SUPPRESSION DEVICE FOR A PERSONAL IMPACT PROTECTION SYSTEM
15/892,461	10508817	150	02/09/2018	Schoon, David	Oven Appliance with Dual Opening and Closing Doors
16/079,701	11253013	150	08/24/2018	Schoon, David	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
16/587,993	11096797	150	09/30/2019	Schoon, David	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
17/408,068	[]	71	08/20/2021	Schoon, David	EXPANDABLE INTERVERTEBRAL DEVICE
17/512,452	[]	83	10/27/2021	Schoon, David	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
62/232,872	[]	159	09/25/2015	Schoon, David	NOISE SUPPRESSION DEVICE FOR A PERSONAL IMPACT PROTECTION SYSTEM
62/301,157	[]	159	02/29/2016	Schoon, David	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
09/657,419	[]	161	09/08/2000	Schoon, David Jacob	Modular imager
09/657,485	[]	161	09/08/2000	Schoon, David Jacob	High resolution imager

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11/943,334	8535379	150	11/20/2007	MOSKOWITZ, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
12/471,345	8257370	250	05/22/2009	MOSKOWITZ, Ahmnon D.	POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLES, STAPLING GUNS, AND DEVICES FOR SPINAL FUSION
12/846,822	[]	160	07/29/2010	MOSKOWITZ, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
12/983,107	9901455	150	12/31/2010	MOSKOWITZ, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
13/084,543	8353913	150	04/11/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/101,129	8784450	150	05/04/2011	MOSKOWITZ, Ahmnon D.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
13/108,982	9005293	150	05/16/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,150	9867719	150	08/15/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,157	9889022	150	08/15/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,162	9895238	150	08/15/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,168	9907674	150	08/15/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/621,243	[]	160	09/15/2012	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
13/741,361	9301854	150	01/14/2013	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION

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13/893,326	9056018	150	05/13/2013	MOSKOWITZ, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
14/049,743	10842357	150	10/09/2013	MOSKOWITZ, Ahmnon D.	ENDOSCOPIC SURGICAL SYSTEM
14/063,197	9848993	150	10/25/2013	MOSKOWITZ, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
14/150,758	[]	161	01/08/2014	MOSKOWITZ, Ahmnon D.	GAME WITH PARAMETERS AND VARIABLES CORRESPONDING TO UNITS OF TIME
14/257,650	9622875	150	04/21/2014	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
14/332,351	9898895	250	07/15/2014	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
14/336,909	[]	160	07/21/2014	MOSKOWITZ, Ahmnon D.	CERVICAL SPINOUS PROCESS STAPLE
14/337,210	10098672	150	07/21/2014	MOSKOWITZ, Ahmnon D.	CERVICAL SPINOUS PROCESS STAPLE
14/460,330	[]	161	08/14/2014	MOSKOWITZ, Ahmnon D.	SYSTEMS AND APPARATUSES FOR IMPROVED VISUALIZATION OF ENDOSCOPIC IMAGES
14/467,006	[]	161	08/23/2014	MOSKOWITZ, Ahmnon D.	LOTTERY GAME BASED ON DATES AND METHOD OF PLAYING A LOTTERY GAME BASED ON DATES
14/668,908	9824544	150	03/25/2015	MOSKOWITZ, Ahmnon D.	METHODS OF PLAYING WAGERING GAMES WITH THE KENO SYSTEM
14/685,374	[]	160	04/13/2015	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
14/739,327	9867712	250	06/15/2015	MOSKOWITZ, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/054,926	9848998	150	02/26/2016	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/162,541	9965924	150	05/23/2016	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING MULTI-ZONE 21
15/397,198	10098678	150	01/03/2017	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM

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15/470,066	[]	160	03/27/2017	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
15/490,107	10064738	150	04/18/2017	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
15/657,811	10186108	150	07/24/2017	MOSKOWITZ, Ahmnon D.	Wagering Game Apparatuses, Methods and Systems for Slot Games with a "21" Theme and Video Three Card Poker featuring Multiple Pay Lines with Progressive Jackpots
15/722,089	10930119	150	10/02/2017	MOSKOWITZ, Ahmnon D.	SYSTEMS AND A METHODS FOR PLAYING MULTI-ZONE TWENTY ONE (21) ACROSS ELECTORNIC GAMING SYSTEMS AND SCRATCH OFF TICKETS
15/945,561	10269206	150	04/04/2018	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
16/277,272	10713884	150	02/15/2019	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
16/457,946	11127261	150	06/29/2019	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
17/182,514	[]	30	02/23/2021	MOSKOWITZ, Ahmnon D.	SYSTEMS AND METHODS FOR PLAYING MULTI-ZONE TWENTY ONE (21) ACROSS ELECTRONIC GAMING SYSTEMS
17/474,410	11881086	150	09/14/2021	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
18/141,731	[]	30	05/01/2023	MOSKOWITZ, Ahmnon D.	SYSTEMS AND METHODS FOR PLAYING MULTI-ZONE TWENTY ONE (21) ACROSS ELECTRONIC GAMING SYSTEMS
18/531,892	[]	30	12/07/2023	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
62/696,503	[]	159	07/11/2018	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
13/103,994	9603713	150	05/09/2011	Moskowitz, Ahmnon D	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
09/849,521	[]	161	05/07/2001	Moskowitz, Ahmnon D.	Hands free umbrella
11/842,855	7942903	150	08/21/2007	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
12/054,335	7972363	150	03/24/2008	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION

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12/471,340	8734516	150	05/22/2009	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
12/957,776	9888918	250	12/01/2010	Moskowitz, Ahmnon D.	HORIZONTAL-TRANSVERTEBRAL CURVILINEAR NAIL-SCREWS WITH INTER-LOCKING RIGID OR JOINTED FLEXIBLE RODS FOR SPINAL FUSION
13/101,135	9675385	150	05/04/2011	Moskowitz, Ahmnon D.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
13/401,829	9744052	150	02/21/2012	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,323	9814601	150	03/12/2012	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,335	9532821	150	03/12/2012	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/678,401	10238505	150	08/16/2017	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/693,594	10149703	150	09/01/2017	Moskowitz, Ahmnon D.	CERVICAL SPINOUS PROCESS STAPLE
15/707,684	10424166	150	09/18/2017	Moskowitz, Ahmnon D.	METHODS OF PLAYING WAGERING GAMES WITH THE KENO SYSTEM
15/791,484	10376383	150	10/24/2017	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/820,232	10016284	150	11/21/2017	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/862,016	10028740	150	01/04/2018	Moskowitz, Ahmnon D.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
15/870,406	10610371	150	01/12/2018	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/894,471	10390969	150	02/12/2018	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/904,617	10022238	150	02/26/2018	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
15/944,117	10537442	150	04/03/2018	Moskowitz, Ahmnon D.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM

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15/944,221	10376376	150	04/03/2018	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/976,340	10307268	150	05/10/2018	Moskowitz, Ahmnon D.	INTERVERTEBRAL EXPANDABLE IMPLANT
16/018,354	10376386	150	06/26/2018	Moskowitz, Ahmnon D.	SPINAL STAPLE
16/018,798	10369003	250	06/26/2018	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
16/025,667	10426633	150	07/02/2018	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/034,545	11116642	150	07/13/2018	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/042,163	10258329	150	07/23/2018	Moskowitz, Ahmnon D.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/100,410	10603183	150	08/10/2018	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/160,824	10842542	150	10/15/2018	Moskowitz, Ahmnon D.	SPINAL BONE FUSION SYSTEM
16/160,937	10722274	150	10/15/2018	Moskowitz, Ahmnon D.	Cervical Spinous Process Staple
16/280,684	10478319	150	02/20/2019	Moskowitz, Ahmnon D.	SYSTEM WITH TOOL ASSEMBLY AND EXPANDABLE SPINAL IMPLANT
16/362,294	10925753	150	03/22/2019	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/384,232	[]	161	04/15/2019	Moskowitz, Ahmnon D.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/532,033	11141288	150	08/05/2019	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/564,946	11024127	150	09/09/2019	Moskowitz, Ahmnon D.	METHODS OF PLAYING WAGERING GAMES WITH THE KENO SYSTEM
16/587,993	11096797	150	09/30/2019	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/744,755	11376136	150	01/16/2020	Moskowitz, Ahmnon D.	EXPANDABLE SPINAL IMPLANT AND TOOL SYSTEM
16/829,246	11229525	150	03/25/2020	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION

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16/841,355	11478359	150	04/06/2020	Moskowitz, Ahmnon D.	ARTIFICIAL DISC SYSTEM
16/952,241	11759243	150	11/19/2020	Moskowitz, Ahmnon D.	SPINAL BONE FUSION SYSTEM
16/953,797	[]	41	11/20/2020	Moskowitz, Ahmnon D.	Endoscopic Surgical System
17/129,149	11083591	150	12/21/2020	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/180,021	[]	94	02/19/2021	Moskowitz, Ahmnon D.	SPINAL FUSION IMPLANT
17/181,706	[]	41	02/22/2021	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/393,672	11806244	150	08/04/2021	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/408,068	[]	71	08/20/2021	Moskowitz, Ahmnon D.	EXPANDABLE INTERVERTEBRAL DEVICE
17/471,667	[]	30	09/10/2021	Moskowitz, Ahmnon D.	3-D PRINTED SPINAL IMPLANT
17/492,996	[]	30	10/04/2021	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/577,722	[]	30	01/18/2022	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
17/706,873	[]	95	03/29/2022	Moskowitz, Ahmnon D.	INTERVERTEBRAL IMPLANT AND TOOL ASSEMBLY
60/208,070	[]	159	05/31/2000	Moskowitz, Ahmnon D.	Hands free umbrella
61/264,648	[]	159	11/25/2009	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/265,752	[]	159	12/01/2009	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/306,926	[]	159	02/22/2010	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/419,679	[]	159	12/03/2010	Moskowitz, Ahmnon D.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
61/425,749	[]	159	12/21/2010	Moskowitz, Ahmnon D.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
61/445,034	[]	159	02/21/2011	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
61/451,579	[]	159	03/10/2011	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL LEAF SPRING- RATCHET SCREW LOCKING MECHANISM
61/451,582	[]	159	03/10/2011	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM

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61/712,251	[]	159	10/10/2012	Moskowitz, Ahmnon D.	ENDOSCOPIC SURGICAL SYSTEM
61/718,707	[]	159	10/25/2012	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/750,350	[]	159	01/08/2013	Moskowitz, Ahmnon D.	GAME WITH PARAMETERS AND VARIABLES CORRESPONDING TO UNITS OF TIME
61/801,783	[]	159	03/15/2013	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/846,608	[]	159	07/15/2013	Moskowitz, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
61/866,038	[]	159	08/14/2013	Moskowitz, Ahmnon D.	ENDOSCOPIC VIEWING APPARATUSES
61/869,645	[]	159	08/23/2013	Moskowitz, Ahmnon D.	LOTTERY GAME BASED ON DATES AND METHOD OF PLAYING A LOTTERY GAME BASED ON DATES
61/970,249	[]	159	03/25/2014	Moskowitz, Ahmnon D.	Methods of playing wagering games with the Keno system
62/165,870	[]	159	05/22/2015	Moskowitz, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING MULTI-ZONE 21
62/403,195	[]	159	10/02/2016	Moskowitz, Ahmnon D.	SYSTEM AND A METHOD FOR PLAYING NUMERICAL CARD GAMES

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13/596,038	9801728	250	08/27/2012	MOSKOWITZ, Nathan	TOOLS FOR IMPLANTATION AND EXTRACTION OF ARTICIAL DISCS
11/943,334	8535379	150	11/20/2007	MOSKOWITZ, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
12/347,990	7951180	250	12/31/2008	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
12/846,822	[]	160	07/29/2010	MOSKOWITZ, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
12/983,107	9901455	150	12/31/2010	MOSKOWITZ, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
13/084,543	8353913	150	04/11/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/101,129	8784450	150	05/04/2011	MOSKOWITZ, Nathan C.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
13/108,982	9005293	150	05/16/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,150	9867719	150	08/15/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,157	9889022	150	08/15/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,162	9895238	150	08/15/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,168	9907674	150	08/15/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/621,243	[]	160	09/15/2012	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION

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13/741,361	9301854	150	01/14/2013	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/893,326	9056018	150	05/13/2013	MOSKOWITZ, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
14/049,743	10842357	150	10/09/2013	MOSKOWITZ, Nathan C.	ENDOSCOPIC SURGICAL SYSTEM
14/063,197	9848993	150	10/25/2013	MOSKOWITZ, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
14/257,650	9622875	150	04/21/2014	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
14/299,711	10016225	150	06/09/2014	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
14/336,909	[]	160	07/21/2014	MOSKOWITZ, Nathan C.	CERVICAL SPINOUS PROCESS STAPLE
14/337,210	10098672	150	07/21/2014	MOSKOWITZ, Nathan C.	CERVICAL SPINOUS PROCESS STAPLE
14/460,330	[]	161	08/14/2014	MOSKOWITZ, Nathan C.	SYSTEMS AND APPARATUSES FOR IMPROVED VISUALIZATION OF ENDOSCOPIC IMAGES
14/685,374	[]	160	04/13/2015	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
14/739,327	9867712	250	06/15/2015	MOSKOWITZ, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/054,926	9848998	150	02/26/2016	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/350,352	10123881	150	11/14/2016	MOSKOWITZ, Nathan C.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS

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15/397,198	10098678	150	01/03/2017	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/470,066	[]	160	03/27/2017	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
15/490,107	10064738	150	04/18/2017	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
11/487,415	7854766	250	07/17/2006	Moskowitz, Nathan	ARTIFICIAL TOTAL LUMBAR DISC FOR UNILATERAL SAFE AND SIMPLE POSTERIOR PLACEMENT IN THE LUMBAR SPINE, AND REMOVABLE BIFUNCTIONAL SCREW WHICH DRIVES VERTICAL SLIDING EXPANSILE PLATE EXPANSION, AND INTERPLATE WIDENING,AND ANGLED TRACTION SPIKES
11/684,787	8251891	250	03/12/2007	Moskowitz, Nathan	TOTALLY WIRELESS ELECTRONICALLY EMBEDDED ACTION-ENDED ENDOSCOPE UTILIZING DIFFERENTIAL DIRECTIONAL ILLUMINATION WITH DIGITALLY CONTROLLED MIRRORS AND/OR PRISMS
12/868,451	8747444	250	08/25/2010	Moskowitz, Nathan	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
12/889,328	10130493	150	09/23/2010	Moskowitz, Nathan	ARTIFICIAL TOTAL LUMBAR DISC FOR UNILATERAL SAFE AND SIMPLE POSTERIOR PLACEMENT IN THE LUMBAR SPINE, AND REMOVEABLE BIFUNCTIONAL SCREW WHICH DRIVES VERTICAL SLIDING EXPANSILE PLATE EXPANSION, AND INTERPLATE WIDENING, AND ANGLED TRACTION SPIKES
60/788,720	[]	159	04/04/2006	Moskowitz, Nathan	Posteriorly placed total lumbar atrificial disc with novel removeable bifunctional screw which drives vertical sliding expansile plate expansion, and interplate widening, and novel angled traction spikes, and interchangeable cores
60/793,329	[]	159	04/20/2006	Moskowitz, Nathan	Electronically controlled artificial intervertebral disc with linear actuation systems and an active closed-loop microchip responding to variable human locomotor activity and spinal motion
09/849,521	[]	161	05/07/2001	Moskowitz, Nathan C.	Hands free umbrella
10/964,633	[]	161	10/15/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs

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11/019,351	7083650	250	12/23/2004	Moskowitz, Nathan C.	ARTIFICIAL EXPANSILE TOTAL LUMBAR AND THORACIC DISCS FOR POSTERIOR PLACEMENT WITHOUT SUPPLEMENTAL INSTRUMENTATION AND ITS ADAPTATION FOR ANTERIOR PLACEMENT OF ARTIFICIAL CERVICAL, THORACIC AND LUMBAR DISCS
11/208,644	7704279	250	08/23/2005	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
11/536,815	7846188	250	09/29/2006	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
11/737,846	7854765	250	04/20/2007	Moskowitz, Nathan C.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
11/842,855	7942903	150	08/21/2007	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
12/054,335	7972363	150	03/24/2008	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
12/471,340	8734516	150	05/22/2009	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
12/945,835	9492282	250	11/13/2010	Moskowitz, Nathan C.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
12/957,776	9888918	250	12/01/2010	Moskowitz, Nathan C.	HORIZONTAL-TRANSVERTEBRAL CURVILINEAR NAIL-SCREWS WITH INTER-LOCKING RIGID OR JOINTED FLEXIBLE RODS FOR SPINAL FUSION
13/093,812	9924940	150	04/25/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION

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13/101,135	9675385	150	05/04/2011	Moskowitz, Nathan C.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
13/103,994	9603713	150	05/09/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
13/401,829	9744052	150	02/21/2012	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,323	9814601	150	03/12/2012	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,335	9532821	150	03/12/2012	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/678,401	10238505	150	08/16/2017	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/693,594	10149703	150	09/01/2017	Moskowitz, Nathan C.	CERVICAL SPINOUS PROCESS STAPLE
15/724,015	10695187	150	10/03/2017	Moskowitz, Nathan C.	HAND MANIPULATED ENDOSCOPIC MEDICAL DEVICE
15/791,484	10376383	150	10/24/2017	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/820,232	10016284	150	11/21/2017	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/862,016	10028740	150	01/04/2018	Moskowitz, Nathan C.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
15/870,406	10610371	150	01/12/2018	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/894,471	10390969	150	02/12/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/896,130	10076367	150	02/14/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
15/904,617	10022238	150	02/26/2018	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
15/934,614	10537367	150	03/23/2018	Moskowitz, Nathan C.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/934,622	10251643	150	03/23/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
15/944,117	10537442	150	04/03/2018	Moskowitz, Nathan C.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/944,221	10376376	150	04/03/2018	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/976,340	10307268	150	05/10/2018	Moskowitz, Nathan C.	INTERVERTEBRAL EXPANDABLE IMPLANT
16/018,354	10376386	150	06/26/2018	Moskowitz, Nathan C.	SPINAL STAPLE
16/018,798	10369003	250	06/26/2018	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
16/018,904	10238383	150	06/26/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
16/025,667	10426633	150	07/02/2018	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/034,545	11116642	150	07/13/2018	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/042,163	10258329	150	07/23/2018	Moskowitz, Nathan C.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/100,410	10603183	150	08/10/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/134,364	10952867	150	09/18/2018	Moskowitz, Nathan C.	Electronically Assisted Medical Device
16/160,824	10842542	150	10/15/2018	Moskowitz, Nathan C.	SPINAL BONE FUSION SYSTEM
16/160,937	10722274	150	10/15/2018	Moskowitz, Nathan C.	Cervical Spinous Process Staple
16/194,976	11135072	150	11/19/2018	Moskowitz, Nathan C.	ARTIFICIAL DISC SYSTEM

