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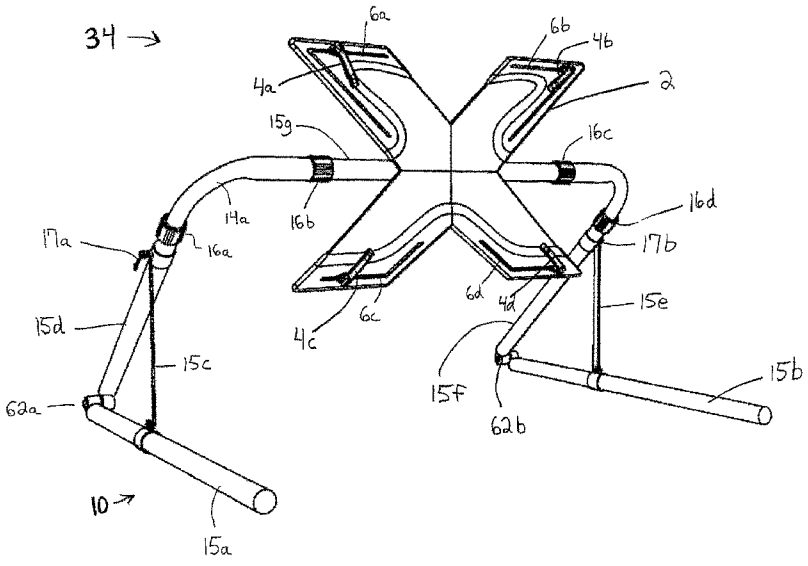
(54) Title: XDECK LAPTOP/BOOK-HOLDER



(57) Abstract: A system and method for using a book/laptop stand is disclosed. The book/laptop stand comprises a short or tall stand, and a mounting deck. The mounting deck comprises a mounting platform, mounting platform coupler, slide clamps, and slide clamp slots. The mounting platform can both rotate and swivel 360°, and is attached to either of the stands by the mounting coupler. Both the height and width of either stand can be adjusted, with optional detents to fix at predetermined locations. The mounting coupler rotationally frictionally couples the mounting platform to the stands. The mounting platform includes slide clamps that are adjustable in location within slide clamp slots. Detents can also be provided for the mounting coupler. The slide clamps include a locking lever, attached to which are a rolling ball that allows users of the book/laptop stand to substantially easily turn pages of a book.

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XDECK LAPTOP/BOOK-HOLDER

PRIORITY

[0001] This application claims benefit under 35 U.S.C. § 119(e) from U.S. Provisional Patent Application Serial No. 60/734,553, filed November 8, 2005, the entire contents of which are expressly incorporated herein by reference.

BACKGROUND OF THE INVENTION

Field of the Invention

[0002] The invention relates to book and laptop holders. More particularly, the invention relates to a system and method for holding a book or laptop such that a user, in a substantially supine position, can ergonomically read the book and/or operate the laptop.

Background Art

[0003] Book holders have been in existence for a very long period of time, and some have been adopted and/or adapted for use with laptops. Traditionally, book holders are heavy, clumsy devices that are not very ergonomic, and have limited usefulness. For example, lecterns are typical of known book holding devices that, while relatively useful for holding a book up at a height that is convenient when standing and lecturing, are far less useful when sitting at a table or desk, or reclining. Many different book holders have been developed over the years in an attempt to improve these apparently relatively simple mechanical devices.

[0004] In addition, since the advent of the computer age, and especially since the widespread use of laptops, many of these known book stands or book holders have been

converted to use for laptops, or modified in minor ways that did little to overcome the known shortcomings.

[0005] A first example of a computer stand is U.S. Patent No. D410,910, issued to Martell on June 15, 1999 (hereinafter the " '910 patent"). The computer stand illustrated in the '910 patent resembles early known book holders in that it consists of a simple flat piece upon which the computer rests. It should be understood by those of ordinary skill in the art of the present invention that "book holder" and "book stand" are interchangeable, and the term "computer" includes or means "laptop." The '910 patent further consists of a ledge to hold the computer upright, two legs and two base leg pieces. The base leg and legs can be adjusted to change the angle between them, from about 0° to about 90°, or a little less. Anything approaching or exceeding 90° invites the computer to fall forward onto the user.

[0006] U.S. Patent No. 4,512,542, issued to Black on April 23, 1985 (hereinafter the " '542 patent"), describes a book holder for holding a book in open condition at a selected page. The book holder described in the '542 patent comprises a pair of elongate limbs extending in opposite directions from a central zone and terminating at their free ends in reversely turned, page engageable fingers extending alongside and spaced from the associated limb. The limbs are coupled together in such a manner as to enable them to be adjusted relative to each other and vary the distance between the fingers. Supporting legs may be connected to the limbs to enable the book holder to support a book at an inclination to the horizontal. The legs preferably are pivoted to one another and to the limbs so as to enable the limbs and legs to be folded to a small-size unit when the holder is not being used. Although the book holder of the '542 patent can be folded up for storage, it suffers from at least the shortcoming of not being adjustable in terms of holding different numbers of pages under the reversely turned page engageable fingers. In other words, the reversely turned page engageable fingers are a fixed height, and no adjustment of their height over the book can be

made. Furthermore, there is no mechanism for retaining a book – let alone a laptop – should the user wish to view the book (or laptop) at an angle greater than 90° from the horizontal.

[0007] U.S. Patent No. 5,112,021, issued to Greene on May 12, 1992 (hereinafter the " '021 patent"), discloses a bookholder device that includes a main arm portion for hinged attachment to a wall (or alternatively, for free standing support on the floor). A clutch assembly portion is attached to the main arm, and releasably engages a rod member. A tray bracket is pivotally connected to the rod member, and further pivotally supports a book tray portion. This book tray supports the book in question by a combination of contact by a tray base, tray perimeter flanges, and a height-adjustable tray crossmember. The book holder disclosed in the '021 patent is a large, unwieldy, mechanically complex apparatus that must be attached to a wall when the user is in a supine position.

[0008] U.S. Patent No. 5,615,856, issued to Simington on April 1, 1997 (hereinafter the " '856 patent"), discloses a book-holder assembly that has a first-side book-support plate and a second-side book-support plate that are oppositely disposed at a desired angle on a plate-connecting member that is attachable to a connector bracket with which universality of positioning is provided by stand means that are designedly foldable or optionally mobile. A first-side page holder that is adjustable separately to thickness of page bunches and a first-side book holder that is adjustable separately to book thicknesses are attachable to the first-side book-support plate. A second-side page holder that is adjustable separately to thickness of page bunches and a second-side book holder that is adjustable separately to book thicknesses are attachable to the second-side book-support plate. A first-side book-holder groove on a bottom side of the first-side book-support plate and a first-side adjustable clamp on a top side of the first-side book support plate provide linear book support on the first-side book-support plate. A second-side book-holder groove on a bottom side of the second-side book-support plate and a second-side adjustable clamp on a top side of the second-side book

support plate provide linear book support on the second-side book-support plate. The '856 patent, aside from its obvious mechanical complexity, suffers in that the page holders are not substantially frictionless, and therefore it appears a user would encounter significant resistance in turning and retaining pages of a book. Further still, the book holder disclosed in the '856 patent would be ill suited for holding laptops.

[0009] U.S. Patent No. 5,979,857, issued to Holm on November 9, 1999 (hereinafter the " '857 patent"), discloses an adjustable book holder that can be attached to a stand to permit hands-free reading and hand-assisted page turning in a sitting or reclining position. The book holder of the '857 patent provides for a one piece book support shelf and back of rigid material, such as a molded clear plastic or metal, onto which a book is secured and one or more pages are held open and flat by a single length of monofilament line attached to opposite sides of a swing arm held in a closed position. A swing arm in the open position allows unobstructed page turning after which the swing arm is returned to the closed position. The swing arm is held in the closed position by free swinging latches fastened to the swing arm and turned up behind the book support back. The swing arm is moved to the open position by pushing back against the swing arm which removes the pressure against the latches allowing the latches to drop clear. The swing arm is rotated down until parallel with the bottom of the book support shelf, limited by a stop rigidly connected to the bottom center of the swing arm and with the stop extension in contact with the underside of the book support bracket. In this position the monofilament line is below the book support shelf and the book page can now be turned. The swing arm is then returned to the closed position. The book holder disclosed in the '857 patent is ill suited for holding a laptop, or for even holding a book such that a user can read it while substantially supine.

[0010] U.S. Patent No. 6,027,092, issued to Gordon on February 22, 2000 (hereinafter the " '092 patent"), discloses a book stand with a base adapted to fit under a person's leg, a

first arm pivotally connected to the base, a second arm telescopically attached to the first arm, and a book rack pivotally mounted on the second arm for supporting a book. An I-shaped page retainer is pivotally mounted on the rack and includes laterally extending upper and lower fingers for holding opposing pages of the book open for reading. The page retainer includes telescoping segments such that the distance between the fingers can be adjusted to accommodate different size books. A book light optionally can be attached to the book rack for lighting the pages. The book holder disclosed in the '092 patent is ill suited for holding a laptop, or for even holding a book such that a user can read it while substantially supine.

[0011] U.S. Patent No. 7,083,155, issued to Smartt on August 1, 2006 (hereinafter the " '155 patent"), discloses a bookstand that has a pivotally adjustable book holder having a frame with upper and lower book supporting plates slidable across each other to provide a book supporting surface of variable size for supporting spines and rear covers of open books of different sizes. The upper plate has a clasp for a central upper edge of an open book and the lower plate has a lower ledge supporting a lower edge of the book and formed with differently spaced sockets receiving plugs to trap open stacks of pages on both sides of an open book by engaging outermost pages exposed for reading, even when a reader is supine. Removing and transferring plugs between sockets releases trapped pages for turning and transfer of plugs between sockets accommodates progressive changes in cumulative total thickness of the stacks of pages on respective opposite sides of the book as the pages are turned during reading. While the book holder disclosed in the '155 patent can allegedly be used to hold a book while the user is supine, such an operation would be unwieldy, and particularly ill suited for use in retaining a laptop while the user is in the supine position.

[0012] Thus, a need exists for a combined laptop and book holder that is mechanically simple to set up and adjust, can be used when the user is in a vertical or a substantially supine

position, and allows the user to move pages in a book substantially easily, yet retain the book or laptop.

SUMMARY OF THE INVENTION

[0013] It is therefore a general object of the invention to provide a combined book holder and laptop holder that will obviate or minimize problems of the type previously described.

[0014] It is an object of the invention to provide a combined book holder and laptop holder that is mechanically simple to set up, and allows a user to be in a vertical position, a substantially supine position, or any position in between, and yet still be able to effectively and efficiently use the combined book holder and laptop holder apparatus.

[0015] It is another object of the invention to provide a combined book holder and laptop holder that allows a user to retain books and laptops in such a manner that they are securely held, even when the user is in a substantially supine position.

[0016] It is still another object of the invention to provide a combined book holder and laptop holder that allows the user to retain a book in any position, yet still be able to easily turn the pages of the book, and not have the book fall off, or out of, or become dislodged from the combined book holder and laptop holder.

[0017] The above described disadvantages are overcome and a number of advantages are realized by a first aspect of the present invention comprising a stand for use in holding a viewable object for a user, the stand comprising a base; a mounting platform that includes a plurality of slots and a plurality of clamps, wherein each slot contains a clamp, and further wherein the clamp is configured to secure the viewable object to the generally x-shaped mounting platform, and wherein, each of the clamps includes a locking lever, and further wherein each locking lever includes a roller configured to allow a user to move a portion of

the viewable object when desired; and a mounting platform coupler configured to frictionally engage the generally x-shaped mounting platform at a user selectable angle to the base.