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16/280,684	10478319	150	02/20/2019	Moskowitz, Nathan C.	SYSTEM WITH TOOL ASSEMBLY AND EXPANDABLE SPINAL IMPLANT
16/362,152	10952723	150	03/22/2019	Moskowitz, Nathan C.	ARTIFICIAL INTERVERTEBRAL IMPLANT
16/362,294	10925753	150	03/22/2019	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/384,232	[]	161	04/15/2019	Moskowitz, Nathan C.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/532,033	11141288	150	08/05/2019	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/587,993	11096797	150	09/30/2019	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/673,806	[]	93	11/04/2019	Moskowitz, Nathan C.	SYSTEMS AND METHODS FOR AUTONOMOUS ROBOTIC SURGERY
16/744,716	11357551	150	01/16/2020	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
16/744,755	11376136	150	01/16/2020	Moskowitz, Nathan C.	EXPANDABLE SPINAL IMPLANT AND TOOL SYSTEM
16/829,246	11229525	150	03/25/2020	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/841,355	11478359	150	04/06/2020	Moskowitz, Nathan C.	ARTIFICIAL DISC SYSTEM
16/952,241	11759243	150	11/19/2020	Moskowitz, Nathan C.	SPINAL BONE FUSION SYSTEM
16/953,797	[]	41	11/20/2020	Moskowitz, Nathan C.	Endoscopic Surgical System
17/129,149	11083591	150	12/21/2020	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/180,021	[]	94	02/19/2021	Moskowitz, Nathan C.	SPINAL FUSION IMPLANT
17/181,706	[]	41	02/22/2021	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/208,640	11864755	150	03/22/2021	Moskowitz, Nathan C.	ARTIFICIAL EXPANDABLE IMPLANT SYSTEMS
17/208,669	11491021	150	03/22/2021	Moskowitz, Nathan C.	ELECTRONICALLY ASSISTED MEDICAL DEVICE
17/393,672	11806244	150	08/04/2021	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/408,068	[]	71	08/20/2021	Moskowitz, Nathan C.	EXPANDABLE INTERVERTEBRAL DEVICE
17/471,667	[]	30	09/10/2021	Moskowitz, Nathan C.	3-D PRINTED SPINAL IMPLANT
17/487,360	11771567	150	09/28/2021	Moskowitz, Nathan C.	ARTIFICIAL DISC SYSTEM

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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
17/492,996	[]	30	10/04/2021	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/577,722	[]	30	01/18/2022	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
17/681,231	11452619	150	02/25/2022	Moskowitz, Nathan C.	ARTIFICIAL DISC SYSTEM
17/706,873	[]	95	03/29/2022	Moskowitz, Nathan C.	INTERVERTEBRAL IMPLANT AND TOOL ASSEMBLY
17/752,330	[]	30	05/24/2022	Moskowitz, Nathan C.	Intervertebral spinal implant systems
17/981,686	[]	93	11/07/2022	Moskowitz, Nathan C.	ELECTRONICALLY ASSISTED MEDICAL DEVICE
18/372,914	[]	30	09/26/2023	Moskowitz, Nathan C.	ASSISTIVE DEVICE AND METHOD
60/208,070	[]	159	05/31/2000	Moskowitz, Nathan C.	Hands free umbrella
60/570,098	[]	159	05/12/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement
60/570,837	[]	159	05/14/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation (adaptation for anterior cervical, thoracic and lumbar devices available)
60/572,468	[]	159	05/20/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs
60/573,346	[]	159	05/24/2004	Moskowitz, Nathan C.	Artificial expansible total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs
60/578,319	[]	159	06/10/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs
60/670,231	[]	159	04/12/2005	Moskowitz, Nathan C.	Stand-alone expansile intervertebral body fusion device utilizing bi-directional fixating transvertebral body screws or pneumatically driven expansile spiked telescoping cylinders with optional motion-calibrating interarticulating joint stapling device
60/673,761	[]	159	04/22/2005	Moskowitz, Nathan C.	Spinal disc microchip implant providing dynamic disc motion in response to variable axial loading forces
61/264,648	[]	159	11/25/2009	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/265,752	[]	159	12/01/2009	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/306,926	[]	159	02/22/2010	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/419,679	[]	159	12/03/2010	Moskowitz, Nathan C.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
61/425,749	[]	159	12/21/2010	Moskowitz, Nathan C.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
61/445,034	[]	159	02/21/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
61/451,579	[]	159	03/10/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL LEAF SPRING- RATCHET SCREW LOCKING MECHANISM
61/451,582	[]	159	03/10/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
61/712,251	[]	159	10/10/2012	Moskowitz, Nathan C.	ENDOSCOPIC SURGICAL SYSTEM
61/718,707	[]	159	10/25/2012	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/801,783	[]	159	03/15/2013	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/866,038	[]	159	08/14/2013	Moskowitz, Nathan C.	ENDOSCOPIC VIEWING APPARATUSES
62/815,605	[]	159	03/08/2019	Moskowitz, Nathan C.	Systems and Methods for Autonomous Robotic Surgery
63/411,943	[]	159	09/30/2022	Moskowitz, Nathan C.	ASSISTIVE DEVICE AND METHOD

Bibliographic Data

Application No: 17/408,068

Foreign Priority claimed: ○ Yes ◉ No

35 USC 119 (a-d) conditions met: ☐ Yes ☑ No ☐ Met After Allowance

Verified and Acknowledged: /CHRISTINA NEGRELLIRODRIGUEZ/ Examiner's Signature | Initials

Title: EXPANDABLE INTERVERTEBRAL DEVICE

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
08/20/2021	623	3773	46440-0020005
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CONTINUING DATA

This application is a CON of 16587993 09/30/2019 PAT 11096797

16587993 is a CON of 16025667 07/02/2018 PAT 10426633

16025667 is a CON of 15820232 11/21/2017 PAT 10016284

15820232 is a CON of 14063197 10/25/2013 PAT 9848993

14063197 has PRO of 61801783 03/15/2013

14063197 is a CIP of 13741361 01/14/2013 PAT 9301854

14063197 has PRO of 61718707 10/25/2012

14063197 is a CIP of 13210150 08/15/2011 PAT 9867719

14063197 is a CIP of 13210157 08/15/2011 PAT 9889022

14063197 is a CIP of 13210168 08/15/2011 PAT 9907674

14063197 is a CIP of 13210162 08/15/2011 PAT 9895238

13741361 is a CON of 13108982 05/16/2011 PAT 9005293

13210150 is a CON of 13108982 05/16/2011 PAT 9005293

13210157 is a CON of 13108982 05/16/2011 PAT 9005293

13210162 is a CON of 13108982 05/16/2011 PAT 9005293

13210168 is a CON of 13108982 05/16/2011 PAT 9005293

13210162 is a CON of 13084543 04/11/2011 PAT 8353913

13741361 is a CON of 13084543 04/11/2011 PAT 8353913

13210157 is a CON of 13084543 04/11/2011 PAT 8353913

13210168 is a CON of 13084543 04/11/2011 PAT 8353913

13210150 is a CON of 13084543 04/11/2011 PAT 8353913

13108982 is a CON of 11842855 08/21/2007 PAT 7942903

13084543 is a CON of 11842855 08/21/2007 PAT 7942903

11842855 is a CIP of 11536815 09/29/2006 PAT 7846188

11536815 is a CIP of 11208644 08/23/2005 PAT 7704279

11208644 has PRO of 60670231 04/12/2005

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

08/30/2021

**** SMALL ENTITY ****

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/210,168	9907674	150	08/15/2011	ALVARADO, Pablo A Valdivia Y	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/741,361	9301854	150	01/14/2013	ALVARADO, Pablo A Valdivia Y	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/893,326	9056018	150	05/13/2013	ALVARADO, Pablo A Valdivia Y	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/054,926	9848998	150	02/26/2016	ALVARADO, Pablo A Valdivia Y	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/084,543	8353913	150	04/11/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/108,982	9005293	150	05/16/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,150	9867719	150	08/15/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,157	9889022	150	08/15/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,162	9895238	150	08/15/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/401,829	9744052	150	02/21/2012	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,335	9532821	150	03/12/2012	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
14/063,197	9848993	150	10/25/2013	ALVARADO, Pablo A. Valdivia Y.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
14/685,374	[]	160	04/13/2015	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
14/739,327	9867712	250	06/15/2015	ALVARADO, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
61/445,034	[]	159	02/21/2011	Alvarado, Pablo A. Valdivia Y	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
61/451,579	[]	159	03/10/2011	Alvarado, Pablo A. Valdivia Y	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL LEAF SPRING- RATCHET SCREW LOCKING MECHANISM
61/451,582	[]	159	03/10/2011	Alvarado, Pablo A. Valdivia Y	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
61/718,707	[]	159	10/25/2012	Alvarado, Pablo A. Valdivia Y	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/801,783	[]	159	03/15/2013	Alvarado, Pablo A. Valdivia Y	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
11/842,855	7942903	150	08/21/2007	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/418,323	9814601	150	03/12/2012	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/678,401	10238505	150	08/16/2017	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/791,484	10376383	150	10/24/2017	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/820,232	10016284	150	11/21/2017	Alvarado, Pablo A. Valdivia Y.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/870,406	10610371	150	01/12/2018	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
15/894,471	10390969	150	02/12/2018	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/944,117	10537442	150	04/03/2018	Alvarado, Pablo A. Valdivia Y.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/944,221	10376376	150	04/03/2018	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/976,340	10307268	150	05/10/2018	Alvarado, Pablo A. Valdivia Y.	INTERVERTEBRAL EXPANDABLE IMPLANT
16/018,354	10376386	150	06/26/2018	Alvarado, Pablo A. Valdivia Y.	SPINAL STAPLE
16/018,798	10369003	250	06/26/2018	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
16/025,667	10426633	150	07/02/2018	Alvarado, Pablo A. Valdivia Y.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/100,410	10603183	150	08/10/2018	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/160,824	10842542	150	10/15/2018	Alvarado, Pablo A. Valdivia Y.	SPINAL BONE FUSION SYSTEM
16/280,684	10478319	150	02/20/2019	Alvarado, Pablo A. Valdivia Y.	SYSTEM WITH TOOL ASSEMBLY AND EXPANDABLE SPINAL IMPLANT
16/362,294	10925753	150	03/22/2019	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/532,033	11141288	150	08/05/2019	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/587,993	11096797	150	09/30/2019	Alvarado, Pablo A. Valdivia Y.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/744,755	11376136	150	01/16/2020	Alvarado, Pablo A. Valdivia Y.	EXPANDABLE SPINAL IMPLANT AND TOOL SYSTEM
16/829,246	11229525	150	03/25/2020	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/841,355	11478359	150	04/06/2020	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL DISC SYSTEM

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
16/952,241	11759243	150	11/19/2020	Alvarado, Pablo A. Valdivia Y.	SPINAL BONE FUSION SYSTEM
17/129,149	11083591	150	12/21/2020	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/181,706	[]	41	02/22/2021	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/393,672	11806244	150	08/04/2021	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/408,068	[]	71	08/20/2021	Alvarado, Pablo A. Valdivia Y.	EXPANDABLE INTERVERTEBRAL DEVICE
17/492,996	[]	30	10/04/2021	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/577,722	[]	30	01/18/2022	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
17/706,873	[]	95	03/29/2022	Alvarado, Pablo A. Valdivia Y.	INTERVERTEBRAL IMPLANT AND TOOL ASSEMBLY

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
11/737,846	7854765	250	04/20/2007	MOSKOWITZ, Mosheh T.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
11/943,334	8535379	150	11/20/2007	MOSKOWITZ, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
12/347,990	7951180	250	12/31/2008	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
12/846,822	[]	160	07/29/2010	MOSKOWITZ, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
12/945,835	9492282	250	11/13/2010	MOSKOWITZ, Mosheh T.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
12/983,107	9901455	150	12/31/2010	MOSKOWITZ, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
13/084,543	8353913	150	04/11/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/101,129	8784450	150	05/04/2011	MOSKOWITZ, Mosheh T.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
13/101,135	9675385	150	05/04/2011	MOSKOWITZ, Mosheh T.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
13/108,982	9005293	150	05/16/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,150	9867719	150	08/15/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,157	9889022	150	08/15/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,162	9895238	150	08/15/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/210,168	9907674	150	08/15/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/596,038	9801728	250	08/27/2012	MOSKOWITZ, Mosheh T.	TOOLS FOR IMPLANTATION AND EXTRACTION OF ARTICIAL DISCS
13/621,243	[]	160	09/15/2012	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
13/741,361	9301854	150	01/14/2013	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/893,326	9056018	150	05/13/2013	MOSKOWITZ, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
14/049,743	10842357	150	10/09/2013	MOSKOWITZ, Mosheh T.	ENDOSCOPIC SURGICAL SYSTEM
14/063,197	9848993	150	10/25/2013	MOSKOWITZ, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
14/257,650	9622875	150	04/21/2014	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
14/299,711	10016225	150	06/09/2014	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
14/336,909	[]	160	07/21/2014	MOSKOWITZ, Mosheh T.	CERVICAL SPINOUS PROCESS STAPLE
14/337,210	10098672	150	07/21/2014	MOSKOWITZ, Mosheh T.	CERVICAL SPINOUS PROCESS STAPLE
14/460,330	[]	161	08/14/2014	MOSKOWITZ, Mosheh T.	SYSTEMS AND APPARATUSES FOR IMPROVED VISUALIZATION OF ENDOSCOPIC IMAGES
14/685,374	[]	160	04/13/2015	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION

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14/739,327	9867712	250	06/15/2015	MOSKOWITZ, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/054,926	9848998	150	02/26/2016	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/350,352	10123881	150	11/14/2016	MOSKOWITZ, Mosheh T.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
15/397,198	10098678	150	01/03/2017	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/470,066	[]	160	03/27/2017	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
15/490,107	10064738	150	04/18/2017	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
11/019,351	7083650	250	12/23/2004	Moskowitz, Mosheh	ARTIFICIAL EXPANSILE TOTAL LUMBAR AND THORACIC DISCS FOR POSTERIOR PLACEMENT WITHOUT SUPPLEMENTAL INSTRUMENTATION AND ITS ADAPTATION FOR ANTERIOR PLACEMENT OF ARTIFICIAL CERVICAL, THORACIC AND LUMBAR DISCS
15/678,401	10238505	150	08/16/2017	Moskowitz, Mosheh	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
09/849,521	[]	161	05/07/2001	Moskowitz, Mosheh T.	Hands free umbrella
10/964,633	[]	161	10/15/2004	Moskowitz, Mosheh T.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs
11/208,644	7704279	250	08/23/2005	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION

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11/487,415	7854766	250	07/17/2006	Moskowitz, Mosheh T.	ARTIFICIAL TOTAL LUMBAR DISC FOR UNILATERAL SAFE AND SIMPLE POSTERIOR PLACEMENT IN THE LUMBAR SPINE, AND REMOVABLE BIFUNCTIONAL SCREW WHICH DRIVES VERTICAL SLIDING EXPANSILE PLATE EXPANSION, AND INTERPLATE WIDENING,AND ANGLED TRACTION SPIKES
11/536,815	7846188	250	09/29/2006	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
11/684,787	8251891	250	03/12/2007	Moskowitz, Mosheh T.	TOTALLY WIRELESS ELECTRONICALLY EMBEDDED ACTION-ENDED ENDOSCOPE UTILIZING DIFFERENTIAL DIRECTIONAL ILLUMINATION WITH DIGITALLY CONTROLLED MIRRORS AND/OR PRISMS
11/842,855	7942903	150	08/21/2007	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
12/054,335	7972363	150	03/24/2008	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
12/471,340	8734516	150	05/22/2009	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
12/471,345	8257370	250	05/22/2009	Moskowitz, Mosheh T.	POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLES, STAPLING GUNS, AND DEVICES FOR SPINAL FUSION
12/868,451	8747444	250	08/25/2010	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
12/889,328	10130493	150	09/23/2010	Moskowitz, Mosheh T.	ARTIFICIAL TOTAL LUMBAR DISC FOR UNILATERAL SAFE AND SIMPLE POSTERIOR PLACEMENT IN THE LUMBAR SPINE, AND REMOVEABLE BIFUNCTIONAL SCREW WHICH DRIVES VERTICAL SLIDING EXPANSILE PLATE EXPANSION, AND INTERPLATE WIDENING, AND ANGLED TRACTION SPIKES
12/957,776	9888918	250	12/01/2010	Moskowitz, Mosheh T.	HORIZONTAL-TRANSVERTEBRAL CURVILINEAR NAIL-SCREWS WITH INTER-LOCKING RIGID OR JOINTED FLEXIBLE RODS FOR SPINAL FUSION

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13/093,812	9924940	150	04/25/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
13/103,994	9603713	150	05/09/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
13/401,829	9744052	150	02/21/2012	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,323	9814601	150	03/12/2012	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,335	9532821	150	03/12/2012	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/693,594	10149703	150	09/01/2017	Moskowitz, Mosheh T.	CERVICAL SPINOUS PROCESS STAPLE
15/724,015	10695187	150	10/03/2017	Moskowitz, Mosheh T.	HAND MANIPULATED ENDOSCOPIC MEDICAL DEVICE
15/791,484	10376383	150	10/24/2017	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/820,232	10016284	150	11/21/2017	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/862,016	10028740	150	01/04/2018	Moskowitz, Mosheh T.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
15/870,406	10610371	150	01/12/2018	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/894,471	10390969	150	02/12/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/896,130	10076367	150	02/14/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
15/904,617	10022238	150	02/26/2018	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT

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15/934,614	10537367	150	03/23/2018	Moskowitz, Mosheh T.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/934,622	10251643	150	03/23/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
15/944,117	10537442	150	04/03/2018	Moskowitz, Mosheh T.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/944,221	10376376	150	04/03/2018	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/976,340	10307268	150	05/10/2018	Moskowitz, Mosheh T.	INTERVERTEBRAL EXPANDABLE IMPLANT
16/018,354	10376386	150	06/26/2018	Moskowitz, Mosheh T.	SPINAL STAPLE
16/018,798	10369003	250	06/26/2018	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
16/018,904	10238383	150	06/26/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
16/025,667	10426633	150	07/02/2018	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/034,545	11116642	150	07/13/2018	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/042,163	10258329	150	07/23/2018	Moskowitz, Mosheh T.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/100,410	10603183	150	08/10/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/134,364	10952867	150	09/18/2018	Moskowitz, Mosheh T.	Electronically Assisted Medical Device
16/160,824	10842542	150	10/15/2018	Moskowitz, Mosheh T.	SPINAL BONE FUSION SYSTEM
16/160,937	10722274	150	10/15/2018	Moskowitz, Mosheh T.	Cervical Spinous Process Staple
16/194,976	11135072	150	11/19/2018	Moskowitz, Mosheh T.	ARTIFICIAL DISC SYSTEM
16/280,684	10478319	150	02/20/2019	Moskowitz, Mosheh T.	SYSTEM WITH TOOL ASSEMBLY AND EXPANDABLE SPINAL IMPLANT

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16/362,152	10952723	150	03/22/2019	Moskowitz, Mosheh T.	ARTIFICIAL INTERVERTEBRAL IMPLANT
16/362,294	10925753	150	03/22/2019	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/384,232	[]	161	04/15/2019	Moskowitz, Mosheh T.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/532,033	11141288	150	08/05/2019	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/587,993	11096797	150	09/30/2019	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/673,806	[]	93	11/04/2019	Moskowitz, Mosheh T.	SYSTEMS AND METHODS FOR AUTONOMOUS ROBOTIC SURGERY
16/744,716	11357551	150	01/16/2020	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
16/744,755	11376136	150	01/16/2020	Moskowitz, Mosheh T.	EXPANDABLE SPINAL IMPLANT AND TOOL SYSTEM
16/829,246	11229525	150	03/25/2020	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/841,355	11478359	150	04/06/2020	Moskowitz, Mosheh T.	ARTIFICIAL DISC SYSTEM
16/952,241	11759243	150	11/19/2020	Moskowitz, Mosheh T.	SPINAL BONE FUSION SYSTEM
16/953,797	[]	41	11/20/2020	Moskowitz, Mosheh T.	Endoscopic Surgical System
17/129,149	11083591	150	12/21/2020	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/180,021	[]	94	02/19/2021	Moskowitz, Mosheh T.	SPINAL FUSION IMPLANT
17/181,706	[]	41	02/22/2021	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/208,640	11864755	150	03/22/2021	Moskowitz, Mosheh T.	ARTIFICIAL EXPANDABLE IMPLANT SYSTEMS
17/208,669	11491021	150	03/22/2021	Moskowitz, Mosheh T.	ELECTRONICALLY ASSISTED MEDICAL DEVICE
17/393,672	11806244	150	08/04/2021	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/408,068	[]	71	08/20/2021	Moskowitz, Mosheh T.	EXPANDABLE INTERVERTEBRAL DEVICE
17/471,667	[]	30	09/10/2021	Moskowitz, Mosheh T.	3-D PRINTED SPINAL IMPLANT
17/487,360	11771567	150	09/28/2021	Moskowitz, Mosheh T.	ARTIFICIAL DISC SYSTEM