[0018] The stand according to the first aspect of the present invention further includes a mounting platform that is generally x-shaped, and wherein the mounting platform comprises: a first substantially planar surface configured to hold the viewable object in a planar relationship with the user; and a second substantially planar surface substantially parallel to the first substantially planar surface; and a recessed area formed between the first and second substantially planar surfaces, wherein the recessed area is configured to ventilate excess heat generated by the viewable object. In the stand according to the first aspect of the present invention, the mounting coupler is configured to frictionally engage the base at any one of a set of predetermined detent angles, and the base is configured to be adjusted in width and/or height, and further wherein a plurality of detent angles and positions are provided to adjust the width and/or height of the base.

[0019] According to the first aspect of the present invention, the stand further comprises an adjustable stabilizer armature adjustable in height above the base, wherein the adjustable stabilizer armature is configured to provide a wedging force to an underside of an object such that the stand is substantially stable and is substantially incapable of tipping, swaying or leaning as a result of securing the viewable object to the mounting platform.

[0020] According to the first aspect of the present invention, the base comprises a first and second L-shaped cross bar, the first and second L-shaped cross bars including a first end and a second end; and a first and second base leg, the first and second base legs including a substantially horizontal portion and an angled portion, and wherein the first and second base legs are configured to frictionally engage the first end of the first and second L-shaped cross bars at the angled portion of the first and second base legs, and wherein the first and second L-shaped cross bars are configured to frictionally engage each other at their respective second

ends. Still further, according to the first aspect of the present invention, the angled portion of the first and second base legs can be formed at an angle from about 48° to about 68° with respect to the substantially horizontal portion, the angled portion of the first and second base legs can be formed at an angle from about 53° to about 63° with respect to the substantially horizontal portion, and wherein the angled portion of the first and second base legs can be formed at an angle of about 58° with respect to the substantially horizontal portion.

[0021] According to the first aspect of the present invention, the base further comprises a rotational coupler configured to rotationally couple the substantially horizontal portion to the angled portion of each of the first and second base legs, and wherein the angled portion of the first and second base legs are configured to be adjusted at a plurality of angles, and wherein a plurality of detent angles are provided to adjust the angled portion of the first and second base legs. In the stand according to the first aspect of the present invention, the detent angles are substantially equally spaced at about 5° apart, or the detent angles are not substantially equally spaced apart.

[0022] Still further according to the first aspect of the present invention, the first and second cross bars are replaced by a single cross bar having a first and second end, and the single cross bar is configured to frictionally engage the angled portion of the first and second base legs, and the stand further means for adjusting a width of the stand. The means for adjusting the width of the stand according to the first aspect of the present invention comprises adjustment of the frictional engagement at the second ends of the first and second L-shaped cross bars thereby adjusting the distance between the first and second base legs.

[0023] According to the first aspect of the present invention, the base comprises a substantially "[" shaped cross bar, wherein the cross bar includes a first and second end, and a first and second base leg, the first and second base legs including a substantially horizontal portion and an angled portion rotationally coupled to the substantially horizontal portion, and

wherein the first and second base legs are configured to frictionally engage the first and second end of the substantially "[" shaped cross bar at the angled portion of the first and second base legs respectively.

[0024] According to the first aspect of the present invention, the substantially "[" shaped cross bar comprises a first and second substantially "L" shaped cross bar part, each of the first and second cross bar part comprising a first and second end; and a substantially straight cross bar part, the substantially straight cross bar part comprising a first and second end, wherein, the first end of the "L" shaped cross bar parts are configured to frictionally engage the angled portion of the first and second base leg, respectively, and the second end of the "L" shaped cross bar parts are configured to frictionally engage the first and second end of the substantially straight cross bar part, respectively.

[0025] According to the first aspect of the present invention, the angled portion of the first and second base legs can be rotated to form an angle from about 48° to about 68° with respect to the substantially horizontal portion, or the angled portion of the first and second base legs can be rotated to form an angle from about 53° to about 63° with respect to the substantially horizontal portion, or the angled portion of the first and second base legs can be rotated to form an angle of about 58° with respect to the substantially horizontal portion. Still further according to the first aspect of the present invention, the angled portion of the first and second base legs are configured to be adjusted at a plurality of angles, and wherein a plurality of detent angles are provided to adjust the angled portion of the first and second base legs, and wherein the detent angles are substantially equally spaced at about 5° apart, or wherein the detent angles are not substantially equally spaced apart, and still further wherein each of the first and second base legs are further configured to rotationally fold together such that the substantially horizontal portion and the angled portion are substantially parallel and adjacent one another.

[0026] According to the first aspect of the present invention, the angled portion of each of the first and second base legs further comprise a first outer tube, a first inner tube spring coupled to the first outer tube, and a twist lock configured to retain the first inner tube at a user selectable height with respect to the first outer tube as a result of the spring force applied by the spring between the first outer tube and the first inner tube. According to the first aspect of the present invention, the base further comprises a rotational coupler configured to rotationally couple the substantially horizontal portion to the angled portion of each of the first and second base legs.

[0027] In the stand according to the first aspect of the present invention, the user can occupy a range of positions from a substantially supine position to a substantially sitting up position.