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17/492,996	[]	30	10/04/2021	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/577,722	[]	30	01/18/2022	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
17/681,231	11452619	150	02/25/2022	Moskowitz, Mosheh T.	ARTIFICIAL DISC SYSTEM
17/706,873	[]	95	03/29/2022	Moskowitz, Mosheh T.	INTERVERTEBRAL IMPLANT AND TOOL ASSEMBLY
17/752,330	[]	30	05/24/2022	Moskowitz, Mosheh T.	Intervertebral spinal implant systems
17/981,686	[]	93	11/07/2022	Moskowitz, Mosheh T.	ELECTRONICALLY ASSISTED MEDICAL DEVICE
18/372,914	[]	30	09/26/2023	Moskowitz, Mosheh T.	ASSISTIVE DEVICE AND METHOD
60/208,070	[]	159	05/31/2000	Moskowitz, Mosheh T.	Hands free umbrella
60/670,231	[]	159	04/12/2005	Moskowitz, Mosheh T.	Stand-alone expansile intervertebral body fusion device utilizing bi-directional fixating transvertebral body screws or pneumatically driven expansile spiked telescoping cylinders with optional motion-calibrating interarticulating joint stapling device
60/673,761	[]	159	04/22/2005	Moskowitz, Mosheh T.	Spinal disc microchip implant providing dynamic disc motion in response to variable axial loading forces
60/788,720	[]	159	04/04/2006	Moskowitz, Mosheh T.	Posteriorly placed total lumbar atrificial disc with novel removeable bifunctional screw which drives vertical sliding expansile plate expansion, and interplate widening, and novel angled traction spikes, and interchangeable cores
60/793,329	[]	159	04/20/2006	Moskowitz, Mosheh T.	Electronically controlled artificial intervertebral disc with linear actuation systems and an active closed-loop microchip responding to variable human locomotor activity and spinal motion
61/264,648	[]	159	11/25/2009	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/265,752	[]	159	12/01/2009	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/306,926	[]	159	02/22/2010	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/419,679	[]	159	12/03/2010	Moskowitz, Mosheh T.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
61/425,749	[]	159	12/21/2010	Moskowitz, Mosheh T.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
61/445,034	[]	159	02/21/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
61/451,579	[]	159	03/10/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL LEAF SPRING- RATCHET SCREW LOCKING MECHANISM

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61/451,582	[]	159	03/10/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
61/712,251	[]	159	10/10/2012	Moskowitz, Mosheh T.	ENDOSCOPIC SURGICAL SYSTEM
61/718,707	[]	159	10/25/2012	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/801,783	[]	159	03/15/2013	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/866,038	[]	159	08/14/2013	Moskowitz, Mosheh T.	ENDOSCOPIC VIEWING APPARATUSES
62/815,605	[]	159	03/08/2019	Moskowitz, Mosheh T.	Systems and Methods for Autonomous Robotic Surgery
63/411,943	[]	159	09/30/2022	Moskowitz, Mosheh T.	ASSISTIVE DEVICE AND METHOD

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3773	

NOTIFICATION DATE	DELIVERY MODE
01/23/2024	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

Office Action Summary	Application No. 17/408,068	Applicant(s) Moskowitz et al.	
	Examiner CHRISTINA NEGRELLI-RODRIGUEZ	Art Unit 3773	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☑ Responsive to communication(s) filed on 06/22/2023.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 21-40 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☑ Claim(s) 36-40 is/are allowed.

7) ☑ Claim(s) 21 is/are rejected.

8) ☑ Claim(s) 22-35 is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to **PPHfeedback@uspto.gov.**

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

DETAILED ACTION

It is noted that claims 21-35 were allowed in the Notice of Allowance mailed on 07/20/2023. However, upon further search and consideration, new prior art has been found to read on the claimed invention.

Notice of Pre-AIA or AIA Status

The present application is being examined under the pre-AIA first to invent provisions.

Priority

The subject matter of claim 21 has an effective filing date of 10/25/2012. The earliest priority document supporting the claimed subject matter is provisional application 61/718,707 filed on 10/25/2012 (see Figures 6a-6d and para.0034-0035 of 61/718,707).

Claim Objections

Claim 23 is objected to because of the following informalities:

Claim 23 recites "wherein the first vertebral body engagement surfaces comprises a plurality of ridges ***for interfacing*** *with a vertebral body surface*" which clearly functionally relates "a plurality of ridges" with "a vertebral body surface". As claim 24 depends on claim 23, the functional recitation "for interfacing with" arguably carries over into claim 24. However, claim 24 should be amended as follows to keep the language of claim 24 consistent with the intended use/functional language recited in claim 23: "wherein the expanded configuration of the expandable intervertebral device of the plurality of ridges on the first vertebral body engagement surfaces are configured to be in contact with the vertebral body surface".

Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP § 2146 *et seq.* for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The filing of a terminal disclaimer by itself is not a complete reply to a nonstatutory double patenting (NSDP) rejection. A complete reply requires that the terminal disclaimer be accompanied by a reply requesting reconsideration of the prior Office action. Even where the

NSDP rejection is provisional the reply must be complete. See MPEP § 804, subsection I.B.1. For a reply to a non-final Office action, see 37 CFR 1.111(a). For a reply to final Office action, see 37 CFR 1.113(c). A request for reconsideration while not provided for in 37 CFR 1.113(c) may be filed after final for consideration. See MPEP §§ 706.07(e) and 714.13.

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The actual filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/apply/applying-online/eterminal-disclaimer.

Claim 21 is rejected on the ground of nonstatutory double patenting as being unpatentable over claim 1 of U.S. Patent No. 10,016,284 B2. Although the claims at issue are not identical, they are not patentably distinct from each other.

Claim 1 of the 284' patent discloses an expandable intervertebral device comprising: (col.14, ll.46, 51-55, 60-64-col.15, ll.18-23, 28-40, note claim 1 recites an interbody device having first and second housings with vertebral body engagement surfaces which oppose interior surfaces of the respective housings, the housings defining a pace in which a wedge slides against the first housing interior surface to move the first housing relative to the second housing from a closed position to an open position, as such the interbody is capable of use as an intervertebral device. Furthermore, claim 1 of 284' discloses all of the structural elements of claim 284' and thus may be used as an intervertebral device).

Claim 1 of the 284' patent further discloses a first body extending from a first end to a second end (first housing corresponds to first body, col.14, ll.46-54), wherein the first body has first and second end portions positioned at the first and second ends, respectively, and has first and second side portions extending between the first and second end portions, wherein the first body has a first vertebral body engagement surface and has a first interior surface positioned on an opposite side of the first body than the first vertebral body engagement surface (col.14, ll.46-54), the first interior surface includes at least one angled housing surface protruding from the first interior surface (col.15, ll.21-23).

Claim 1 of the 284' patent further discloses a second body extending from a third end to a fourth end (second housing corresponds to second body, col.14, ll.55-56), wherein the second body has third and fourth end portions positioned at the third and fourth ends, respectively, and has third and fourth side portions extending between the third and fourth end portions (col.14, ll.56-59), wherein the second body has a second vertebral body engagement surface and has a second interior surface positioned on an opposite side of the second body than the second vertebral body engagement surface (col.14, ll.60-64).

Claim 1 of the 284' patent further discloses a wedge having an angled wedge surface (col.15, ll.14-17), wherein the wedge is positioned between the first body and the second body with the angled wedge surface facing the first interior surface of the first body (col.15, ll.18-21) and the at least one angled housing surface of the first body is positioned to engage the angled wedge surface of the wedge (col.15, ll.21-24), wherein the wedge is configured to slide within a space defined by the first body and second body in a direction toward the second and fourth ends of the first body and second body from a first wedge position in which the first body and the second body are in a substantially closed position to a second wedge position whereby the angled

wedge surface presses against the first interior surface of the first body to move the first body relative to the second body from a compressed configuration to an expanded configuration, whereby the wedge remains axially confined within the space defined by the first body and second body in the compressed and expanded configurations (col.15, ll.28-40).

The invention of claim 1 of the patent is in effect a "species" of the "generic" invention of claim 21 of the application. It has been held that the generic invention is "anticipated" by the "species". See In re Goodman, 29 USPQ2d 2010 (Fed. Cir. 1993). Since claim 21 of the application is anticipated by respective claim 1 of the patent, they are not patentably distinct from 1.

Claim Rejections - 35 USC § 102

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis (i.e., changing from AIA to pre-AIA) for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

The following is a quotation of the appropriate paragraphs of pre-AIA 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 21 is rejected under pre-AIA 35 U.S.C. 102(a) as being anticipated by Glerum et al. (US. Publication No.2011/0319997 A1; hereinafter “Glerum”).

Regarding claim 1, Glerum discloses an expandable intervertebral device (note abstract) comprising: a first body (14, Figures 3-6) extending from a first end to a second end (note ends shown from left to right in Figures 5-6), wherein the first body has first and second end portions positioned at the first and second ends (note portions of ends as reasonably shown in Figures 4-6), respectively, and has first and second side portions extending between the first and second end portions (note side portions 14 engaging body portion 12 as seen in Figure 3), wherein the first body has a first vertebral body engagement surface (texturing 50, see Figures 3-6 and para. 0044) and has a first interior surface (interior surface of 14 including angle surfaces/ramped portions 46, 48 and grooves 47, 49, see Figures 4-6 and para. 0043) positioned on an opposite side of the first body than the first vertebral body engagement surface (notes Figures 4-6), the first interior surface includes at least one angled housing surface protruding from the first interior surface (angle surfaces/ramped portions 46, 48 and grooves 47, 49, see Figures 4-6 and para. 0043); a second body (16, Figures 3-6) extending from a third end to a fourth end (note ends shown from left to right in Figures 5-6), wherein the second body has third and fourth end portions positioned at the third and fourth ends (note portions of ends as reasonably shown in Figures 4-6), respectively, and has third and fourth side portions extending between the third and fourth end portions (note side portions of 16 including angle surfaces/ramped portions 46, 48 and grooves 47, 49, see Figures 4-6 and para. 0043), wherein the second body has a second vertebral body engagement surface (texturing 50, see Figures 3-6 and para.0044) and has a second interior surface (interior surfaces of 16 including angle surfaces/ramped portions 46, 48 and grooves 47, 49, see Figures 4-6 and para.0043) positioned on an opposite side of the second body than the second vertebral body engagement surface (note Figures 4-6); and a wedge (52, Figures 4-6) having an angled wedge surface (58, Figures 4-6), wherein the wedge is positioned between the

first body and the second body with the angled wedge surface facing the first interior surface of the first body (note Figures 4-6) and the at least one angled housing surface of the first body is positioned to engage the angled wedge surface of the wedge (note para.0043, 0045 and 0049), wherein the wedge is configured to slide within a space defined by the first body and second body in a direction toward the second and fourth ends of the first body and second body from a first wedge position in which the first body and the second body are in a substantially closed position to a second wedge position whereby the angled wedge surface presses against the first interior surface of the first body to move the first body relative to the second body from a compressed configuration to an expanded configuration (note Figures 5-6 and para.0043, 0045 and 0049 where the wedge moves from the left of the page toward the right of the page (i.e. in a direction toward the second and fourth ends of the first body and second body) within a space defined between the first and second body 14, 16 as reasonably shown in Figures 5-6), whereby the wedge remains axially confined within the space defined by the first body and second body in the compressed and expanded configurations (note abutting surfaces shown in figures below and as reasonably seen in Figures 5-6 which prevent the wedge from moving further to the left when the compressed configuration, note also once expanded in Figure 6 the wedge 52 remains axially within the space between first and second bodies 14, 16. Juxtapose this with instant specification Figures 6a-6d, para.0055-0056 where wedge/translation nut 616 translates within the space between first body 602 and second body 604 and does not axially leave the space therebetween).

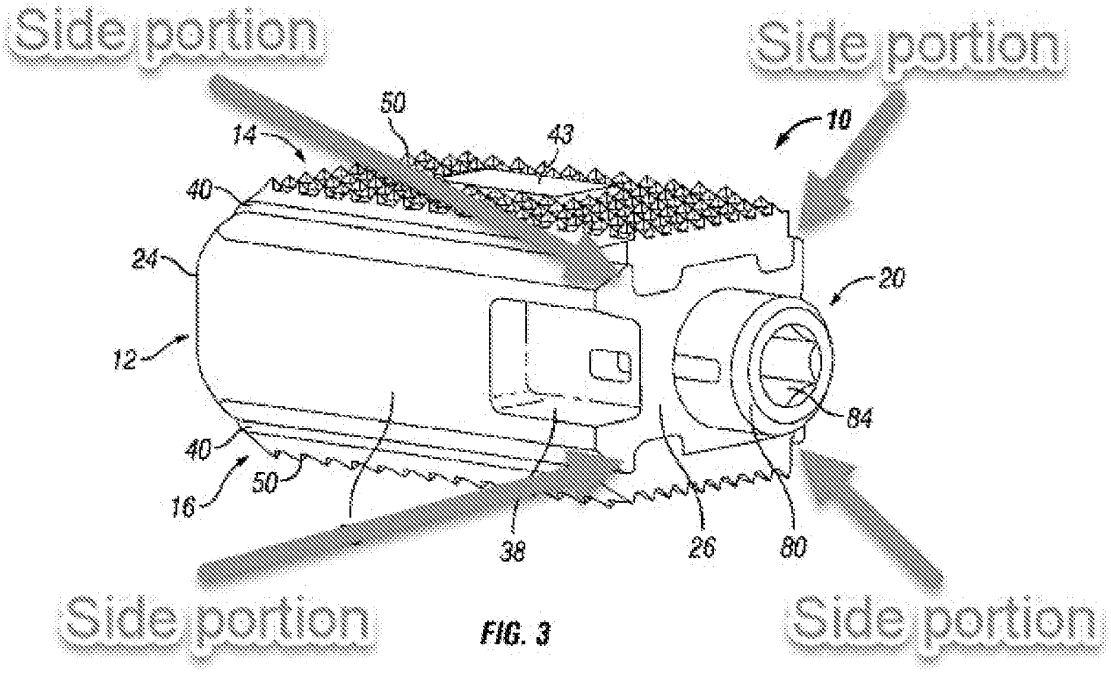

Side portion
Side portion
50
14
43
10
40
24
20
12
84
40
50
16
38
26
80
Side portion
Side portion

FIG. 3

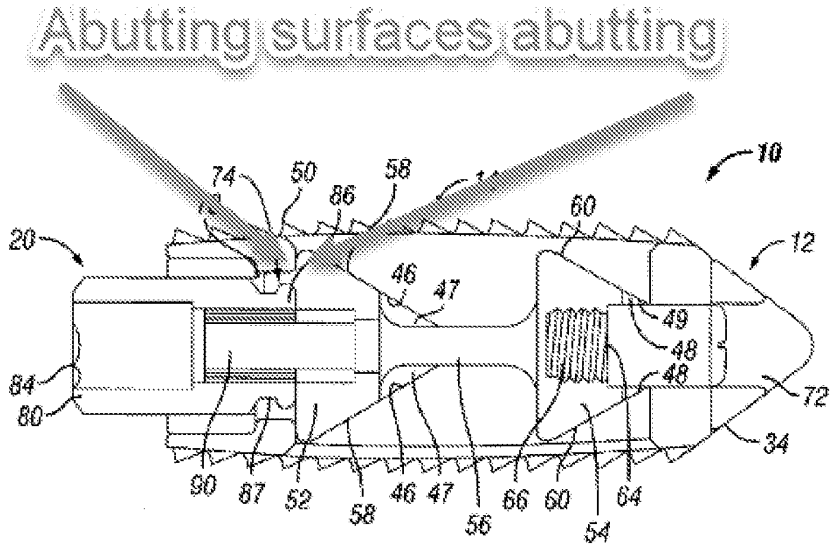

Abutting surfaces abutting
10
74
50
58
86
60
20
12
46
47
49
48
84
80
48
72
34
90
87
52
58
46
47
56
66
60
64
54

FIG. 5

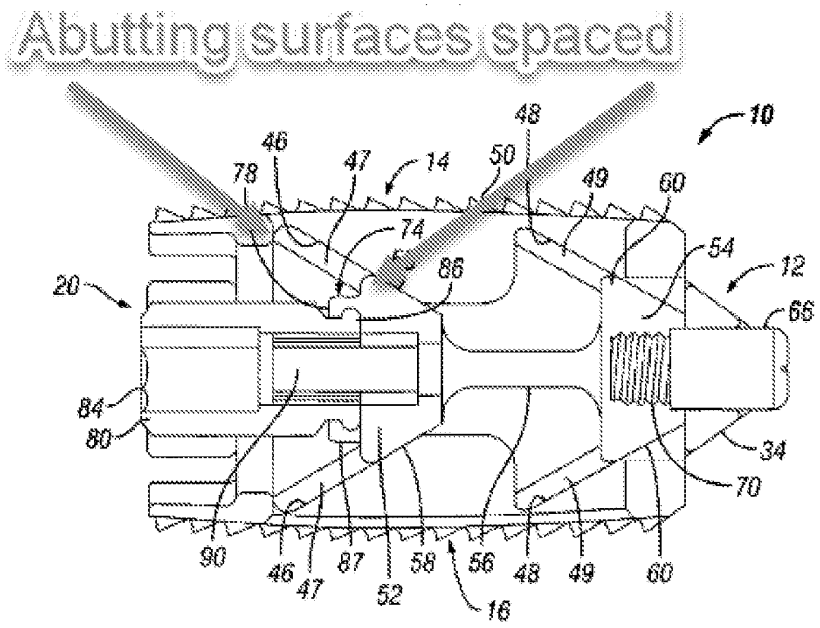


FIG. 6

Allowable Subject Matter

Claims 36-40 are allowed.