[0028] According to the first aspect of the present invention, the stand further comprises means for adjusting a width of the stand, and the means for adjusting the width of the stand comprises means for adjusting the width of the "[" shaped cross bar. The means for adjusting the width of the "[" shaped cross bar according to the first aspect of the present invention comprises a first and second substantially "L" shaped cross bar part, each of the first and second cross bar part comprising a first and second end, and a substantially straight cross bar part, the substantially straight cross bar part comprising a first and second end, wherein, the first end of the "L" shaped cross bar parts are configured to frictionally engage the angled portion of the first and second base leg, respectively, and the second end of the "L" shaped cross bar parts are configured to frictionally engage the first and second end of the substantially straight cross bar part, respectively. According to the first aspect of the present invention, adjustment of the width of the "[" shaped cross bar comprises adjustment of the frictional engagement at the second end of the first L-shaped cross bar and the substantially straight cross bar, or, adjustment of the frictional engagement at the second end of the second

L-shaped cross bar, or adjustment of the frictional engagement at the second end of the 1st L-shaped cross bar and the substantially straight cross bar, and adjustment of the frictional engagement at the second end of the 2nd L-shaped cross bar and the substantially straight cross bar.

[0029] According to the first aspect of the present invention, the plurality of slots comprises a first upper pair of slots, each of the respective upper pair of slots having both a substantially horizontal portion, and an angled portion that is formed at about a 45° angle with respect to the substantially horizontal portion, and a second lower pair of slots, each of the respective lower pair of slots having both a substantially horizontal portion, and an angled portion that is formed at about a 140° angle with respect to the substantially horizontal portion. Still further according to the first aspect of the present invention, each roller comprises a substantially spherical ball rotationally attached to the respective locking lever, or each roller comprises a substantially cylindrical rolling cylinder rotationally attached to the respective locking lever, or still further the roller comprises a frictionally reduced surface attached to the respective locking lever.

[0030] According to the first aspect of the present invention, the viewable object comprises a laptop computer, and wherein the slots are configured to allow a user to adjust the clamps to accommodate a plurality of different sized laptops. According to the first aspect of the present invention, the stand further comprises a removable strap attached to the mounting platform, and configured to segregate a user selectable portion of the viewable object, the viewable object comprises a book, and the user selectable portion comprises at least one page of the book.

[0031] According to a second aspect of the present invention, a method is provided for enabling a user to hold and view a viewable object in a stand, wherein the stand comprises a base, a generally x-shaped mounting platform that includes a plurality of slots and clamps,

the clamps including locking levers with rollers, the stand further comprising a mounting platform coupler, wherein the method comprises providing a user with the stand, and wherein the user employs the stand to hold and adjustably view the viewable object by adjusting a height of the base; coupling the generally x-shaped mounting platform to the base; positioning the viewable object onto the generally x-shaped mounting platform; clamping the viewable object onto the mounting platform with the clamps; adjusting a viewing angle of the mounting platform with respect to the user using the mounting platform coupler; and moving a first portion of the viewable object from a first and second clamp to a third and fourth clamp by rolling the first portion out from under the first and second clamp and inserting and rolling the first portion under the third and fourth clamps, such that a second and subsequent portions of the viewable object can now be viewed, and wherein the second and subsequent portions of the viewable object and the viewable object remains substantially undisturbed while the first portion is being moved.

[0032] According to the second aspect of the present invention, the method further comprises isolating a user-selected portion of the viewable object with a removable strap attached to the generally x-shaped mounting platform, adjusting a width of the stand, and wherein the user is substantially supine.

[0033] According to the second aspect of the present invention, each roller comprises a substantially spherical ball rotationally attached to the respective locking lever, or each roller comprises a substantially cylindrical rolling cylinder rotationally attached to the respective locking lever, or wherein the roller comprises a frictionally reduced surface attached to the respective locking lever.

[0034] According to the second aspect of the present invention, the method further comprises segregating a user selectable portion of the viewable object with a removable strap attached to the mounting platform, and wherein the viewable object comprises a book, and

the user selectable portion comprises at least one page of the book. The viewable object according to the second aspect of the present invention comprises a laptop, wherein the step of moving a first portion is not performed, and wherein the method further comprises adjusting the position of one or more of the clamps within their respective slots to allow a user to accommodate a plurality of different sized laptops.

[0035] Still further according to the second aspect of the present invention the method further comprises adjusting the position of one or more of the clamps within their respective slots to allow a user to accommodate a plurality of different sized books, and wherein the step of adjusting the height of the base comprises raising the height of the base by loosening a twist lock on the base to allow the user to raise the height of the base, and lowering the height of the base by loosening the twist lock on the base to allow the user to lower the height of the base.

[0036] According to the second aspect of the present invention, the base includes a first and second base leg, each of the base legs including the twist lock, a first outer tube and a first inner tube, and a spring coupled between the first outer tube and the first inner tube, and wherein the steps of raising and lowering the height of the base comprises raising the inner tube up in relation to the outer tube via an expansion force provided by the spring, and lowering the inner tube in relation to outer tube by preventing the inner tube from dropping via the expansion force provided by the spring.

[0037] According to the second aspect of the present invention, the method further comprises lifting an adjustable stabilizer armature against an underside of an object, thereby providing a wedging force such that the stand is substantially stable and substantially incapable of tipping, leaning or swaying with the viewable object mounted on the mounting platform.

[0038] According to a third aspect of the present invention, a method is provided for using a stand to hold and view a viewable object, wherein the stand comprises a base, a generally x-shaped mounting platform that includes a plurality of slots and clamps, the clamps including locking levers with rollers, the stand further comprising a mounting platform coupler, the method comprising adjusting a height of the base, coupling the generally x-shaped mounting platform to the base, positioning the viewable object onto the generally x-shaped mounting platform, clamping the viewable object onto the mounting platform with the clamps, adjusting a viewing angle of the mounting platform with respect to the user using the mounting platform coupler, and moving a first portion of the viewable object from a first and second clamp to a third and fourth clamp by rolling the first portion out from under the first and second clamp and inserting and rolling the first portion under the third and fourth clamps, such that a second and subsequent portions of the viewable object can now be viewed, and wherein the second and subsequent portions of the viewable object and the viewable object remains substantially undisturbed while the first portion is being moved.