Claims 22-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Negrelli whose telephone number is 571-270-7389. The examiner can normally be reached on Monday-Friday, between 8:00am to 4:00pm. If attempts to reach the examiner by telephone are unsuccessful, ***please contact*** **the examiner's**

supervisor, Eduardo Robert, *at* (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CHRISTINA NEGRELLI/

Examiner, Art Unit 3773

/EDUARDO C ROBERT/
Supervisory Patent Examiner, Art Unit 3773

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/408,068	**01/26/2024 01:35:16 PM Z ET**	**46440-0020005**

Title of Invention

EXPANDABLE INTERVERTEBRAL DEVICE

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4713	FILED BY	Emily Whitcomb
PATENT CENTER #	64101934	FILING DATE	08/20/2021
CUSTOMER #	26191	FIRST NAMED INVENTOR	Ahmnon D. Moskowitz
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Kiersten Batzli

Documents

TOTAL DOCUMENTS: 3

DOCUMENT		PAGES	DESCRIPTION	SIZE (KB)
ReplytoOA.pdf		12	-	120 KB
ReplytoOA-A....pdf	(1-1)	1	Amendment/Request for Reconsideration-After Non-Final Rejection	78 KB
ReplytoOA-CLM.pdf	(2-9)	8	Claims	79 KB
ReplytoOA-REM.pdf	(10-12)	3	Applicant Arguments/Remarks Made in an Amendment	85 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
ReplytoOA.pdf	32E75DDBBAE609BDD39A59A778BFF6C4413AEB32106C4BB5

	4CD830D0EDA7BFBAC67AEDC376E7A8D1B881B152BB75D55 7B01B177526EA56A9D8E4F14DB430013E
ReplytoOA-A....pdf	2231E50F42645EEC5BB4234889ADE4FFB892992D1B850AFC3 9B2E7EF57667AB7BDD368D80F93E77AD3453BC809B5DD93A C3AC49058C6A22DDD617BF3344F91CA
ReplytoOA-CLM.pdf	7B551406CCE387BECF5001AADEA0788F5E69366382834C3C C136AA8768CD64A637C31A891C9327231CF0BDD7B57ADA28 7DD15B10C4209909BBE6F56DD42820E7
ReplytoOA-REM.pdf	A5FB4E900A1D3D809903C7DBB69B9EEF9A85F2D03E71053D C1DB3FF6B90ADD754C2B4CD055F26FF23FFFB503725E5EAB A5D8BDA18F60C1D8AFA65221807CCA8B

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES
PATENT AND TRADEMARK OFFICE

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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/408,068	**01/26/2024 01:35:16 PM Z ET**	**46440-0020005**

Title of Invention

EXPANDABLE INTERVERTEBRAL DEVICE

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4713	FILED BY	Emily Whitcomb
PATENT CENTER #	64101934	AUTHORIZED BY	Kiersten Batzli
CUSTOMER #	26191	FILING DATE	08/20/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Ahmnon D. Moskowitz

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
DA / 061050	**E20241PD35505422**	**Emily Whitcomb**

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
2202	EACH CLAIM IN EXCESS OF 20	40.00	1	40.00
			TOTAL AMOUNT:	**$40.00**

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

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submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor	:	Ahmnon D. Moskowitz	Art Unit	:	3773
Application No.	:	17/408,068	Examiner	:	Christina Negrellirodrigue
Filed	:	August 20, 2021	Conf. No.	:	4713
Title	:	AN EXPANDABLE INTERVERTEBRAL DEVICE			

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY TO ACTION OF JANUARY 23, 2024

Please consider the following reply.

Amendments to Claims:

Listing of Claims.

1-20. (Cancelled)

21. (Currently Amended) An expandable intervertebral device comprising:

a first body extending from a first end to a second end and having a first length between the first end and the second end, wherein the first body has first and second end portions positioned at the first and second ends, respectively, and has first and second side portions extending between the first and second end portions, wherein the first body has a first vertebral body engagement surface and has a first interior surface positioned on an opposite side of the first body than the first vertebral body engagement surface, the first interior surface includes at least one angled housing surface protruding from the first interior surface;

a second body extending from a third end to a fourth end and having a second length between the third end and the fourth end, the second length being greater than the first length, wherein the second body has third and fourth end portions positioned at the third and fourth ends, respectively, and has third and fourth side portions extending between the third and fourth end portions, wherein the second body has a second vertebral body engagement surface and has a second interior surface positioned on an opposite side of the second body than the second vertebral body engagement surface; [[and]]

a wedge having an angled wedge surface, wherein the wedge is positioned between the first body and the second body with the angled wedge surface facing the first interior surface of the first body and the at least one angled housing surface of the first body is positioned to engage the angled wedge surface of the wedge, wherein the wedge is configured to slide within a space defined by the first body and second body in a direction toward the second and fourth ends of the first body and second body from a first wedge position in which the first body and the second body are in a substantially closed

position to a second wedge position whereby the angled wedge surface presses against the first interior surface of the first body to move the first body relative to the second body from a compressed configuration to an expanded configuration, whereby the wedge remains axially confined within the space defined by the first body and second body in the compressed and expanded configurations; and

a cavity defined within the expandable intervertebral device, the cavity configured to be filled with bone fusion materials; and

wherein the second end portion of the first body is smaller than the fourth end portion of the second body such that the second end portion of the first body is positionable between the third and fourth side portions of the second body at the fourth end of the second body in the compressed configuration.

22. (Previously Presented) The expandable intervertebral device of claim 21, wherein the first body and second body are hingedly connected such that the first body can pivot with respect to the second body so as to move the first end of the first body away from the third end of the second body.

23. (Currently Amended) [[The]] An expandable intervertebral device ~~of claim 21,~~ comprising:

a first body extending from a first end to a second end, wherein the first body has first and second end portions positioned at the first and second ends, respectively, and has first and second side portions extending between the first and second end portions, wherein the first body has a first vertebral body engagement surface and has a first interior surface positioned on an opposite side of the first body than the first vertebral body engagement surface, ~~wherein~~ the first vertebral body engagement surface ~~comprises~~ comprising a plurality of ridges for interfacing with a vertebral body surface, the first interior surface includes at least one angled housing surface protruding from the first interior surface;

a second body extending from a third end to a fourth end, wherein the second body has third and fourth end portions positioned at the third and fourth ends,

respectively, and has third and fourth side portions extending between the third and fourth end portions, wherein the second body has a second vertebral body engagement surface and has a second interior surface positioned on an opposite side of the second body than the second vertebral body engagement surface, the first body configured to fit between the third and fourth side portions in a compressed configuration of the expandable intervertebral device; and

a wedge having an angled wedge surface, wherein the wedge is positioned between the first body and the second body with the angled wedge surface facing the first interior surface of the first body and the at least one angled housing surface of the first body is positioned to engage the angled wedge surface of the wedge, wherein the wedge is configured to slide within a space defined by the first body and second body in a direction toward the second and fourth ends of the first body and second body from a first wedge position in which the first body and the second body are in a substantially closed position to a second wedge position whereby the angled wedge surface presses against the first interior surface of the first body to move the first body relative to the second body from a compressed configuration to an expanded configuration without moving the second body, whereby the wedge remains axially confined within the space defined by the first body and second body in the compressed and expanded configurations.

24. (Currently Amended) The expandable intervertebral device of claim 23, wherein in the expanded configuration of the expandable intervertebral device the plurality of ridges on the first vertebral body engagement surface are configured to be in contact with the vertebral body surface.

25. (Cancelled)

26. (Currently Amended) The expandable intervertebral device of claim [[25]] 21, wherein movement of the first body relative to the second body toward the expanded configuration of the expandable intervertebral device increases a volume of the cavity.

27. (Currently Amended) The expandable intervertebral device of claim [[21]] 23, further comprising a locking mechanism for retaining the expandable intervertebral device in the expanded configuration.

28. (Previously Presented) The expandable intervertebral device of claim 27, further comprising means to promote segmental spinal fusion.

29. (Currently Amended) The expandable intervertebral device of claim [[21]] 23, wherein the first body defines first and second bone cavities extending through the first vertebral body engagement surface with a wall of the first body at least partially separating the first and second bone cavities and wherein the first and second side portions of the first body have respective first and second outer side surfaces, wherein the third and fourth side portions of the second body have respective third and fourth inner side surfaces, and wherein the first body is positioned at least partially inside the second body with the first and second outer side surfaces positioned inward of and adjacent to the third and fourth inner side surfaces of the third and fourth side portions in the compressed configuration.

30. (Currently Amended) The expandable intervertebral device of claim 21, further comprising:

wherein the wedge is actuated in response to a rotation of a threaded screw; and

wherein the rotation of the threaded screw results in axial movement of the wedge within the space defined by the first body and the second body such that the at least one angled housing surface of the first body engages the angled wedge surface of the wedge to move the first body relative to the second body from the compressed configuration to the expanded configuration.

31. (Previously Presented) The expandable intervertebral device of claim 30, wherein the rotation of the threaded screw in a first direction actuates movement of the first body relative to the second body so as to expand the expandable intervertebral device vertically.

32. (Previously Presented) The expandable intervertebral device of claim 31, wherein the expandable intervertebral device further comprises indentations on opposing sides for engaging a positioning tool.

33. (Previously Presented) A system comprising:

the expandable intervertebral device of claim 32; and

a tool comprising:

an elongate shaft;

first and second prongs that are sized and positioned such that the first and second prongs engage the indentations on opposing sides of the expandable intervertebral device when the tool engages the expandable intervertebral device; and

a screwdriver sized and configured for operating the threaded screw.

34. (Previously Presented) The system of claim 33, wherein the screwdriver comprises an elongate member configured to extend within the elongate shaft of the tool.

35. (Previously Presented) The system of claim 33, the tool further comprising a handle positioned at a proximal end of the elongate shaft.

36. (Previously Presented) An expandable intervertebral device comprising:

a first body extending from a first end to a second end, wherein the first body has first and second end portions positioned at the first and second ends, respectively, and has first and second side portions extending between the first and second end portions, wherein the first body has a first vertebral body engagement surface having a first plurality of ridges formed therein and has a first interior surface positioned on an opposite side of the first body than the first vertebral body engagement surface;

a second body extending from a third end to a fourth end, wherein the second body has third and fourth end portions positioned at the third and fourth ends, respectively, and has third and fourth side portions extending between the third and

fourth end portions, wherein the second body has a second vertebral body engagement surface having a second plurality of ridges formed therein and has a second interior surface positioned on an opposite side of the second body than the second vertebral body engagement surface, wherein the first body is aligned with the second body such that the first end of the first body is axially aligned with the third end of the second body and the second end of the first body is axially aligned with the fourth end of the second body, wherein the first end portion of the first body and the third end portion of the second body are hingedly interconnected such that the first body can pivot with respect to the second body so as to move the second end portion of the first body away from the fourth end portion of the second body; and

a wedge extending from a fifth end to a sixth end and having an angled wedge surface extending along at least a portion of a distance between the fifth end and the sixth end, wherein the wedge is positioned between the first body and the second body with the angled wedge surface facing the first interior surface of the first body, wherein the first interior surface of the first body has an angled housing surface shaped to engage the angled wedge surface of the wedge, wherein the wedge is configured to slide within a space defined by the first body and second body in a direction toward the second and fourth ends of the first body and second body from a first wedge position that allows the first body and second body to pivot to a position that is substantially closed to a second wedge position whereby the angled wedge surface presses against the first interior surface of the first body to hingedly open the first body with respect to the second body whereby the wedge remains axially confined within the space defined by the first body and second body in the first and second wedge positions.

37. (Previously Presented) The expandable intervertebral device of claim 36, wherein a first length of the first body from the first end to the second end is substantially equal to a second length of the second body from the third end to the fourth end, and wherein the second end portion of the first body is smaller than the fourth end portion of the second body such that the second end portion of the first body is positionable between the third and fourth side portions of the second body at the fourth end of the second body.

38. (Previously Presented) The expandable intervertebral device of claim 37, wherein the first body defines a first bone material receiving area between the first and second end portions and the first and second side portions, and the second body defines a second bone material receiving area between the third and fourth end portions and the third and fourth side portions, and wherein the first bone material receiving area is coupled to the second bone material receiving area when the wedge is in the second wedge position.

39. (Previously Presented) The expandable intervertebral device of claim 38, wherein a distance from the fifth end to the sixth end of the wedge is less than a distance from the first end to the second end of the first body and is less than a distance from the third end to the fourth end of the second body.

40. (Previously Presented) A method of operating the expandable intervertebral device of claim 36, the method comprising:

inserting the expandable intervertebral device in a target surgical location between two vertebrae of a human patient; and

turning a rotation screw to actuate a movement of the wedge to pivot the first body away from the second body while the device is positioned between the vertebrae of the human patient.

41. (New) The expandable intervertebral device of claim 21, wherein the second interior surface is substantially parallel with the second vertebral body engagement surface such that the wedge is configured to move along a path parallel to the second vertebral body engagement surface when the wedge slides within the space against the second interior surface.

42. (New) The expandable intervertebral device of claim 23, wherein the second interior surface is substantially parallel with the second vertebral body engagement surface such that the wedge is configured to move along a path parallel to the second vertebral body

engagement surface when the wedge slides within the space against the second interior surface.

REMARKS

Claims 21-24 and 26-42 are pending in this application. Claims 21, 23, 26, 27, 29, and 30 have been amended, claim 25 has been cancelled, and new claims 41 and 42 have been added. Written description support for the amendments and new claims is found throughout the original specification. No new matter has been added. Applicant respectfully requests reconsideration and allowance of all pending claims 21-24 and 26-42.

Claim Objections

The Office Action objected to claim 23 as containing informalities. Claim 24 has been amended as the examiner suggests to address the informality. Applicant requests withdrawal of the objection in view of the claim amendments.

Double Patenting

Claim 21 was rejected on the ground of nonstatutory double patenting as being unpatentable over claim 1 of U.S. Patent No. 10,016,284 B2. Claim 21 has been amended, and Applicant respectfully submits that amended claim 21 is patentably distinct from claim 1 of U.S. Patent No. 10,016,284 B2. Applicant respectfully requests reconsideration and withdrawal of the double patenting rejection in view of the amendments to claim 21.

Claim Rejections - 35 U.S.C. § 102

Claim 21 is rejected 35 U.S.C. § 102 as being allegedly anticipated by U.S. Publication No. 2011/0319997 ("Glerum"). Without agreeing with the rejection, Applicant has amended claim 21 without prejudice or disclaimer. Amended claim 21 incorporates the subject matter of previously pending claim 25 (indicated as allowable) along with various other limitations, and is patentable over Glerum.

Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 21 under 35 U.S.C. § 103 in view of the claim amendments.

New Claims

New claims 41 and 42 depend from independent claims 21 and 23, respectively, and are patentable over the prior art of record for at least this reason, as well as for the additional inventive combinations recited therein.

Request for Reconsideration

The Applicant respectfully requests prompt consideration and a Notice of Allowance. **In the event that no Notice of Allowance will be provided in the next communication, Applicant requests that the Examiner telephone the undersigned attorney (612-766-2015) prior to the next communication so that prosecution on the merits may be expedited**.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper. Applicant hereby specifically reserves the right to prosecute claims of different or broader scope in a continuation application. The Patent Office should infer no (i) adoption of a position with respect to patentability, (ii) change in the Applicant's position with respect to any claim or subject matter of the invention, or (iii) acquiescence in any way to any position taken by the Office Action, based on the amendments made herein.

The fees for excess claims are being paid with this reply on the USPTO patent electronic filing system. Please apply those fees and any other necessary charges or credits to Deposit Account 06-1050, referencing the above attorney docket number.

Respectfully submitted,

Date: January 26, 2024

/Kiersten M. Batzli/
Kiersten M. Batzli, Reg. No. 75,476

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101019730.doc

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
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NOTICE OF ALLOWANCE AND FEE(S) DUE

26191 7590 02/14/2024
FISH & RICHARDSON P.C. (TC)
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER	
NEGRELLIRODRIGUE, CHRISTINA	
ART UNIT	PAPER NUMBER
3773	

DATE MAILED: 02/14/2024

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/408,068	08/20/2021	Ahmnon D. Moskowitz	46440-0020005	4713

TITLE OF INVENTION: EXPANDABLE INTERVERTEBRAL DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0.00	$0.00	$480	05/14/2024

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

26191 7590 02/14/2024
FISH & RICHARDSON P.C. (TC)
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/408,068	08/20/2021	Ahmnon D. Moskowitz	46440-0020005	4713

TITLE OF INVENTION: EXPANDABLE INTERVERTEBRAL DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0.00	$0.00	$480	05/14/2024

EXAMINER	ART UNIT	CLASS-SUBCLASS
NEGRELLIRODRIGUE, CHRISTINA	3773	623-017150

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. Fees submitted: ❑ Issue Fee ❑ Publication Fee (if required)

4b. Method of Payment: *(Please first reapply any previously paid fee shown above)*

❑ Electronic Payment via the USPTO patent electronic filing system ❑ Enclosed check ❑ Non-electronic payment by credit card (Attach form PTO-2038)

❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

❑ Applicant asserting small entity status. See 37 CFR 1.27

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

❑ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/408,068	08/20/2021	Ahmnon D. Moskowitz	46440-0020005	4713

26191 7590 02/14/2024

FISH & RICHARDSON P.C. (TC)
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER	
NEGRELLIRODRIGUE, CHRISTINA	
ART UNIT	**PAPER NUMBER**
3773	

DATE MAILED: 02/14/2024

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013).
https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf

Routine uses of the information in this record may include disclosure to:

1) law enforcement, in the event that the system of records indicates a violation or potential violation of law;
2) a federal, state, local, or international agency, in response to its request;
3) a contractor of the USPTO having need for the information in order to perform a contract;
4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record;
5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record;
6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations;
7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals;
8) another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c));
9) the Office of Personnel Management (OPM) for personnel research purposes; and
10) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

Notice of Allowability	Application No. 17/408,068	Applicant(s) Moskowitz et al.	
	Examiner CHRISTINA NEGRELLI-RODRIGUEZ	Art Unit 3773	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☑ This communication is responsive to Amendments to the Claims filed on 01/26/2024.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

3. ☑ The allowed claim(s) is/are 21-24 and 26-42 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information , please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	/EDUARDO C ROBERT/ Supervisory Patent Examiner, Art Unit 3773

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	Art Unit
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

CPC - Searched*		
Symbol	**Date**	**Examiner**
A61F2/442, 4425, 2002/443, 4455	05/05/2023	CN
A61F2/442, 4425, 2002/443, 4455	07/05/2023	CN
A61F2/442, 4425, 2002/443, 4455	01/11/2024	CN
A61F2/442, 4425, 2002/443, 4455	02/02/2024	CN

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**
623	17.11-17.16	05/05/2023	CN
606	246-249	05/05/2023	CN

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	Art Unit
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

Search Notes		
Search Notes	**Date**	**Examiner**
Inventor Name Search	05/05/2023	CN
Considered all references in circled areas in PE2E search (see PE2E printout)	05/05/2023	CN
Updated Inventor Name Search	07/05/2023	CN
Considered all references in circled areas in PE2E search (see PE2E printout)	07/05/2023	CN
Updated Inventor Name Search	01/11/2024	CN
Considered all references in circled areas in PE2E search (see PE2E printout)	01/11/2024	CN
Updated Inventor Name Search	01/11/2024	CN
Updated Inventor Name Search	02/02/2024	CN
Considered all references in circled areas in PE2E search (see PE2E printout)	02/02/2024	CN

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
	Interference Search History Printout	07/05/2023	CN
	Interference Search History Printout	02/02/2024	CN

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	**Art Unit**
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