[0039] According to the third aspect of the present invention, the method further comprises isolating a user selected portion of the viewable object with a removable strap attached to the generally x-shaped mounting platform, and adjusting a width of the stand. According to the second aspect of the present invention, the user is substantially supine. Each roller in the stand according to the third aspect of the present invention comprises a substantially spherical ball rotationally attached to the respective locking lever, or a substantially cylindrical rolling cylinder rotationally attached to the respective locking lever, or wherein the roller comprises a frictionally reduced surface attached to the respective locking lever.

[0040] According to the third aspect of the present invention, the method further comprises segregating a user selectable portion of the viewable object with a removable strap attached to the mounting platform, and wherein the viewable object comprises a book, and the user selectable portion comprises at least one page of the book.

[0041] According to the third aspect of the present invention, the viewable object comprises a laptop, wherein the step of moving a first portion is not performed, and wherein the method further comprises adjusting the position of one or more of the clamps within their respective slots to allow a user to accommodate a plurality of different sized laptops. The method according to the third aspect of the present invention further comprises adjusting the position of one or more of the clamps within their respective slots to allow a user to accommodate a plurality of different sized books, and the step of adjusting the height of the base comprises raising the height of the base by loosening a twist lock on the base to allow the user to raise the height of the base, and lowering the height of the base by loosening the twist lock on the base to allow the user to lower the height of the base.

[0042] Still further according to the third aspect of the present invention, the base includes a first and second base leg, each of the base legs including the twist lock, a first outer tube and a first inner tube, and a spring coupled between the first outer tube and the first inner tube, and wherein the steps of raising and lowering the height of the base comprises raising the inner tube up in relation to the outer tube via an expansion force provided by the spring, and lowering the inner tube in relation to outer tube by preventing the inner tube from dropping via the expansion force provided by the spring.

BRIEF DESCRIPTION OF THE DRAWINGS

[0043] The novel features and advantages of the present invention will best be understood by reference to the detailed description of the preferred embodiments that follows, when read in conjunction with the accompanying drawings, in which:

[0044] FIG. 1 illustrates a perspective view of a XDeck book/laptop holder short stand (short stand) according to a first embodiment of the present invention.

[0045] FIG. 2 illustrates a front view of the short stand shown in FIG. 1.

[0046] FIG. 3 illustrates a side view of the short stand shown in FIG. 1.

[0047] FIG. 4 illustrates a top view of the short stand shown in FIG. 1

[0048] FIG. 5 illustrates a side view of the short stand shown in FIG 1 in an expanded configuration.

[0049] FIGS. 6A and 6B illustrate perspective views of an XDeck book/laptop holder tall stand (tall stand) according to another embodiment of the present invention.

[0050] FIG. 6C illustrates a perspective view of a tall stand with an adjustable stabilizer armature providing a wedging stabilizing force for the tall stand under a piece of furniture according to an embodiment of the present invention.

[0051] FIG. 7 illustrates a front view of the tall stand shown in FIG. 6A.

[0052] FIG. 8 illustrates a side view of the tall stand shown in FIG. 6A.

[0053] FIG. 9 illustrates a top view of the tall stand shown in FIG. 6A.

[0054] FIGS. 10A-F illustrate perspective views of several different embodiments of a tall stand according to further embodiments of the present invention.

[0055] FIGS. 11A and 11B illustrate front perspective views of a mounting platform according to an embodiment of the present invention.

[0056] FIG. 12 illustrates a rear perspective view of the mounting platform shown in FIGS. 11A and 11B.

[0057] FIG. 13 illustrates a front view of the mounting platform shown in FIGS. 11A and 11B.

[0058] FIGS. 14A-D illustrate several left side views of several embodiments of the mounting platform shown in FIGS. 11A and 11B.

[0059] FIG. 15 illustrates a perspective view of slide clamps on a mounting platform according to an embodiment of the present invention.

[0060] FIG. 16 illustrates a side view of the slide clamps and mounting platform shown in FIG. 15.

[0061] FIG. 17A illustrates a side view of the slide clamp shown in FIG. 15.

[0062] FIG. 17B illustrates an expanded side view of an outermost portion of the slide clamp shown in FIG. 17A illustrating a rolling ball according to an embodiment of the present invention.

[0063] FIG. 18A illustrates an expanded side perspective view of the slide clamp shown in FIG. 15.

[0064] FIGS. 18B and 18C illustrate additional embodiments of a rolling ball used in the locking lever illustrated in FIG. 15 according to additional embodiments of the present invention.

[0065] FIG. 19 illustrates a perspective view of a mounting coupler in an open configuration according to an embodiment of the present invention.

[0066] FIG. 20 illustrates a perspective view of the mounting coupler shown in FIG. 19 in a coupled configuration according to an embodiment of the present invention.

[0067] FIG. 21 illustrates a side view of the mounting coupler shown in FIG. 19 attached to the mounting platform shown in FIG. 11 according to an embodiment of the present invention.

[0068] FIG. 22 illustrates an expanded side view of the mounting coupler shown in FIG. 19.

[0069] FIG. 23A illustrates a front view of a book strap according to an embodiment of the present invention.

[0070] FIG. 23B illustrates a front view of a book strap according to an alternative embodiment of the present invention.

[0071] FIG. 24A illustrates a front perspective view of the book strap shown in FIG. 23 restraining pages of a book according to an embodiment of the present invention.

[0072] FIG. 24B illustrates a front perspective view of a book and the book strap shown in FIG. 24A attached to the mounting platform shown in FIG. 11 according to an embodiment of the present invention.

[0073] FIGS. 25A-S illustrate several additional embodiments of a mounting platform according to an embodiment of the present invention.

[0074] FIGS. 26 and 27 illustrate a front and side view of short stand according to an alternative embodiment of the present invention.

[0075] FIG. 28 is a flow chart of a method for using the XDeck book/laptop stand according to an embodiment of the present invention.

[0076] FIG. 29 illustrates a front perspective view of the XDeck book/laptop stand retaining a laptop according to an embodiment of the present invention.

[0077] FIG. 30 illustrates a front perspective view of the XDeck book/laptop stand retaining a book according to an embodiment of the present invention.

[0078] FIG. 31 illustrates an XDeck book/laptop short stand on a bed retaining a book for use while the user is in a substantially supine position according to an embodiment of the invention.

[0079] FIG. 32 illustrates an XDeck book/laptop tall stand adjacent to a bed for use while the user is in a substantially supine position according to an embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0080] The various features of the preferred embodiments will now be described with reference to the drawing figures, in which like parts are identified with the same reference characters. The following description of the presently contemplated best mode of practicing the invention is not to be taken in a limiting sense, but is provided merely for the purpose of describing the general principles of the invention.

[0081] **I. Summary of the Several Embodiments of the Invention**

[0082] The XDeck book/laptop (book/laptop) stand 34 disclosed herein comprises two main components: a stand 10, 60, and a mounting deck 12. Mounting deck 12 comprises several major sub-components: mounting platform 2, slide clamps 4, slide clamp slots 6, and mounting platform coupler 8. Book/laptop stand 34 comprises at least two different embodiments: A short stand 10 and a tall stand 60. According to a preferred embodiment of the present invention, short stand 10 can be used by users when laying down, either partially or in a fully supine position, in bed, on a couch, the floor, or other locations. Similarly, tall stand 60 can be used when sitting in a chair, in a substantially supine position on a bed, standing, or other locations. Mounting platform 2, attached to either short or tall stand 10, 60, is adjustable to substantially any angle of inclination between the stands 10, 60 and the user, and is further configured to retain book 50 or laptop 52 securely, also at an angle of inclination. Further still, book/laptop stand 34 according to an embodiment of the present invention allows users to turn the pages of books substantially easily, without fear of dropping the book, even when the book is facing straight down over the user.

[0083] Book/laptop stand 34 allows users of laptop computers 52, readers of books 50, electronic book devices (e-books, i.e. Sony Reader), and console videogame (i.e. Xbox 360, Nintendo Wii, PlayStation2, and PlayStation3) players the widest available range of body positions while interacting with the above-mentioned media or equipment—from seated upright to substantially or fully supine. Users of the book/laptop stand 34 benefit tremendously by virtue of its adjustability, as the device can quickly and safely be adjusted to a comfort-enhancing position.

[0084] **II. Stands**

[0085] A. Short Stand 10

[0086] FIG. 1 illustrates a perspective view of a book/laptop holder short stand (short stand) 10 according to a first embodiment of the present invention. As shown in FIGS. 1-3, short stand 10 comprises a plurality of short stand components 15a-f. First and second short stand components 15a, b are substantially horizontally inclined, intended to rest on the floor, sofa, or bed within which a user is either seated, reclining or laying down (or somewhere in between these positions). Attached to distal ends of first and second short stand components 15a, b respectively are rotational couplers 62a, b, to which are attached fourth and sixth short stand components 15d, f. Fourth and sixth short stand components 15d, f can therefore rotate to approximately any angle with respect to first and second short stand components 15a, b because of rotational couplers 62a, b.

[0087] According to alternative embodiments of the present invention, rotational couplers 62a, b can be provided with detents at pre-set angles, or can be detent-free. Some examples of pre-set detent angles are detents set at every 5°, 10° or even 15°. The angles between detents need not be substantially the same, for example, there can be a first detent at 5°, then another at 15°, the third at 25°, and so on. Alternatively, rotational couplers 62a, b can be detent-free, rotating smoothly and can be set at nearly any desired angle. Further still, even

with the preset detents, the rotational couplers 62a, b can be smoothly adjustable between the pre-set detent angles.

[0088] Slidingly engaged to first and second short stand components 15a, b are third and fifth short stand components 15c, e. Third and fifth short stand components 15c, e are fixedly and rotationally engaged with fourth and sixth short stand components 15d, f. By virtue of the sliding engagement fixture between third and fifth short stand components 15c, e and first and second short stand components 15a, b, and further because third and fifth short stand components 15c, e are attached to fourth and sixth short stand components 15d, f, the weight of a laptop 52 or book 50 will be directly transferred to the horizontally inclined first and second short stand components 15a, b. At the upper end of third and fifth short stand components 15c, e are located flip lock levers 17a, b respectively. Flip lock levers 17a, b secure third and fifth short stand components 15c, e in place along fourth and sixth short stand components 15d, f such that any desired angle θ can be formed between first and fourth short stand components 15a and 15d, and between second and sixth short stand components 15b and 15f (as shown in FIG. 3), thereby adjusting the height of short stand 10. Loosening first and second flip lock levers 17a, b and then pushing the top portion of third and fifth short stand components 15c, e towards rotational couplers 62a, b folds stand 34 substantially flat, for ease of storage.

[0089] At an upper end of fourth and sixth short stand components 15d, f are first and fourth twist locks, 16a, d, respectively, which engage and retain first and second L-shaped armatures 14a, b, respectively. Twist locks 16, as those of ordinary skill in the art can appreciate, permit two separate components to be joined together. The twist locks allow a first component to slide within or alongside a second component when the twist lock is in a loosened state, and then, once relative positioning of the first and second components is complete, the twist lock can be tightened coupling the two components together. The

aforementioned description of twist locks is merely illustrative, and not meant to be limiting, and all different means for twist-locks known are considered to be included within the various embodiments of the present invention. At a distal end of first and second L-shaped armatures 14a, b are second and third twist locks 16b, c that engage sixth short stand component 15g. Coupled to sixth short stand component 15g is mounting platform 2 via mounting coupler 8, both of which are described in greater detail below. The net effect of twist locks 16a, d, and first and second L-shaped armatures 14a, b is to give the user the ability to adjust the height of short stand 10 to a desired height within the design limits of the components.