CPC						
Symbol					**Type**	**Version**
A61F	/	2	/	447	F	2013-01-01
A61B	/	17	/	0642	I	2013-01-01
A61F	/	2	/	4611	I	2013-01-01
A61B	/	17	/	7064	I	2013-01-01
A61F	/	2002	/	30261	A	2013-01-01
A61F	/	2002	/	30266	A	2013-01-01
A61F	/	2002	/	30281	A	2013-01-01
A61F	/	2002	/	30471	A	2013-01-01
A61F	/	2002	/	30525	A	2013-01-01
A61F	/	2002	/	30538	A	2013-01-01
A61F	/	2002	/	30556	A	2013-01-01
A61B	/	17	/	86	A	2013-01-01
A61B	/	2017	/	922	A	2013-01-01
A61F	/	2002	/	2835	A	2013-01-01
A61F	/	2002	/	30387	A	2013-01-01
A61F	/	2002	/	30448	A	2013-01-01
A61F	/	2002	/	30507	A	2013-01-01
A61F	/	2002	/	3055	A	2013-01-01
A61F	/	2002	/	30579	A	2013-01-01
A61F	/	2002	/	30604	A	2013-01-01
A61F	/	2002	/	30772	A	2013-01-01
A61F	/	2002	/	30878	A	2013-01-01
A61F	/	2002	/	448	A	2013-01-01
A61F	/	2002	/	4627	A	2013-01-01
A61F	/	2002	/	4681	A	2013-01-01
A61F	/	2002	/	4687	A	2013-01-01
A61F	/	2220	/	0025	A	2013-01-01
A61F	/	2220	/	005	A	2013-01-01
A61F	/	2230	/	0015	A	2013-01-01
A61F	/	2250	/	0007	A	2013-01-01
A61B	/	17	/	8875	A	2013-01-01

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	02 February 2024	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	21	
/EDUARDO C ROBERT/ Supervisory Patent Examiner, Art Unit 3773	06 February 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	21	6C

U.S. Patent and Trademark Office — Part of Paper No.: 20240201

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	**Art Unit**
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

CPC							
Symbol						**Type**	**Version**
A61B	/	2017	/	0256		A	2013-01-01
A61F	/	2002	/	30495		A	2013-01-01
A61F	/	2002	/	30593		A	2013-01-01

CPC Combination Sets								
Symbol						**Type**	**Set**	**Ranking**	**Version**
	/		/						

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	02 February 2024	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	21	
/EDUARDO C ROBERT/ Supervisory Patent Examiner, Art Unit 3773	06 February 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	21	6C

U.S. Patent and Trademark Office — Part of Paper No.: 20240201

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	**Art Unit**
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

INTERNATIONAL CLASSIFICATION				
CLAIMED				
A61F	/	2	/	44

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
623	17.15

CROSS REFERENCES(S)						
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**					

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	02 February 2024	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	21	
/EDUARDO C ROBERT/ Supervisory Patent Examiner, Art Unit 3773	06 February 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	21	6C

U.S. Patent and Trademark Office — Part of Paper No.: 20240201

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	17/408,068	Moskowitz et al.
	Examiner	**Art Unit**
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIMS

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		10		19	11	28	18	37						
	2		11		20	12	29	19	38						
	3		12	1	21	4	30	20	39						
	4		13	2	22	5	31	21	40						
	5		14	8	23	6	32	7	41						
	6		15	9	24	14	33	13	42						
	7		16		25	15	34								
	8		17	3	26	16	35								
	9		18	10	27	17	36								

/CHRISTINA NEGRELLIRODRIGUEZ/ Examiner, Art Unit 3773	02 February 2024	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	21	
/EDUARDO C ROBERT/ Supervisory Patent Examiner, Art Unit 3773	06 February 2024	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	21	6C

U.S. Patent and Trademark Office Part of Paper No.: 20240201

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/408,068	Moskowitz et al.
	Examiner	Art Unit
	CHRISTINA NEGRELLI-RODRIGUEZ	3773

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

CLAIMS

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	05/05/2023	07/05/2023	01/11/2024	02/02/2024					
	1	-	-	-	-					
	2	-	-	-	-					
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	18	-	-	-	-					
	19	-	-	-	-					
	20	-	-	-	-					
1	21	✓	=	✓	=					
2	22	✓	=	O	=					
8	23	O	=	O	=					
9	24	O	=	O	=					
	25	O	=	O	-					
3	26	O	=	O	=					
10	27	O	=	O	=					
11	28	O	=	O	=					
12	29	O	=	O	=					
4	30	✓	=	O	=					
5	31	O	=	O	=					
6	32	O	=	O	=					
14	33	O	=	O	=					
15	34	O	=	O	=					
16	35	O	=	O	=					
17	36	✓	=	=	=					
18	37	✓	=	=	=					
19	38	✓	=	=	=					
20	39	✓	=	=	=					
21	40	✓	=	=	=					
7	41				=					
13	42				=					

Last Name: Moskowitz
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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
11/737,846	7854765	250	04/20/2007	MOSKOWITZ, Mosheh T.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
11/943,334	8535379	150	11/20/2007	MOSKOWITZ, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
12/347,990	7951180	250	12/31/2008	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
12/846,822	[]	160	07/29/2010	MOSKOWITZ, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
12/945,835	9492282	250	11/13/2010	MOSKOWITZ, Mosheh T.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
12/983,107	9901455	150	12/31/2010	MOSKOWITZ, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
13/084,543	8353913	150	04/11/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/101,129	8784450	150	05/04/2011	MOSKOWITZ, Mosheh T.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
13/101,135	9675385	150	05/04/2011	MOSKOWITZ, Mosheh T.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
13/108,982	9005293	150	05/16/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,150	9867719	150	08/15/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,157	9889022	150	08/15/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,162	9895238	150	08/15/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION

Last Name: Moskowitz
First Name: Mosheh

Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/210,168	9907674	150	08/15/2011	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/596,038	9801728	250	08/27/2012	MOSKOWITZ, Mosheh T.	TOOLS FOR IMPLANTATION AND EXTRACTION OF ARTICIAL DISCS
13/621,243	[]	160	09/15/2012	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
13/741,361	9301854	150	01/14/2013	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/893,326	9056018	150	05/13/2013	MOSKOWITZ, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
14/049,743	10842357	150	10/09/2013	MOSKOWITZ, Mosheh T.	ENDOSCOPIC SURGICAL SYSTEM
14/063,197	9848993	150	10/25/2013	MOSKOWITZ, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
14/257,650	9622875	150	04/21/2014	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
14/299,711	10016225	150	06/09/2014	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
14/336,909	[]	160	07/21/2014	MOSKOWITZ, Mosheh T.	CERVICAL SPINOUS PROCESS STAPLE
14/337,210	10098672	150	07/21/2014	MOSKOWITZ, Mosheh T.	CERVICAL SPINOUS PROCESS STAPLE
14/460,330	[]	161	08/14/2014	MOSKOWITZ, Mosheh T.	SYSTEMS AND APPARATUSES FOR IMPROVED VISUALIZATION OF ENDOSCOPIC IMAGES
14/685,374	[]	160	04/13/2015	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION

Last Name: Moskowitz
First Name: Mosheh

Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
14/739,327	9867712	250	06/15/2015	MOSKOWITZ, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/054,926	9848998	150	02/26/2016	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/350,352	10123881	150	11/14/2016	MOSKOWITZ, Mosheh T.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
15/397,198	10098678	150	01/03/2017	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/470,066	[]	160	03/27/2017	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
15/490,107	10064738	150	04/18/2017	MOSKOWITZ, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
11/019,351	7083650	250	12/23/2004	Moskowitz, Mosheh	ARTIFICIAL EXPANSILE TOTAL LUMBAR AND THORACIC DISCS FOR POSTERIOR PLACEMENT WITHOUT SUPPLEMENTAL INSTRUMENTATION AND ITS ADAPTATION FOR ANTERIOR PLACEMENT OF ARTIFICIAL CERVICAL, THORACIC AND LUMBAR DISCS
15/678,401	10238505	150	08/16/2017	Moskowitz, Mosheh	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
09/849,521	[]	161	05/07/2001	Moskowitz, Mosheh T.	Hands free umbrella
10/964,633	[]	161	10/15/2004	Moskowitz, Mosheh T.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs
11/208,644	7704279	250	08/23/2005	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION

Last Name: Moskowitz
First Name: Mosheh

Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
11/487,415	7854766	250	07/17/2006	Moskowitz, Mosheh T.	ARTIFICIAL TOTAL LUMBAR DISC FOR UNILATERAL SAFE AND SIMPLE POSTERIOR PLACEMENT IN THE LUMBAR SPINE, AND REMOVABLE BIFUNCTIONAL SCREW WHICH DRIVES VERTICAL SLIDING EXPANSILE PLATE EXPANSION, AND INTERPLATE WIDENING,AND ANGLED TRACTION SPIKES
11/536,815	7846188	250	09/29/2006	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
11/684,787	8251891	250	03/12/2007	Moskowitz, Mosheh T.	TOTALLY WIRELESS ELECTRONICALLY EMBEDDED ACTION-ENDED ENDOSCOPE UTILIZING DIFFERENTIAL DIRECTIONAL ILLUMINATION WITH DIGITALLY CONTROLLED MIRRORS AND/OR PRISMS
11/842,855	7942903	150	08/21/2007	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
12/054,335	7972363	150	03/24/2008	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
12/471,340	8734516	150	05/22/2009	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
12/471,345	8257370	250	05/22/2009	Moskowitz, Mosheh T.	POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLES, STAPLING GUNS, AND DEVICES FOR SPINAL FUSION
12/868,451	8747444	250	08/25/2010	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
12/889,328	10130493	150	09/23/2010	Moskowitz, Mosheh T.	ARTIFICIAL TOTAL LUMBAR DISC FOR UNILATERAL SAFE AND SIMPLE POSTERIOR PLACEMENT IN THE LUMBAR SPINE, AND REMOVEABLE BIFUNCTIONAL SCREW WHICH DRIVES VERTICAL SLIDING EXPANSILE PLATE EXPANSION, AND INTERPLATE WIDENING, AND ANGLED TRACTION SPIKES
12/957,776	9888918	250	12/01/2010	Moskowitz, Mosheh T.	HORIZONTAL-TRANSVERTEBRAL CURVILINEAR NAIL-SCREWS WITH INTER-LOCKING RIGID OR JOINTED FLEXIBLE RODS FOR SPINAL FUSION

Last Name: Moskowitz
First Name: Mosheh

Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/093,812	9924940	150	04/25/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
13/103,994	9603713	150	05/09/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
13/401,829	9744052	150	02/21/2012	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,323	9814601	150	03/12/2012	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,335	9532821	150	03/12/2012	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/693,594	10149703	150	09/01/2017	Moskowitz, Mosheh T.	CERVICAL SPINOUS PROCESS STAPLE
15/724,015	10695187	150	10/03/2017	Moskowitz, Mosheh T.	HAND MANIPULATED ENDOSCOPIC MEDICAL DEVICE
15/791,484	10376383	150	10/24/2017	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/820,232	10016284	150	11/21/2017	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/862,016	10028740	150	01/04/2018	Moskowitz, Mosheh T.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
15/870,406	10610371	150	01/12/2018	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/894,471	10390969	150	02/12/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/896,130	10076367	150	02/14/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
15/904,617	10022238	150	02/26/2018	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT

Last Name: Moskowitz
First Name: Mosheh

Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
15/934,614	10537367	150	03/23/2018	Moskowitz, Mosheh T.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/934,622	10251643	150	03/23/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
15/944,117	10537442	150	04/03/2018	Moskowitz, Mosheh T.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/944,221	10376376	150	04/03/2018	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/976,340	10307268	150	05/10/2018	Moskowitz, Mosheh T.	INTERVERTEBRAL EXPANDABLE IMPLANT
16/018,354	10376386	150	06/26/2018	Moskowitz, Mosheh T.	SPINAL STAPLE
16/018,798	10369003	250	06/26/2018	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
16/018,904	10238383	150	06/26/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
16/025,667	10426633	150	07/02/2018	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/034,545	11116642	150	07/13/2018	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/042,163	10258329	150	07/23/2018	Moskowitz, Mosheh T.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/100,410	10603183	150	08/10/2018	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/134,364	10952867	150	09/18/2018	Moskowitz, Mosheh T.	Electronically Assisted Medical Device
16/160,824	10842542	150	10/15/2018	Moskowitz, Mosheh T.	SPINAL BONE FUSION SYSTEM
16/160,937	10722274	150	10/15/2018	Moskowitz, Mosheh T.	Cervical Spinous Process Staple
16/194,976	11135072	150	11/19/2018	Moskowitz, Mosheh T.	ARTIFICIAL DISC SYSTEM
16/280,684	10478319	150	02/20/2019	Moskowitz, Mosheh T.	SYSTEM WITH TOOL ASSEMBLY AND EXPANDABLE SPINAL IMPLANT

Last Name: Moskowitz
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Examiner: NEGRELLIRODRIGUE, CHRISTINA

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16/362,152	10952723	150	03/22/2019	Moskowitz, Mosheh T.	ARTIFICIAL INTERVERTEBRAL IMPLANT
16/362,294	10925753	150	03/22/2019	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/384,232	[]	161	04/15/2019	Moskowitz, Mosheh T.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/532,033	11141288	150	08/05/2019	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/587,993	11096797	150	09/30/2019	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/673,806	[]	93	11/04/2019	Moskowitz, Mosheh T.	SYSTEMS AND METHODS FOR AUTONOMOUS ROBOTIC SURGERY
16/744,716	11357551	150	01/16/2020	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
16/744,755	11376136	150	01/16/2020	Moskowitz, Mosheh T.	EXPANDABLE SPINAL IMPLANT AND TOOL SYSTEM
16/829,246	11229525	150	03/25/2020	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/841,355	11478359	150	04/06/2020	Moskowitz, Mosheh T.	ARTIFICIAL DISC SYSTEM
16/952,241	11759243	150	11/19/2020	Moskowitz, Mosheh T.	SPINAL BONE FUSION SYSTEM
16/953,797	[]	71	11/20/2020	Moskowitz, Mosheh T.	Endoscopic Surgical System
17/129,149	11083591	150	12/21/2020	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/180,021	[]	100	02/19/2021	Moskowitz, Mosheh T.	SPINAL FUSION IMPLANT
17/181,706	[]	41	02/22/2021	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/208,640	11864755	150	03/22/2021	Moskowitz, Mosheh T.	ARTIFICIAL EXPANDABLE IMPLANT SYSTEMS
17/208,669	11491021	150	03/22/2021	Moskowitz, Mosheh T.	ELECTRONICALLY ASSISTED MEDICAL DEVICE
17/393,672	11806244	150	08/04/2021	Moskowitz, Mosheh T.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/408,068	[]	71	08/20/2021	Moskowitz, Mosheh T.	EXPANDABLE INTERVERTEBRAL DEVICE
17/471,667	[]	30	09/10/2021	Moskowitz, Mosheh T.	3-D PRINTED SPINAL IMPLANT
17/487,360	11771567	150	09/28/2021	Moskowitz, Mosheh T.	ARTIFICIAL DISC SYSTEM

Last Name: Moskowitz
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17/492,996	[]	30	10/04/2021	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/577,722	[]	30	01/18/2022	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
17/681,231	11452619	150	02/25/2022	Moskowitz, Mosheh T.	ARTIFICIAL DISC SYSTEM
17/706,873	11903849	150	03/29/2022	Moskowitz, Mosheh T.	INTERVERTEBRAL IMPLANT AND TOOL ASSEMBLY
17/752,330	[]	30	05/24/2022	Moskowitz, Mosheh T.	Intervertebral spinal implant systems
17/981,686	[]	93	11/07/2022	Moskowitz, Mosheh T.	ELECTRONICALLY ASSISTED MEDICAL DEVICE
18/372,914	[]	30	09/26/2023	Moskowitz, Mosheh T.	ASSISTIVE DEVICE AND METHOD
60/208,070	[]	159	05/31/2000	Moskowitz, Mosheh T.	Hands free umbrella
60/670,231	[]	159	04/12/2005	Moskowitz, Mosheh T.	Stand-alone expansile intervertebral body fusion device utilizing bi-directional fixating transvertebral body screws or pneumatically driven expansile spiked telescoping cylinders with optional motion-calibrating interarticulating joint stapling device
60/673,761	[]	159	04/22/2005	Moskowitz, Mosheh T.	Spinal disc microchip implant providing dynamic disc motion in response to variable axial loading forces
60/788,720	[]	159	04/04/2006	Moskowitz, Mosheh T.	Posteriorly placed total lumbar atrificial disc with novel removeable bifunctional screw which drives vertical sliding expansile plate expansion, and interplate widening, and novel angled traction spikes, and interchangeable cores
60/793,329	[]	159	04/20/2006	Moskowitz, Mosheh T.	Electronically controlled artificial intervertebral disc with linear actuation systems and an active closed-loop microchip responding to variable human locomotor activity and spinal motion
61/264,648	[]	159	11/25/2009	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/265,752	[]	159	12/01/2009	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/306,926	[]	159	02/22/2010	Moskowitz, Mosheh T.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/419,679	[]	159	12/03/2010	Moskowitz, Mosheh T.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
61/425,749	[]	159	12/21/2010	Moskowitz, Mosheh T.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
61/445,034	[]	159	02/21/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
61/451,579	[]	159	03/10/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL LEAF SPRING- RATCHET SCREW LOCKING MECHANISM

Last Name: Moskowitz
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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
61/451,582	[]	159	03/10/2011	Moskowitz, Mosheh T.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
61/712,251	[]	159	10/10/2012	Moskowitz, Mosheh T.	ENDOSCOPIC SURGICAL SYSTEM
61/718,707	[]	159	10/25/2012	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/801,783	[]	159	03/15/2013	Moskowitz, Mosheh T.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/866,038	[]	159	08/14/2013	Moskowitz, Mosheh T.	ENDOSCOPIC VIEWING APPARATUSES
62/815,605	[]	159	03/08/2019	Moskowitz, Mosheh T.	Systems and Methods for Autonomous Robotic Surgery
63/411,943	[]	159	09/30/2022	Moskowitz, Mosheh T.	ASSISTIVE DEVICE AND METHOD

Last Name: Sugalski
First Name: Eric

Examiner: NEGRELLIRODRIGUE, CHRISTINA

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11/536,278	8061305	250	09/28/2006	SUGALSKI, ERIC	LEASH HANDLE WITH AN INTEGRATED COMPARTMENT
12/846,822	[]	160	07/29/2010	SUGALSKI, Eric	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
12/983,107	9901455	150	12/31/2010	SUGALSKI, Eric	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
14/063,197	9848993	150	10/25/2013	SUGALSKI, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
14/597,798	9700324	150	01/15/2015	SUGALSKI, Eric	SURGICAL CLIP APPLICATOR
16/205,674	11191939	150	11/30/2018	SUGALSKI, Eric	STABILIZING CONNECTOR DEVICES FOR VASCULAR ACCESS AND METHODS OF USING THE SAME
29/537,472	[]	161	08/26/2015	SUGALSKI, Eric	WALL MOUNTED PANEL FOR PURIFICATION
61/928,171	[]	159	01/16/2014	SUGALSKI, Eric	SURGICAL CLIP APPLICATOR
62/238,858	[]	159	10/08/2015	SUGALSKI, Eric	WALL PURIFICATION SYSTEMS, METHODS AND KITS
62/631,208	[]	159	02/15/2018	SUGALSKI, Eric	STABILIZING CONNECTOR DEVICES FOR VASCULAR ACCESS AND METHODS OF USING THE SAME
10/551,169	7228589	150	09/28/2005	Sugalski, Eric	UNATTENDED SPOT CLEANING APPARATUS
10/603,568	[]	161	06/25/2003	Sugalski, Eric	Removable light
11/393,373	[]	161	03/30/2006	Sugalski, Eric	Liquid dispensing devices including an attached cleaning element
11/455,952	7481406	150	06/20/2006	Sugalski, Eric	PLASTIC PEGBOARD ASSEMBLY
12/144,338	[]	161	06/23/2008	Sugalski, Eric	GRILL LIGHT WITH AUTOMATIC SWITCH
12/349,019	[]	161	01/06/2009	Sugalski, Eric	Plastic Pegboard Assembly
12/565,367	8545513	150	09/23/2009	Sugalski, Eric	Uterine Manipulator Assemblies and Related Components and Methods
12/842,327	8663270	150	07/23/2010	Sugalski, Eric	Jaw Movement Mechanism and Method for a Surgical Tool
12/842,399	[]	161	07/23/2010	Sugalski, Eric	Surgical Tool with Crossbar Lever
13/138,209	10933191	150	02/01/2012	Sugalski, Eric	INFUSION SET
13/613,927	10018364	150	09/13/2012	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
13/614,068	9255712	150	09/13/2012	Sugalski, Eric	OVEN APPLIANCE WITH DOORS HAVING A TONGUE AND GROOVE INTERFACE
13/614,274	9651265	150	09/13/2012	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
13/614,482	8944536	150	09/13/2012	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/013,216	8740916	150	08/29/2013	Sugalski, Eric	Uterine Manipulator Assemblies and Related Components and Methods
14/578,687	9188346	150	12/22/2014	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/727,896	9562818	250	06/02/2015	Sugalski, Eric	Manipulation Device with Force Read-Out
14/874,766	9328929	150	10/05/2015	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/974,896	9900735	150	12/18/2015	Sugalski, Eric	COMMUNICATION SYSTEMS
15/083,329	9494323	150	03/29/2016	Sugalski, Eric	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/291,223	9644848	150	10/12/2016	Sugalski, Eric	AN OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/499,092	9890957	150	04/27/2017	Sugalski, Eric	Oven Appliance with Dual Opening and Closing Doors