[0090] According to a preferred embodiment of the present invention, when a user wants to read a book 50 using book/laptop stand 34, the user places book 50 onto mounting platform 2, and secures it with clamps 4a-d, as more fully described in detail below. To obtain the most proper book height, third and fifth short stand components 15c, e are manipulated to push the angle between horizontal and angled portions (the angle between first and fourth short stand components 15a, d and between second and sixth short stand components 15b, f to about 58°. Flip locks 17a, b are then used to lock the third and fifth short stand components 15c, e at the desired position, thereby setting a desired angle between first and fourth short stand components 15a, d, and between second and sixth short stand components 15b, f. To fine tune the height of book 50 on book/laptop stand 34, the user can then extend the telescoping L-shaped armatures 14a, b to the desired height.

[0091] According to further alternative embodiments of the present invention, pre-set detents can be provided between fourth short stand component 15d and first L-shaped armature 14a, and between sixth short stand component 15f and second L-shaped armature 14b. The pre-set detents (at 0.5", 1.0", or other increments), can assist a user with safely and quickly adjusting the height of short stand 10. Further still, height adjustment can be further

assisted with the inclusion of two springs (one on each side) to assist user in raising the height of short stand 10, and substantially preventing short stand 10 from being lowered too rapidly because of a heavy laptop 52. In place of springs, an alternative embodiment of the present invention can utilize pneumatic cylinders to assist a user with safely and quickly adjusting the height of short stand 10.

[0092] For example, as seen in FIG. 3, which is a side view of short stand 10, the user can raise short stand 10 to a height of about 12"-14". In FIG. 5, which is a side view of short stand 10 in an expanded configuration, the user has raised the height to about 24"-30". As those of ordinary skill in the art can appreciate, any desired height of short stand 10 can be accomplished by suitable sizing of short stand components 15a-g, use of flip lock levers 17a, b, and use of telescoping L-shaped armatures 14a, b.

[0093] Furthermore, the width of short stand can be changed through use of second and third twist locks 16b, c and sixth short stand component 15g. By loosening either or both second or third twist locks 16b, c, sixth short stand component 15g can then be retracted into, or extracted from, either or both first and second L-shaped armatures 14a, b. According to a preferred embodiment of the invention, a typical user, laying down in bed, will adjust their short stand to a height of about 12"-14", and a width of about 28". The length of each of first and second short stand components 15a, b, according to a preferred embodiment of the present invention, is about 24". While the preferred embodiment of the present invention incorporates short stand component 15g of 20" in length, alternate embodiments could incorporate short stand component 15g of shorter or longer lengths. Furthermore, short stand component 15g could be made up of multiple interlocking pieces. FIG. 2 illustrates a front view of short stand 10, and FIG. 4 illustrates a top view of short stand 10 shown in FIG. 1.

[0094] FIG. 26 illustrates a front view of a different version of short stand 10 (hereinafter referred to as "short stand 10"") according to another embodiment of the present invention,

and FIG. 27 is a side view of short stand 10'. Short stand 10' looks similar to short stand 10, but is made up slightly different components. Short stand 10' comprises first and second short stand components 15a', b' that have both a substantially horizontal and an angled portion. Thus, the angle between the horizontal and angled portions of short stand components 15a', b' of short stand 10', according to an embodiment of the present invention, can be fixed at the time of manufacture. According to a preferred embodiment of the present invention, the angle between the substantially horizontal portion and angled portion of first and second short stand component 15a', b' is about 58°. According to a further embodiment of the present invention, rotational couplers 62a, b can be inserted between the horizontal and angled portions of short stand components 15a', b', thereby allowing the angle between the horizontal and angled portions to be adjustable, either continuously, or with the use of detents, at preset variable or constant angles. Short stand 10' further comprises first and third twist locks 16a', c', which are engaged with first and second L-shaped armatures 14a', b'. However, instead of there being an additional short stand component 15g' between first and second L-shaped armatures 14a', b', they are connected via second twist lock 16b'. Mounting platform 2 is attached to either of first and second L-shaped armatures 14a', b' via mounting coupler 8. FIG. 27 illustrates a side view of short stand 10' with laptop 52 retained securely thereon. The use of detents and springs as previously described in regard to short stand 10 applies equally as well to short stand 10'.

[0095] An alternative embodiment of either short stand 10 or 10' incorporates adjustable reading light(s) (L.E.D. or halogen, among other possibilities) into short stand components 15a, b and/or 15d, f as depicted in FIG. 1. These lights could be powered by, for example, batteries or ordinary household electrical service (120-volt AC).

[0096] FIG. 29 illustrates a front perspective view of the XDeck book/laptop stand 34 retaining laptop 52 according to an embodiment of the present invention. Laptop 52 is held

by clamps 4a-d securely in place so that a user can ergonomically lay in a substantially supine configuration and operate laptop 52 with ease and comfort. FIG. 30 illustrates a front perspective view of the XDeck book/laptop stand 34 retaining book 50 according to an embodiment of the present invention. Book 50 is held by clamps 4a-d securely in place so that a user can ergonomically lay in a substantially supine configuration and read book 50 in ease and comfort with the user's head substantially flat on the surface upon which the user lays. Also shown in FIG. 30 is book strap 54, discussed in greater detail below, that aids in retaining book 50 against mounting platform 2 according to an embodiment of the present invention.