Last Name: Sugalski
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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
15/820,232	10016284	150	11/21/2017	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/892,461	10508817	150	02/09/2018	Sugalski, Eric	Oven Appliance with Dual Opening and Closing Doors
15/904,617	10022238	150	02/26/2018	Sugalski, Eric	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/025,667	10426633	150	07/02/2018	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/034,545	11116642	150	07/13/2018	Sugalski, Eric	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/079,701	11253013	150	08/24/2018	Sugalski, Eric	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
16/587,993	11096797	150	09/30/2019	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
17/167,565	[]	61	02/04/2021	Sugalski, Eric	INFUSION SET
17/167,651	11690953	150	02/04/2021	Sugalski, Eric	INFUSION SET
17/167,692	11712517	150	02/04/2021	Sugalski, Eric	INFUSION SET
17/408,068	[]	71	08/20/2021	Sugalski, Eric	EXPANDABLE INTERVERTEBRAL DEVICE
17/471,667	[]	30	09/10/2021	Sugalski, Eric	3-D PRINTED SPINAL IMPLANT
17/512,452	[]	41	10/27/2021	Sugalski, Eric	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
17/517,368	[]	30	11/02/2021	Sugalski, Eric	Stabilizing Connector Devices for Vascular Access and Methods of Using the Same
60/667,187	[]	159	03/30/2005	Sugalski, Eric	Liquid dispensing devices including an attached cleaning element
60/721,553	[]	159	09/29/2005	Sugalski, Eric	Leash handle with integrated compartment
60/757,740	[]	159	01/09/2006	Sugalski, Eric	Pet perch
61/108,211	[]	159	10/24/2008	Sugalski, Eric	Uterine Manipulator Assemblies and Related Components and Methods
61/202,019	[]	159	01/21/2009	Sugalski, Eric	Infusion set
61/718,707	[]	159	10/25/2012	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/801,783	[]	159	03/15/2013	Sugalski, Eric	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
62/301,157	[]	159	02/29/2016	Sugalski, Eric	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
62/592,684	[]	159	11/30/2017	Sugalski, Eric	STABILIZING CONNECTOR DEVICES FOR VASCULAR ACCESS AND METHODS OF USING THE SAME
60/845,730	[]	159	09/19/2006	Sugalski, Eric C.	Stroller toy apparatus
63/586,260	[]	20	09/28/2023	Sugalski, Eric C.	TRANSDUCER ARRAY HAVING SUBARRAYS AND METHODS OF PRODUCTION AND USE THEREOF

Last Name: Sugalski Examiner: NEGRELLIRODRIGUE, CHRISTINA

First Name: Eric

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
10/933,381	7462187	150	09/03/2004	Sugalski, Eric Christopher	POWERED SURGICAL APPARATUS, METHOD OF MANUFACTURING POWERED SURGICAL APPARATUS, AND METHOD OF USING POWERED SURGICAL APPARATUS
11/045,135	8454640	150	01/31/2005	Sugalski, Eric Christopher	Powered surgical apparatus, method of manufacturing powered surgical apparatus, and method of using powered surgical apparatus
11/045,138	[]	161	01/31/2005	Sugalski, Eric Christopher	Powered surgical apparatus, method of manufacturing powered surgical apparatus, and method of using powered surgical apparatus
11/045,255	7473263	150	01/31/2005	Sugalski, Eric Christopher	POWERED SURGICAL APPARATUS, METHOD OF MANUFACTURING POWERED SURGICAL APPARATUS, AND METHOD OF USING POWERED SURGICAL APPARATUS
11/045,256	7799044	250	01/31/2005	Sugalski, Eric Christopher	POWERED SURGICAL APPARATUS, METHOD OF MANUFACTURING POWERED SURGICAL APPARATUS, AND METHOD OF USING POWERED SURGICAL APPARATUS
11/508,063	8616932	150	08/22/2006	Sugalski, Eric Christopher	Collapsible umbrella gym
11/711,787	7416539	150	02/28/2007	Sugalski, Eric Christopher	POWERED SURGICAL APPARATUS, METHOD OF MANUFACTURING POWERED SURGICAL APPARATUS, AND METHOD OF USING POWERED SURGICAL APPARATUS
12/007,756	[]	161	01/15/2008	Sugalski, Eric Christopher	Powered surgical apparatus, method of manufacturing powered surgical apparatus, and method of using powered surgical apparatus
16/834,953	[]	161	03/30/2020	Sugalski, Eric Christopher	CONTROLLED-DOSE MEDICINAL LIQUID VAPING DEVICE
60/366,224	[]	159	03/22/2002	Sugalski, Eric Christopher	Powered surgical apparatus, method of manufacturing powered surgical apparatus, and method of using powered surgical apparatus
62/825,935	[]	159	03/29/2019	Sugalski, Eric Christopher	CONTROLLED-DOSE MEDICINAL OIL VAPING DEVICE

*all references in circled areas have been considered

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	1	"17408068"	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 10:35 AM
L2	5	"16025667"	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 10:59 AM
L3	1504	(expand$4) AND 606/246-249.ccls.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:40 PM
L4	1093	(expand$4) AND 623/17.11-17.16	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:40 PM
L6	4486	(expand$4) AND A61F2/442.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:40 PM
L7	1962	(expand$4) AND A61F2/4425.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:40 PM
L8	1121	(expand$4) AND A61F2002/443.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:41 PM
L9	4824	(expand$4) AND A61F2/4455.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/05/05 12:41 PM
L10	45	(Moskowitz Family).as.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/05/05 12:41 PM
L11	326	(Ahmnon NEAR2 Moskowitz).in. OR (Mosheh NEAR2 Moskowitz).in. OR (Pablo NEAR2 Alvarado).in. OR (Eric NEAR2 Sugalski).in. OR (Nathan NEAR2 Moskowitz).in. OR (David NEAR2 Schoon).in.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/05/05 12:44 PM
L12	1	"17408068"	(US-PGPUB; USPAT)	OR	ON	ON	2023/07/05 02:50 PM
L13	18	"10426633"	(US-PGPUB; USPAT)	OR	ON	ON	2023/07/05 02:52 PM
L14	1	"10426633".pn.	(US-PGPUB; USPAT)	OR	ON	ON	2023/07/05 02:52 PM
L15	13990	A61F2/442.cpc. OR A61F2/4425.cpc. OR A61F2002/443.cpc. OR A61F2/4455.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2023/07/05 03:31 PM
L16	119	L15 AND @pd>"20230505"	(US-PGPUB; USPAT)	OR	ON	ON	2023/07/05 03:31 PM
L17	45	(Moskowitz Family).as.	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/07/05 03:32 PM
L18	327	(Ahmnon NEAR2 Moskowitz).in. OR (Mosheh NEAR2 Moskowitz).in. OR	(US-PGPUB; USPAT)	ADJ	ON	ON	2023/07/05 03:33 PM

		(Pablo NEAR2 Alvarado).in. OR (Eric NEAR2 Sugalski).in. OR (Nathan NEAR2 Moskowitz).in. OR (David NEAR2 Schoon).in.					
L21	47	"20110319997"	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/11 10:27 AM
L22	1	"10016284".pn.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/11 12:58 PM
L23	14359	A61F2/442.cpc. OR A61F2/4425.cpc. OR A61F2002/443.cpc. OR A61F2/4455.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/11 02:44 PM
L24	347	L23 AND @pd>"20230705"	(US-PGPUB; USPAT)	OR	ON	ON	2024/01/11 02:45 PM
L25	335	(Ahmnon NEAR2 Moskowitz).in. OR (Mosheh NEAR2 Moskowitz).in. OR (Pablo NEAR2 Alvarado).in. OR (Eric NEAR2 Sugalski).in. OR (Nathan NEAR2 Moskowitz).in. OR (David NEAR2 Schoon).in.	(US-PGPUB; USPAT)	ADJ	ON	ON	2024/01/11 02:45 PM
L26	49	(Moskowitz Family).as.	(US-PGPUB; USPAT)	ADJ	ON	ON	2024/01/11 02:45 PM
L27	336	(Ahmnon NEAR2 Moskowitz).in. OR (Mosheh NEAR2 Moskowitz).in. OR (Pablo NEAR2 Alvarado).in. OR (Eric NEAR2 Sugalski).in. OR (Nathan NEAR2 Moskowitz).in. OR (David NEAR2 Schoon).in.	(US-PGPUB; USPAT)	ADJ	ON	ON	2024/02/01 10:49 AM
L28	49	(Moskowitz Family).as.	(US-PGPUB; USPAT)	ADJ	ON	ON	2024/02/01 10:49 AM
L29	14400	A61F2/442.cpc. OR A61F2/4425.cpc. OR A61F2002/443.cpc. OR A61F2/4455.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 07:56 AM
L30	35	L29 AND @pd>"20240111"	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/02 07:56 AM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp

N8	0	(expandable intervertebral device) AND (angled wedge surface) AND (second wedge position) AND (angled housing surface shaped to engage angled wedge surface).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2024/01/11 02:45 PM
N9	0	(expandable intervertebral device) AND (angled wedge surface) AND (second wedge position) AND (angled housing surface shaped to engage angled wedge surface).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2024/01/11 02:45 PM
N10	0	(expandable intervertebral device) AND (angled wedge surface) AND (second wedge position) AND (angled housing surface shaped to engage angled wedge surface).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2024/02/02 08:09 AM
N11	0	(expandable intervertebral device) AND (angled wedge surface) AND (second wedge position) AND (angled housing surface shaped to engage angled wedge surface).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2024/02/02 08:09 AM

Last Name: Alvarado
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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/210,168	9907674	150	08/15/2011	ALVARADO, Pablo A Valdivia Y	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/741,361	9301854	150	01/14/2013	ALVARADO, Pablo A Valdivia Y	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/893,326	9056018	150	05/13/2013	ALVARADO, Pablo A Valdivia Y	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/054,926	9848998	150	02/26/2016	ALVARADO, Pablo A Valdivia Y	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/084,543	8353913	150	04/11/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/108,982	9005293	150	05/16/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,150	9867719	150	08/15/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,157	9889022	150	08/15/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,162	9895238	150	08/15/2011	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/401,829	9744052	150	02/21/2012	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,335	9532821	150	03/12/2012	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
14/063,197	9848993	150	10/25/2013	ALVARADO, Pablo A. Valdivia Y.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION

Last Name: Alvarado
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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
14/685,374	[]	160	04/13/2015	ALVARADO, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
14/739,327	9867712	250	06/15/2015	ALVARADO, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
61/445,034	[]	159	02/21/2011	Alvarado, Pablo A. Valdivia Y	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
61/451,579	[]	159	03/10/2011	Alvarado, Pablo A. Valdivia Y	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL LEAF SPRING- RATCHET SCREW LOCKING MECHANISM
61/451,582	[]	159	03/10/2011	Alvarado, Pablo A. Valdivia Y	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
61/718,707	[]	159	10/25/2012	Alvarado, Pablo A. Valdivia Y	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/801,783	[]	159	03/15/2013	Alvarado, Pablo A. Valdivia Y	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
11/842,855	7942903	150	08/21/2007	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/418,323	9814601	150	03/12/2012	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/678,401	10238505	150	08/16/2017	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/791,484	10376383	150	10/24/2017	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/820,232	10016284	150	11/21/2017	Alvarado, Pablo A. Valdivia Y.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/870,406	10610371	150	01/12/2018	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT

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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
15/894,471	10390969	150	02/12/2018	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/944,117	10537442	150	04/03/2018	Alvarado, Pablo A. Valdivia Y.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/944,221	10376376	150	04/03/2018	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/976,340	10307268	150	05/10/2018	Alvarado, Pablo A. Valdivia Y.	INTERVERTEBRAL EXPANDABLE IMPLANT
16/018,354	10376386	150	06/26/2018	Alvarado, Pablo A. Valdivia Y.	SPINAL STAPLE
16/018,798	10369003	250	06/26/2018	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
16/025,667	10426633	150	07/02/2018	Alvarado, Pablo A. Valdivia Y.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/100,410	10603183	150	08/10/2018	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/160,824	10842542	150	10/15/2018	Alvarado, Pablo A. Valdivia Y.	SPINAL BONE FUSION SYSTEM
16/280,684	10478319	150	02/20/2019	Alvarado, Pablo A. Valdivia Y.	SYSTEM WITH TOOL ASSEMBLY AND EXPANDABLE SPINAL IMPLANT
16/362,294	10925753	150	03/22/2019	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/532,033	11141288	150	08/05/2019	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/587,993	11096797	150	09/30/2019	Alvarado, Pablo A. Valdivia Y.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/744,755	11376136	150	01/16/2020	Alvarado, Pablo A. Valdivia Y.	EXPANDABLE SPINAL IMPLANT AND TOOL SYSTEM
16/829,246	11229525	150	03/25/2020	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/841,355	11478359	150	04/06/2020	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL DISC SYSTEM

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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
16/952,241	11759243	150	11/19/2020	Alvarado, Pablo A. Valdivia Y.	SPINAL BONE FUSION SYSTEM
17/129,149	11083591	150	12/21/2020	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/181,706	[]	41	02/22/2021	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/393,672	11806244	150	08/04/2021	Alvarado, Pablo A. Valdivia Y.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/408,068	[]	71	08/20/2021	Alvarado, Pablo A. Valdivia Y.	EXPANDABLE INTERVERTEBRAL DEVICE
17/492,996	[]	30	10/04/2021	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/577,722	[]	30	01/18/2022	Alvarado, Pablo A. Valdivia Y.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
17/706,873	11903849	150	03/29/2022	Alvarado, Pablo A. Valdivia Y.	INTERVERTEBRAL IMPLANT AND TOOL ASSEMBLY

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/596,038	9801728	250	08/27/2012	MOSKOWITZ, Nathan	TOOLS FOR IMPLANTATION AND EXTRACTION OF ARTICIAL DISCS
11/943,334	8535379	150	11/20/2007	MOSKOWITZ, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
12/347,990	7951180	250	12/31/2008	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
12/846,822	[]	160	07/29/2010	MOSKOWITZ, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
12/983,107	9901455	150	12/31/2010	MOSKOWITZ, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
13/084,543	8353913	150	04/11/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/101,129	8784450	150	05/04/2011	MOSKOWITZ, Nathan C.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
13/108,982	9005293	150	05/16/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,150	9867719	150	08/15/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,157	9889022	150	08/15/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,162	9895238	150	08/15/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,168	9907674	150	08/15/2011	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/621,243	[]	160	09/15/2012	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/741,361	9301854	150	01/14/2013	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/893,326	9056018	150	05/13/2013	MOSKOWITZ, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
14/049,743	10842357	150	10/09/2013	MOSKOWITZ, Nathan C.	ENDOSCOPIC SURGICAL SYSTEM
14/063,197	9848993	150	10/25/2013	MOSKOWITZ, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
14/257,650	9622875	150	04/21/2014	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
14/299,711	10016225	150	06/09/2014	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
14/336,909	[]	160	07/21/2014	MOSKOWITZ, Nathan C.	CERVICAL SPINOUS PROCESS STAPLE
14/337,210	10098672	150	07/21/2014	MOSKOWITZ, Nathan C.	CERVICAL SPINOUS PROCESS STAPLE
14/460,330	[]	161	08/14/2014	MOSKOWITZ, Nathan C.	SYSTEMS AND APPARATUSES FOR IMPROVED VISUALIZATION OF ENDOSCOPIC IMAGES
14/685,374	[]	160	04/13/2015	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
14/739,327	9867712	250	06/15/2015	MOSKOWITZ, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/054,926	9848998	150	02/26/2016	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/350,352	10123881	150	11/14/2016	MOSKOWITZ, Nathan C.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS

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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
15/397,198	10098678	150	01/03/2017	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/470,066	[]	160	03/27/2017	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
15/490,107	10064738	150	04/18/2017	MOSKOWITZ, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
11/487,415	7854766	250	07/17/2006	Moskowitz, Nathan	ARTIFICIAL TOTAL LUMBAR DISC FOR UNILATERAL SAFE AND SIMPLE POSTERIOR PLACEMENT IN THE LUMBAR SPINE, AND REMOVABLE BIFUNCTIONAL SCREW WHICH DRIVES VERTICAL SLIDING EXPANSILE PLATE EXPANSION, AND INTERPLATE WIDENING,AND ANGLED TRACTION SPIKES
11/684,787	8251891	250	03/12/2007	Moskowitz, Nathan	TOTALLY WIRELESS ELECTRONICALLY EMBEDDED ACTION-ENDED ENDOSCOPE UTILIZING DIFFERENTIAL DIRECTIONAL ILLUMINATION WITH DIGITALLY CONTROLLED MIRRORS AND/OR PRISMS
12/868,451	8747444	250	08/25/2010	Moskowitz, Nathan	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
12/889,328	10130493	150	09/23/2010	Moskowitz, Nathan	ARTIFICIAL TOTAL LUMBAR DISC FOR UNILATERAL SAFE AND SIMPLE POSTERIOR PLACEMENT IN THE LUMBAR SPINE, AND REMOVEABLE BIFUNCTIONAL SCREW WHICH DRIVES VERTICAL SLIDING EXPANSILE PLATE EXPANSION, AND INTERPLATE WIDENING, AND ANGLED TRACTION SPIKES
60/788,720	[]	159	04/04/2006	Moskowitz, Nathan	Posteriorly placed total lumbar atrificial disc with novel removeable bifunctional screw which drives vertical sliding expansile plate expansion, and interplate widening, and novel angled traction spikes, and interchangeable cores
60/793,329	[]	159	04/20/2006	Moskowitz, Nathan	Electronically controlled artificial intervertebral disc with linear actuation systems and an active closed-loop microchip responding to variable human locomotor activity and spinal motion
09/849,521	[]	161	05/07/2001	Moskowitz, Nathan C.	Hands free umbrella
10/964,633	[]	161	10/15/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs

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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
11/019,351	7083650	250	12/23/2004	Moskowitz, Nathan C.	ARTIFICIAL EXPANSILE TOTAL LUMBAR AND THORACIC DISCS FOR POSTERIOR PLACEMENT WITHOUT SUPPLEMENTAL INSTRUMENTATION AND ITS ADAPTATION FOR ANTERIOR PLACEMENT OF ARTIFICIAL CERVICAL, THORACIC AND LUMBAR DISCS
11/208,644	7704279	250	08/23/2005	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
11/536,815	7846188	250	09/29/2006	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
11/737,846	7854765	250	04/20/2007	Moskowitz, Nathan C.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
11/842,855	7942903	150	08/21/2007	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
12/054,335	7972363	150	03/24/2008	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
12/471,340	8734516	150	05/22/2009	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
12/945,835	9492282	250	11/13/2010	Moskowitz, Nathan C.	ELECTRONICALLY CONTROLLED ARTIFICIAL INTERVERTEBRAL DISC WITH MOTOR ASSISTED ACTUATION SYSTEMS
12/957,776	9888918	250	12/01/2010	Moskowitz, Nathan C.	HORIZONTAL-TRANSVERTEBRAL CURVILINEAR NAIL-SCREWS WITH INTER-LOCKING RIGID OR JOINTED FLEXIBLE RODS FOR SPINAL FUSION
13/093,812	9924940	150	04/25/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
13/101,135	9675385	150	05/04/2011	Moskowitz, Nathan C.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
13/103,994	9603713	150	05/09/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
13/401,829	9744052	150	02/21/2012	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,323	9814601	150	03/12/2012	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,335	9532821	150	03/12/2012	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/678,401	10238505	150	08/16/2017	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/693,594	10149703	150	09/01/2017	Moskowitz, Nathan C.	CERVICAL SPINOUS PROCESS STAPLE
15/724,015	10695187	150	10/03/2017	Moskowitz, Nathan C.	HAND MANIPULATED ENDOSCOPIC MEDICAL DEVICE
15/791,484	10376383	150	10/24/2017	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/820,232	10016284	150	11/21/2017	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/862,016	10028740	150	01/04/2018	Moskowitz, Nathan C.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
15/870,406	10610371	150	01/12/2018	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/894,471	10390969	150	02/12/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/896,130	10076367	150	02/14/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION

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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
15/904,617	10022238	150	02/26/2018	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
15/934,614	10537367	150	03/23/2018	Moskowitz, Nathan C.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/934,622	10251643	150	03/23/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
15/944,117	10537442	150	04/03/2018	Moskowitz, Nathan C.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM
15/944,221	10376376	150	04/03/2018	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/976,340	10307268	150	05/10/2018	Moskowitz, Nathan C.	INTERVERTEBRAL EXPANDABLE IMPLANT
16/018,354	10376386	150	06/26/2018	Moskowitz, Nathan C.	SPINAL STAPLE
16/018,798	10369003	250	06/26/2018	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
16/018,904	10238383	150	06/26/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, EXPANSILE INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
16/025,667	10426633	150	07/02/2018	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/034,545	11116642	150	07/13/2018	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/042,163	10258329	150	07/23/2018	Moskowitz, Nathan C.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/100,410	10603183	150	08/10/2018	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/134,364	10952867	150	09/18/2018	Moskowitz, Nathan C.	Electronically Assisted Medical Device
16/160,824	10842542	150	10/15/2018	Moskowitz, Nathan C.	SPINAL BONE FUSION SYSTEM
16/160,937	10722274	150	10/15/2018	Moskowitz, Nathan C.	Cervical Spinous Process Staple
16/194,976	11135072	150	11/19/2018	Moskowitz, Nathan C.	ARTIFICIAL DISC SYSTEM

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
16/280,684	10478319	150	02/20/2019	Moskowitz, Nathan C.	SYSTEM WITH TOOL ASSEMBLY AND EXPANDABLE SPINAL IMPLANT
16/362,152	10952723	150	03/22/2019	Moskowitz, Nathan C.	ARTIFICIAL INTERVERTEBRAL IMPLANT
16/362,294	10925753	150	03/22/2019	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/384,232	[]	161	04/15/2019	Moskowitz, Nathan C.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/532,033	11141288	150	08/05/2019	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/587,993	11096797	150	09/30/2019	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/673,806	[]	93	11/04/2019	Moskowitz, Nathan C.	SYSTEMS AND METHODS FOR AUTONOMOUS ROBOTIC SURGERY
16/744,716	11357551	150	01/16/2020	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS, ZERO-PROFILE HORIZONTAL INTERVERTEBRAL MINIPLATES, TOTAL INTERVERTEBRAL BODY FUSION DEVICES, AND POSTERIOR MOTION-CALIBRATING INTERARTICULATING JOINT STAPLING DEVICE FOR SPINAL FUSION
16/744,755	11376136	150	01/16/2020	Moskowitz, Nathan C.	EXPANDABLE SPINAL IMPLANT AND TOOL SYSTEM
16/829,246	11229525	150	03/25/2020	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/841,355	11478359	150	04/06/2020	Moskowitz, Nathan C.	ARTIFICIAL DISC SYSTEM
16/952,241	11759243	150	11/19/2020	Moskowitz, Nathan C.	SPINAL BONE FUSION SYSTEM
16/953,797	[]	71	11/20/2020	Moskowitz, Nathan C.	Endoscopic Surgical System
17/129,149	11083591	150	12/21/2020	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/180,021	[]	100	02/19/2021	Moskowitz, Nathan C.	SPINAL FUSION IMPLANT
17/181,706	[]	41	02/22/2021	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/208,640	11864755	150	03/22/2021	Moskowitz, Nathan C.	ARTIFICIAL EXPANDABLE IMPLANT SYSTEMS
17/208,669	11491021	150	03/22/2021	Moskowitz, Nathan C.	ELECTRONICALLY ASSISTED MEDICAL DEVICE
17/393,672	11806244	150	08/04/2021	Moskowitz, Nathan C.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/408,068	[]	71	08/20/2021	Moskowitz, Nathan C.	EXPANDABLE INTERVERTEBRAL DEVICE
17/471,667	[]	30	09/10/2021	Moskowitz, Nathan C.	3-D PRINTED SPINAL IMPLANT
17/487,360	11771567	150	09/28/2021	Moskowitz, Nathan C.	ARTIFICIAL DISC SYSTEM

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Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
17/492,996	[]	30	10/04/2021	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/577,722	[]	30	01/18/2022	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
17/681,231	11452619	150	02/25/2022	Moskowitz, Nathan C.	ARTIFICIAL DISC SYSTEM
17/706,873	11903849	150	03/29/2022	Moskowitz, Nathan C.	INTERVERTEBRAL IMPLANT AND TOOL ASSEMBLY
17/752,330	[]	30	05/24/2022	Moskowitz, Nathan C.	Intervertebral spinal implant systems
17/981,686	[]	93	11/07/2022	Moskowitz, Nathan C.	ELECTRONICALLY ASSISTED MEDICAL DEVICE
18/372,914	[]	30	09/26/2023	Moskowitz, Nathan C.	ASSISTIVE DEVICE AND METHOD
60/208,070	[]	159	05/31/2000	Moskowitz, Nathan C.	Hands free umbrella
60/570,098	[]	159	05/12/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement
60/570,837	[]	159	05/14/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation (adaptation for anterior cervical, thoracic and lumbar devices available)
60/572,468	[]	159	05/20/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs
60/573,346	[]	159	05/24/2004	Moskowitz, Nathan C.	Artificial expansible total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs
60/578,319	[]	159	06/10/2004	Moskowitz, Nathan C.	Artificial expansile total lumbar and thoracic discs for posterior placement without supplemental instrumentation and its adaptation for anterior placement of artificial cervical, thoracic and lumbar discs
60/670,231	[]	159	04/12/2005	Moskowitz, Nathan C.	Stand-alone expansile intervertebral body fusion device utilizing bi-directional fixating transvertebral body screws or pneumatically driven expansile spiked telescoping cylinders with optional motion-calibrating interarticulating joint stapling device
60/673,761	[]	159	04/22/2005	Moskowitz, Nathan C.	Spinal disc microchip implant providing dynamic disc motion in response to variable axial loading forces
61/264,648	[]	159	11/25/2009	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/265,752	[]	159	12/01/2009	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/306,926	[]	159	02/22/2010	Moskowitz, Nathan C.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/419,679	[]	159	12/03/2010	Moskowitz, Nathan C.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
61/425,749	[]	159	12/21/2010	Moskowitz, Nathan C.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
61/445,034	[]	159	02/21/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
61/451,579	[]	159	03/10/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL LEAF SPRING- RATCHET SCREW LOCKING MECHANISM
61/451,582	[]	159	03/10/2011	Moskowitz, Nathan C.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
61/712,251	[]	159	10/10/2012	Moskowitz, Nathan C.	ENDOSCOPIC SURGICAL SYSTEM
61/718,707	[]	159	10/25/2012	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/801,783	[]	159	03/15/2013	Moskowitz, Nathan C.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/866,038	[]	159	08/14/2013	Moskowitz, Nathan C.	ENDOSCOPIC VIEWING APPARATUSES
62/815,605	[]	159	03/08/2019	Moskowitz, Nathan C.	Systems and Methods for Autonomous Robotic Surgery
63/411,943	[]	159	09/30/2022	Moskowitz, Nathan C.	ASSISTIVE DEVICE AND METHOD

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Verified and Acknowledged: /CHRISTINA NEGRELLIRODRIGUEZ/ (Examiner's Signature) (Initials)

Title: EXPANDABLE INTERVERTEBRAL DEVICE

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
08/20/2021	623	3773	46440-0020005
RULE			

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CONTINUING DATA

This application is a CON of 16587993 09/30/2019 PAT 11096797

16587993 is a CON of 16025667 07/02/2018 PAT 10426633

16025667 is a CON of 15820232 11/21/2017 PAT 10016284

15820232 is a CON of 14063197 10/25/2013 PAT 9848993

14063197 has PRO of 61801783 03/15/2013

14063197 is a CIP of 13741361 01/14/2013 PAT 9301854

14063197 has PRO of 61718707 10/25/2012

14063197 is a CIP of 13210150 08/15/2011 PAT 9867719

14063197 is a CIP of 13210157 08/15/2011 PAT 9889022

14063197 is a CIP of 13210168 08/15/2011 PAT 9907674

14063197 is a CIP of 13210162 08/15/2011 PAT 9895238

13741361 is a CON of 13108982 05/16/2011 PAT 9005293

13210150 is a CON of 13108982 05/16/2011 PAT 9005293

13210157 is a CON of 13108982 05/16/2011 PAT 9005293

13210162 is a CON of 13108982 05/16/2011 PAT 9005293

13210168 is a CON of 13108982 05/16/2011 PAT 9005293

13210162 is a CON of 13084543 04/11/2011 PAT 8353913

13741361 is a CON of 13084543 04/11/2011 PAT 8353913

13210157 is a CON of 13084543 04/11/2011 PAT 8353913

13210168 is a CON of 13084543 04/11/2011 PAT 8353913

13210150 is a CON of 13084543 04/11/2011 PAT 8353913

13108982 is a CON of 11842855 08/21/2007 PAT 7942903

13084543 is a CON of 11842855 08/21/2007 PAT 7942903

11842855 is a CIP of 11536815 09/29/2006 PAT 7846188

11536815 is a CIP of 11208644 08/23/2005 PAT 7704279

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FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

08/30/2021

**** SMALL ENTITY ****

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APP. #	Patent #	Status	Filing Date	Inventor Name	Title
07/568,908	5054893	250	08/17/1990	SCHOON, DAVID	ELECTRO-OPTIC CELL LINEAR ARRAY
06/045,821	4242565	150	06/05/1979	SCHOON, DAVID J.	THERMAL PRINT HEAD
06/434,189	4541061	150	10/13/1982	SCHOON, DAVID J.	DATA CLOCKING CIRCUITRY FOR A SCANNING APPARATUS
06/470,489	4631726	250	02/28/1983	SCHOON, DAVID J.	LASER DIODE CONTROL CIRCUITRY
06/574,066	4571623	150	01/26/1984	SCHOON, DAVID J.	DATA CLOCKING CIRCUITRY
06/586,204	4630223	250	03/05/1984	SCHOON, DAVID J.	SCANNER AMPLITUDE STABILIZATION SYSTEM
06/589,772	4586057	150	03/15/1984	SCHOON, DAVID J.	COMPENSATION CIRCUITRY FOR A LASER PRINTER USING A SELF-RESONANT SCANNER
06/594,211	4683551	250	03/28/1984	SCHOON, DAVID J.	RAM CLOCK SWITCHING CIRCUITRY FOR A LASER BEAM PRINTER
06/820,231	4686363	250	01/21/1986	SCHOON, DAVID J.	SELF-RESONANT SCANNER BIASING SYSTEM
07/096,959	4857904	250	09/15/1987	SCHOON, DAVID J.	COMBINATION OF TRANSITION-ENCODED FONT INFORMATION FOR GENERATION OF SUPERIMPOSED FONT IMAGES
07/096,960	4847607	250	09/15/1987	SCHOON, DAVID J.	IMAGE GENERATION FROM TRANSITION-ENCODED FONT INFORMATION
07/096,961	4870498	250	09/15/1987	SCHOON, DAVID J.	DECOMPRESSING RUN-LENGTH-ENCODED TO TRANSITION-ENCODED FONT IMAGE INFORMATION IN AN IMAGE GENERATOR
07/542,957	5225851	250	06/25/1990	SCHOON, DAVID J.	BAND IMAGING DEVICE
07/811,797	[]	161	12/20/1991	SCHOON, DAVID J.	FAULT TOLERANT IMAGING DEVICE
07/811,806	[]	161	12/20/1991	SCHOON, DAVID J.	HIGH RESOLUTION IMAGING DEVICE
07/811,807	[]	161	12/20/1991	SCHOON, DAVID J.	IMAGING DEVICE
07/827,061	[]	161	01/28/1992	SCHOON, DAVID J.	BANDWISE IMAGING DEVICE
07/828,021	[]	161	01/30/1992	SCHOON, DAVID J.	COLOR IMAGING DEVICE
07/884,408	5434600	250	05/18/1992	SCHOON, DAVID J.	ILLUMINATION MODULE FOR BANDWISE IMAGING DEVICE
07/914,450	5250982	250	07/15/1992	SCHOON, DAVID J.	APPARATUS AND METHOD OF IMAGING UV-SENSITIVE MEDIA
08/175,716	[]	161	12/29/1993	SCHOON, DAVID J.	SPATIAL STABILIZATION FOR BANDWISE IMAGING DEVICE
08/181,573	5481398	250	01/13/1994	SCHOON, DAVID J.	TEMPERATURE STABILIZATION MEANS FOR IMAGING OUTPUT RECORDER
08/181,574	5565906	250	01/13/1994	SCHOON, DAVID J.	CLOCKING MEANS FOR BANDWISE IMAGING DEVICE
08/594,017	5684620	250	01/30/1996	SCHOON, DAVID J.	HIGH RESOLUTION IMAGING SYSTEM AND METHOD OF IMAGING USING THE SAME
09/276,007	6148134	250	03/25/1999	SCHOON, DAVID J.	FIBER MOUNTS FOR FIBER OPTIC HARNESS IN A FIBER OPTIC-BASED IMAGING SYSTEM
09/276,433	[]	161	03/25/1999	SCHOON, DAVID J.	LIGHT DISTRIBUTION DEVICE FOR FIBER OPTIC-BASED IMAGING SYSTEM
14/597,798	9700324	150	01/15/2015	SCHOON, David	SURGICAL CLIP APPLICATOR
61/928,171	[]	159	01/16/2014	SCHOON, David	SURGICAL CLIP APPLICATOR
13/613,927	10018364	150	09/13/2012	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
13/614,068	9255712	150	09/13/2012	Schoon, David	OVEN APPLIANCE WITH DOORS HAVING A TONGUE AND GROOVE INTERFACE
13/614,274	9651265	150	09/13/2012	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS

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13/614,482	8944536	150	09/13/2012	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/578,687	9188346	150	12/22/2014	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
14/874,766	9328929	150	10/05/2015	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/083,329	9494323	150	03/29/2016	Schoon, David	OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/291,223	9644848	150	10/12/2016	Schoon, David	AN OVEN APPLIANCE WITH DUAL OPENING AND CLOSING DOORS
15/499,092	9890957	150	04/27/2017	Schoon, David	Oven Appliance with Dual Opening and Closing Doors
15/762,925	10939711	150	03/23/2018	Schoon, David	NOISE SUPPRESSION DEVICE FOR A PERSONAL IMPACT PROTECTION SYSTEM
15/892,461	10508817	150	02/09/2018	Schoon, David	Oven Appliance with Dual Opening and Closing Doors
16/079,701	11253013	150	08/24/2018	Schoon, David	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
16/587,993	11096797	150	09/30/2019	Schoon, David	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
17/408,068	[]	71	08/20/2021	Schoon, David	EXPANDABLE INTERVERTEBRAL DEVICE
17/512,452	[]	41	10/27/2021	Schoon, David	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
62/232,872	[]	159	09/25/2015	Schoon, David	NOISE SUPPRESSION DEVICE FOR A PERSONAL IMPACT PROTECTION SYSTEM
62/301,157	[]	159	02/29/2016	Schoon, David	AIRBAG ACTUATOR MOUNTED IN A CUSTOM BUCKLE FOR PERSONAL IMPACT PROTECTION SYSTEMS
09/657,419	[]	161	09/08/2000	Schoon, David Jacob	Modular imager
09/657,485	[]	161	09/08/2000	Schoon, David Jacob	High resolution imager

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11/943,334	8535379	150	11/20/2007	MOSKOWITZ, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
12/471,345	8257370	250	05/22/2009	MOSKOWITZ, Ahmnon D.	POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLES, STAPLING GUNS, AND DEVICES FOR SPINAL FUSION
12/846,822	[]	160	07/29/2010	MOSKOWITZ, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
12/983,107	9901455	150	12/31/2010	MOSKOWITZ, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
13/084,543	8353913	150	04/11/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/101,129	8784450	150	05/04/2011	MOSKOWITZ, Ahmnon D.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
13/108,982	9005293	150	05/16/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,150	9867719	150	08/15/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,157	9889022	150	08/15/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,162	9895238	150	08/15/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/210,168	9907674	150	08/15/2011	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
13/621,243	[]	160	09/15/2012	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
13/741,361	9301854	150	01/14/2013	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION

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13/893,326	9056018	150	05/13/2013	MOSKOWITZ, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
14/049,743	10842357	150	10/09/2013	MOSKOWITZ, Ahmnon D.	ENDOSCOPIC SURGICAL SYSTEM
14/063,197	9848993	150	10/25/2013	MOSKOWITZ, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
14/150,758	[]	161	01/08/2014	MOSKOWITZ, Ahmnon D.	GAME WITH PARAMETERS AND VARIABLES CORRESPONDING TO UNITS OF TIME
14/257,650	9622875	150	04/21/2014	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
14/332,351	9898895	250	07/15/2014	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
14/336,909	[]	160	07/21/2014	MOSKOWITZ, Ahmnon D.	CERVICAL SPINOUS PROCESS STAPLE
14/337,210	10098672	150	07/21/2014	MOSKOWITZ, Ahmnon D.	CERVICAL SPINOUS PROCESS STAPLE
14/460,330	[]	161	08/14/2014	MOSKOWITZ, Ahmnon D.	SYSTEMS AND APPARATUSES FOR IMPROVED VISUALIZATION OF ENDOSCOPIC IMAGES
14/467,006	[]	161	08/23/2014	MOSKOWITZ, Ahmnon D.	LOTTERY GAME BASED ON DATES AND METHOD OF PLAYING A LOTTERY GAME BASED ON DATES
14/668,908	9824544	150	03/25/2015	MOSKOWITZ, Ahmnon D.	METHODS OF PLAYING WAGERING GAMES WITH THE KENO SYSTEM
14/685,374	[]	160	04/13/2015	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
14/739,327	9867712	250	06/15/2015	MOSKOWITZ, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/054,926	9848998	150	02/26/2016	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/162,541	9965924	150	05/23/2016	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING MULTI-ZONE 21
15/397,198	10098678	150	01/03/2017	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM

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15/470,066	[]	160	03/27/2017	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
15/490,107	10064738	150	04/18/2017	MOSKOWITZ, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
15/657,811	10186108	150	07/24/2017	MOSKOWITZ, Ahmnon D.	Wagering Game Apparatuses, Methods and Systems for Slot Games with a "21" Theme and Video Three Card Poker featuring Multiple Pay Lines with Progressive Jackpots
15/722,089	10930119	150	10/02/2017	MOSKOWITZ, Ahmnon D.	SYSTEMS AND A METHODS FOR PLAYING MULTI-ZONE TWENTY ONE (21) ACROSS ELECTORNIC GAMING SYSTEMS AND SCRATCH OFF TICKETS
15/945,561	10269206	150	04/04/2018	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
16/277,272	10713884	150	02/15/2019	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
16/457,946	11127261	150	06/29/2019	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
17/182,514	[]	41	02/23/2021	MOSKOWITZ, Ahmnon D.	SYSTEMS AND METHODS FOR PLAYING MULTI-ZONE TWENTY ONE (21) ACROSS ELECTRONIC GAMING SYSTEMS
17/474,410	11881086	150	09/14/2021	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
18/141,731	[]	30	05/01/2023	MOSKOWITZ, Ahmnon D.	SYSTEMS AND METHODS FOR PLAYING MULTI-ZONE TWENTY ONE (21) ACROSS ELECTRONIC GAMING SYSTEMS
18/531,892	[]	30	12/07/2023	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
62/696,503	[]	159	07/11/2018	MOSKOWITZ, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
13/103,994	9603713	150	05/09/2011	Moskowitz, Ahmnon D	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION
09/849,521	[]	161	05/07/2001	Moskowitz, Ahmnon D.	Hands free umbrella
11/842,855	7942903	150	08/21/2007	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
12/054,335	7972363	150	03/24/2008	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT STAPLING GUNS AND DEVICES FOR SPINAL FUSION

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12/471,340	8734516	150	05/22/2009	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
12/957,776	9888918	250	12/01/2010	Moskowitz, Ahmnon D.	HORIZONTAL-TRANSVERTEBRAL CURVILINEAR NAIL-SCREWS WITH INTER-LOCKING RIGID OR JOINTED FLEXIBLE RODS FOR SPINAL FUSION
13/101,135	9675385	150	05/04/2011	Moskowitz, Ahmnon D.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
13/401,829	9744052	150	02/21/2012	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,323	9814601	150	03/12/2012	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
13/418,335	9532821	150	03/12/2012	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM
15/678,401	10238505	150	08/16/2017	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/693,594	10149703	150	09/01/2017	Moskowitz, Ahmnon D.	CERVICAL SPINOUS PROCESS STAPLE
15/707,684	10424166	150	09/18/2017	Moskowitz, Ahmnon D.	METHODS OF PLAYING WAGERING GAMES WITH THE KENO SYSTEM
15/791,484	10376383	150	10/24/2017	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
15/820,232	10016284	150	11/21/2017	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
15/862,016	10028740	150	01/04/2018	Moskowitz, Ahmnon D.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
15/870,406	10610371	150	01/12/2018	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/894,471	10390969	150	02/12/2018	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING TRANSVERTEBRAL BODY SCREWS AND POSTERIOR CERVICAL AND LUMBAR INTERARTICULATING JOINT CALIBRATED STAPLING DEVICES FOR SPINAL FUSION
15/904,617	10022238	150	02/26/2018	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
15/944,117	10537442	150	04/03/2018	Moskowitz, Ahmnon D.	BIDIRECTIONAL FIXATING INTERVERTEBRAL IMPLANT SYSTEM

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15/944,221	10376376	150	04/03/2018	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
15/976,340	10307268	150	05/10/2018	Moskowitz, Ahmnon D.	INTERVERTEBRAL EXPANDABLE IMPLANT
16/018,354	10376386	150	06/26/2018	Moskowitz, Ahmnon D.	SPINAL STAPLE
16/018,798	10369003	250	06/26/2018	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISCS, DISC PLATE INSERTION GUN FOR PERFORMING SEQUENTIAL SINGLE PLATE INTERVERTEBRAL IMPLANTATION ENABLING SYMMETRIC BI-DISC PLATE ALIGNMENT FOR INTERPLATE MOBILE CORE PLACEMENT
16/025,667	10426633	150	07/02/2018	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/034,545	11116642	150	07/13/2018	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
16/042,163	10258329	150	07/23/2018	Moskowitz, Ahmnon D.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/100,410	10603183	150	08/10/2018	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
16/160,824	10842542	150	10/15/2018	Moskowitz, Ahmnon D.	SPINAL BONE FUSION SYSTEM
16/160,937	10722274	150	10/15/2018	Moskowitz, Ahmnon D.	Cervical Spinous Process Staple
16/280,684	10478319	150	02/20/2019	Moskowitz, Ahmnon D.	SYSTEM WITH TOOL ASSEMBLY AND EXPANDABLE SPINAL IMPLANT
16/362,294	10925753	150	03/22/2019	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/384,232	[]	161	04/15/2019	Moskowitz, Ahmnon D.	SPINAL FUSION IMPLANT WITH CURVILINEAR NAIL-SCREWS
16/532,033	11141288	150	08/05/2019	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
16/564,946	11024127	150	09/09/2019	Moskowitz, Ahmnon D.	METHODS OF PLAYING WAGERING GAMES WITH THE KENO SYSTEM
16/587,993	11096797	150	09/30/2019	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
16/744,755	11376136	150	01/16/2020	Moskowitz, Ahmnon D.	EXPANDABLE SPINAL IMPLANT AND TOOL SYSTEM
16/829,246	11229525	150	03/25/2020	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION

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16/841,355	11478359	150	04/06/2020	Moskowitz, Ahmnon D.	ARTIFICIAL DISC SYSTEM
16/952,241	11759243	150	11/19/2020	Moskowitz, Ahmnon D.	SPINAL BONE FUSION SYSTEM
16/953,797	[]	71	11/20/2020	Moskowitz, Ahmnon D.	Endoscopic Surgical System
17/129,149	11083591	150	12/21/2020	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/180,021	[]	100	02/19/2021	Moskowitz, Ahmnon D.	SPINAL FUSION IMPLANT
17/181,706	[]	41	02/22/2021	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/393,672	11806244	150	08/04/2021	Moskowitz, Ahmnon D.	ARTIFICIAL CERVICAL AND LUMBAR DISC SYSTEM
17/408,068	[]	71	08/20/2021	Moskowitz, Ahmnon D.	EXPANDABLE INTERVERTEBRAL DEVICE
17/471,667	[]	30	09/10/2021	Moskowitz, Ahmnon D.	3-D PRINTED SPINAL IMPLANT
17/492,996	[]	30	10/04/2021	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
17/577,722	[]	30	01/18/2022	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS HAVING A CENTRAL SCREW LOCKING LEVER, AND PLIERS AND DEVICES FOR SPINAL FUSION
17/706,873	11903849	150	03/29/2022	Moskowitz, Ahmnon D.	INTERVERTEBRAL IMPLANT AND TOOL ASSEMBLY
60/208,070	[]	159	05/31/2000	Moskowitz, Ahmnon D.	Hands free umbrella
61/264,648	[]	159	11/25/2009	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/265,752	[]	159	12/01/2009	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/306,926	[]	159	02/22/2010	Moskowitz, Ahmnon D.	TOTAL ARTIFICIAL SPINO-LAMINAR PROSTHETIC REPLACEMENT
61/419,679	[]	159	12/03/2010	Moskowitz, Ahmnon D.	INTERARTICULATING SPINOUS AND TRANSVERSE PROCESS STAPLES FOR SPINAL FUSION
61/425,749	[]	159	12/21/2010	Moskowitz, Ahmnon D.	SPINOUS PROCESS STAPLE WITH INTERDIGITATING-INTERLOCKING HEMI-SPACERS FOR ADJACENT SPINOUS PROCESS SEPARATION AND DISTRACTION
61/445,034	[]	159	02/21/2011	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS
61/451,579	[]	159	03/10/2011	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL LEAF SPRING- RATCHET SCREW LOCKING MECHANISM
61/451,582	[]	159	03/10/2011	Moskowitz, Ahmnon D.	BI-DIRECTIONAL FIXATING/LOCKING TRANSVERTEBRAL BODY SCREW/INTERVERTEBRAL CAGE STAND-ALONE CONSTRUCTS WITH NOVEL VERTICAL HEMI-BRACKET SCREW LOCKING MECHANISM

Last Name: Moskowitz
First Name: Ahmnon

Examiner: NEGRELLIRODRIGUE, CHRISTINA

APP. #	Patent #	Status	Filing Date	Inventor Name	Title
61/712,251	[]	159	10/10/2012	Moskowitz, Ahmnon D.	ENDOSCOPIC SURGICAL SYSTEM
61/718,707	[]	159	10/25/2012	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/750,350	[]	159	01/08/2013	Moskowitz, Ahmnon D.	GAME WITH PARAMETERS AND VARIABLES CORRESPONDING TO UNITS OF TIME
61/801,783	[]	159	03/15/2013	Moskowitz, Ahmnon D.	ZERO-PROFILE EXPANDABLE INTERVERTEBRAL SPACER DEVICES FOR DISTRACTION AND SPINAL FUSION AND A UNIVERSAL TOOL FOR THEIR PLACEMENT AND EXPANSION
61/846,608	[]	159	07/15/2013	Moskowitz, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING POKER, BLACKJACK AND BACCARAT
61/866,038	[]	159	08/14/2013	Moskowitz, Ahmnon D.	ENDOSCOPIC VIEWING APPARATUSES
61/869,645	[]	159	08/23/2013	Moskowitz, Ahmnon D.	LOTTERY GAME BASED ON DATES AND METHOD OF PLAYING A LOTTERY GAME BASED ON DATES
61/970,249	[]	159	03/25/2014	Moskowitz, Ahmnon D.	Methods of playing wagering games with the Keno system
62/165,870	[]	159	05/22/2015	Moskowitz, Ahmnon D.	METHODS, SYSTEMS, AND APPARATUS FOR PLAYING MULTI-ZONE 21
62/403,195	[]	159	10/02/2016	Moskowitz, Ahmnon D.	SYSTEM AND A METHOD FOR PLAYING NUMERICAL CARD GAMES

TO: PATDOCTC@fr.com
FROM: noreply@uspto.gov
CC: patentcenter_eofficeaction@uspto.gov
SUBJECT: USPTO: Patent Electronic System - e-Postcard Notification for Customer Number 26191

Wed Feb 21 05:44:35 EST 2024

Dear Patent Center Customer:

Correspondence Address:

FISH &RICHARDSON P.C. (TC)
PO BOX 1022
MINNEAPOLIS,MINNESOTA,55440-1022
UNITED STATES

An email notification regarding the correspondence was sent to the following email address(es) associated with customer number 26191:

PATDOCTC@fr.com

This is a courtesy reminder that new correspondence is available for the application. If you have not done so already, please review the correspondence listed below. The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

Application	Document	Mailroom Date	Attorney Docket No.
17408068	NOA	02/14/2024	46440-0020005

To view your correspondence online, please sign in to Patent Center and then select Workbench/View correspondence. Or to update your email addresses, select Manage/Manage customer numbers.

If you have any questions, please contact the Patent Electronic Business Center (EBC) at ebc@uspto.gov or 866-217-9197 Monday – Friday, 6 a.m. to midnight ET.

Please do not reply to this email as it was sent from an unmonitored mailbox.

Sincerely,

The Patent Center Team

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22314-1450

By fax, send to: (571) 273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

26191 7590 02/14/2024

FISH & RICHARDSON P.C.
P.O. BOX 1022
MINNEAPOLIS, MN 55440-1022

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/408,068	08/20/2021	Ahmnon D. Moskowitz	46440-0020005	4713

TITLE OF INVENTION: AN EXPANDABLE INTERVERTEBRAL DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0	$0	$480	05/14/2024

EXAMINER	ART UNIT	CLASS-SUBCLASS
NEGRELLIRODRIGUE, CHRISTINA	3773	623-017150

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

[ ] Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

[ ] "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

1 Fish & Richardson P.C.
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Moskowitz Family LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Rockville, MD

Please check the appropriate assignee category or categories (will not be printed on the patent): [ ] Individual [X] Corporation or other private group entity [ ] Government

4a. Fees Submitted: [X] Issue Fee [ ] Publication Fee (if required)

4b. Method of Payment (*Please first reapply any previously paid fee shown above*):

[X] Electronic Payment via the USPTO patent electronic filing system [ ] Enclosed check [ ] Non-electronic payment by credit card (Attach form PTO-2038)

[X] The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account No. 06-1050

5. **Change of Entity Status** (from status indicated above)

[ ] Applicant certifying micro entity status. See 37 CFR 1.29 — **NOTE**: Absent a valid Certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

[ ] Applicant asserting small entity status. See 37 CFR 1.27. — **NOTE**: If the application was previously under micro entity status, checking this box will be taken as a notification of loss of entitlement to micro entity status.

[ ] Applicant changing to regular undiscounted fee status. — **NOTE**: Checking this box will be taken as a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Kiersten M. Batzi/ Date May 13, 2024

Typed or printed name Kiersten M. Batzli Registration No. 75,476

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
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ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/408,068	05/13/2024 02:16:15 PM Z ET	46440-0020005

Title of Invention

EXPANDABLE INTERVERTEBRAL DEVICE

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4713	FILED BY	Emily Whitcomb
PATENT CENTER #	65498416	AUTHORIZED BY	Kiersten Batzli
CUSTOMER #	26181	FILING DATE	08/20/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Ahmnon D. Moskowitz

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
DA / 061050	E20245CE16495222	Emily Whitcomb

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
2501	UTILITY ISSUE FEE	480.00	1	480.00
			TOTAL AMOUNT:	$480.00

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage

submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor	:	Ahmnon D. Moskowitz	Art Unit	:	3773
			Examiner	:	Christina Negrellirodrigue
Application No.	:	17/408,068			
Filed	:	August 20, 2021	Confirmation No.	:	4713
			Notice of Allowance Date: February 14, 2024		
Title	:	AN EXPANDABLE INTERVERTEBRAL DEVICE			

MAIL STOP ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY TO NOTICE OF ALLOWANCE

In response to the Notice of Allowance dated February 14, 2024, enclosed is a completed Part B - Fee(s) Transmittal.

The issue fee is being paid with this reply on the USPTO patent electronic filing system. Apply that fee and any other necessary charges or credits to Deposit Account 06-1050, referencing the above attorney docket number.

COMMENTS ON EXAMINER'S REASONS FOR ALLOWANCE

It is recognized that, in accordance with M.P.E.P. § 1302.14, the Examiner's reasons for allowance need not set forth all of the details as to why the claims are allowed. In the above-referenced application, it is not conceded that the Examiner's stated reasons for allowance are the only reasons for which the claims are allowable. The Examiner's reasons for allowance indicate that particular claim elements are not disclosed or suggested by the prior art of record, yet the claims may be patentable for other reasons as well, including the inventive combination of all of the recited claim elements. It is not conceded that the specific limitations identified by the Examiner are necessary to distinguish the art of record or to satisfy the requirements of 35 U.S.C. § 112. Moreover, the Examiner does not assert, and it would not be conceded, that the Examiner's reasons have any bearing on the patentability of claims in any other applications directed to the disclosed subject matter.

In addition, each dependent claim stands on its own and may be allowable on its own merits. In particular, each dependent claim may be allowable on the basis of a combination of some of the features recited in the dependent claim and its base claim(s), which combination of features may not include all of the limitations identified in the Examiner's reasons for allowance.

Respectfully submitted,

Date: May 13, 2024

/Kiersten M. Batzli/
Kiersten M. Batzli, Reg. No. 75,476

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Facsimile: (877) 769-7945

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ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/408,068	**05/13/2024 02:16:15 PM Z ET**	**46440-0020005**

Title of Invention

EXPANDABLE INTERVERTEBRAL DEVICE

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4713	FILED BY	Emily Whitcomb
PATENT CENTER #	65498416	FILING DATE	08/20/2021
CUSTOMER #	26191	FIRST NAMED INVENTOR	Ahmnon D. Moskowitz
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	Kiersten Batzli

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
ReplytoNOA.pdf	2	Issue Fee Payment (PTO-85B)	59 KB
IssueFee.pdf	1	Issue Fee Payment (PTO-85B)	131 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
ReplytoNOA.pdf	0DF118E9C1E39135E86CAA369C61B5C8A8423B837D2798662 4D6A33C1A36D4AC50823560F7D7ECB14C4B50D28A4A80B9A 14FF6B7F97BAF075E2685BAA13EE82C

IssueFee.pdf 8A55651B2496143137193AB8E05D8514071186D81E09A34CFD
8B0D9C4F1361B8A9EDA71EC0BA38BE506541989237469OE47
641D2331A6BE45AC23C3DED9E504C

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/408,068	06/18/2024	12011367	46440-0020005	4713

26191 7590 05/29/2024

FISH & RICHARDSON P.C. (TC)
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

ISSUE NOTIFICATION

The projected patent number and issue date are specified above. The patent will issue electronically. The electronically issued patent is the official patent grant pursuant to 35 U.S.C. § 153. The patent may be accessed on or after the issue date through Patent Center at https://patentcenter.uspto.gov/. The patent will be available in both the public and the private sides of Patent Center. Further assistance in electronically accessing the patent, or about Patent Center, is available by calling the Patent Electronic Business Center at 1-888-217-9197.

The USPTO is implementing electronic patent issuance with a transition period, during which period the USPTO will mail a ceremonial paper copy of the electronic patent grant to the correspondence address of record. Additional copies of the patent (i.e., certified and presentation copies) may be ordered for a fee from the USPTO's Certified Copy Center at https://certifiedcopycenter.uspto.gov/index.html. The Certified Copy Center may be reached at (800)972-6382.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 204 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Center (https://patentcenter.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional inventors):

Ahmnon D. Moskowitz, Rockville, MD;
Mosheh T. Moskowitz, Rockville, MD;
Pablo A. Valdivia Y. Alvarado, Cambridge, MA;
Eric Sugalski, Arlington, MA;
Nathan C. Moskowitz, Rockville, MD;

APPLICANT(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional applicants):

Moskowitz Family LLC, Rockville, MD;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/408,068	08/20/2021	Ahmnon D. Moskowitz	46440-0020005	4713

26191 7590 06/18/2024

FISH & RICHARDSON P.C. (TC)
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

EXAMINER	
NEGRELLIRODRIGUE, CHRISTINA	

ART UNIT	PAPER NUMBER
3773	

NOTIFICATION DATE	DELIVERY MODE
06/18/2024	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

APPLICATION NO.	ISSUE DATE	PATENT NO.
17/408,068	18-Jun-2024	12011367

FISH & RICHARDSON P.C. (TC)
PO BOX 1022
MINNEAPOLIS, MN 55440-1022

EGRANT NOTIFICATION

Your electronic patent grant (eGrant) is now available, which can be accessed via Patent Center at https://patentcenter.uspto.gov

The electronic patent grant is the official patent grant under 35 U.S.C. 153. For more information, please visit https://www.uspto.gov/electronicgrants