[0097] B. Tall Stand 60

[0098] FIG. 6A illustrates a perspective view of book/laptop holder tall stand (tall stand) 60 according to another embodiment of the present invention. As discussed above, tall stand 60 can be used, according to a preferred embodiment of the present invention, by users that are standing up, or laying down on a bed. Tall stand 60 comprises tall stand base 64, first tall stand component 66a, first twist lock 16a, second tall stand component 66b, second twist lock 16b, L-shaped armature 14a, third twist lock 16c, adjustable stabilizer armature 76 and third tall stand component 66c, which is identical to short stand component 15g. Mounting platform 2 is coupled to third tall stand component 66c, which is substantially horizontal, via mounting coupler 8. A user can adjust the height of tall stand 60 by either of first and second twist locks 16a, b, and can adjust final placement of mounting platform 2 by either mounting coupler 8 or via twist lock 16c, and extending or retracting third tall stand component 66c. The use of detents, springs and pneumatic cylinders as previously described in regard to short stand 10 and short stand 10', applies equally as well to the structure and assembly of tall stand 60.

[0099] According to a preferred embodiment of the present invention, a user can locate tall stand base 64 under a bed such that tall stand components 66a, b stand adjacent to the side of the bed, and third tall stand component 66c and mounting platform 2 extend over the bed. Adjustable stabilizer armature (armature) 76a, as depicted in FIGS. 6A, 7 and 8, is substantially perpendicular to tall stand component 66a and substantially parallel to tall stand component 64. Armature 76a can be adjusted to apply upward pressure to the underside of a chair or bed to further improve the stability of tall stand 60. Armature 76a either slidingly engages tall stand component 66a, or is fabricated as an L-shaped component fixed to base 64 that slides up and down to engage the underside of the bed. In a preferred embodiment of the present invention, armature 76a protrudes from within tall stand component 66a and through the use of detents, springs and pneumatic cylinders, the user can raise or lower armature 76 such that it wedges under the bed. With armature 76a applying an upward force to the underside of the bed, base 64 is forced down onto the floor and a substantially secure footing is available for tall stand 60. The height of tall stand 60, coupled with an 8-10 pound laptop, for example, could make tall stand 60 susceptible to tipping and/or wobbling without the use of armature 76a. The use of detents, springs, and pneumatic cylinders as previously described in regard to short stand 10 and short stand 10' applies equally as well with armature 76a. Optionally, tall stand 60 can be fabricated without armature 76a. FIG. 6B illustrates an alternative embodiment of tall stand 60 with armature 76b according to an embodiment of the present invention. Armature 76b operates substantially similarly to armature 76a, and therefore a detailed description of its operation is omitted for purposes of brevity. FIG. 6C illustrates armature 76b on tall stand 60a wherein armature 76b is shown applying a force to the underside of a bed or chair. As a result of the upward force applied by armature 76b, and downward force applied by base 64, tall stand 60a is substantially immobile and stable, and can support a great deal of weight on mounting platform 8 such as, for example, a laptop 52,

without swaying or tipping. The combination of armature 76a and base 64 can be envisioned as an adjustable wedge. FIG. 7 illustrates a front view of tall stand 60, FIG. 8 illustrates a side view of tall stand 60, and FIG. 9 illustrates a top view of tall stand 60. FIGS 7-9 illustrate tall stand 60 with armature 76a though, as one of ordinary skill in the art can appreciate, armature 76b can be used equally as well, or no armature 76a, b can be used with tall stand 60.

[00100] FIGS. 10A-F illustrate a perspective view of several different embodiments of tall stand 60 according to further embodiments of the present invention. Shown in FIG. 10A is tall stand 60b according to an alternative embodiment of the present invention, wherein fourth tall stand component 66d, an 18" extender tube, takes the place of first and second tall stand components 66a, b, and first twist lock 16a. FIGS. 10B-F illustrate different embodiments of tall stand bases 64 according to alternative embodiments of the present invention. Although FIGS 10A-F do not include armature 76a, b, one of ordinary skill in the art of the present invention can appreciate that use of either armature 76a, b with the alternate embodiments of tall stand 60 shown in FIGS 10A-F is within the scope of the embodiments of the present invention.

[00101] According to an alternative embodiment of the present invention, a user can locate tall stand base 64 between the mattress and box spring of a typical bed such that tall stand components 66a, b stand adjacent to the side of the mattress and third tall stand component 66c and mounting platform 2 extend over the surface of the bed. According to still another alternative embodiment of the present invention, tall stand 60 incorporates adjustable reading light(s) (L.E.D. or halogen, among other possibilities) that can be attached to predetermined points on tall stand components 66a, b and/or 14a as depicted in FIG. 6. These lights could be powered by, for example, batteries or ordinary household electrical service (120-volt AC).

[00102] III. Mounting Deck 12

[00103] As discussed above, mounting deck 12 comprises several major subcomponents: mounting platform 2, slide clamp slots 6, slide clamps 4, and mounting platform coupler 8. Each will be discussed in detail in turn.

[00104] A. Mounting Platform 2

[00105] FIGS. 11A and B illustrate front perspective views of mounting platform 2 according to an embodiment of the present invention. Mounting platform 2, according to a preferred embodiment of the present invention, can be fabricated of plastic, for example polycarbonate, lexan, acrylic, high density polyethylene (HDPE) or polyvinyl chloride (PVC). According to an alternative embodiment of the present invention, wood, or metal can also be used to manufacture mounting platform 2, or even ceramics, glass, composite materials (i.e., carbon fibers), fiberglass, cardboard, particleboard, or still even quarried materials, such as marble or granite. Mounting platform 2 as illustrated in FIGS. 11-14, and 25A-F is generally X-shaped, though this need not always be the case. For example, mounting platform 2 could be manufactured as a rectangle, circle, square, oval or many other different shapes or designs, as depicted in FIGS. 25G-S. Mounting platform 2 comprises a front side 68, rear side 70, slide clamp slots 6a-d, mounting platform recessed area (recessed area) 72 and a mounting coupler access area (access area) 74. FIG. 12 illustrates a rear perspective view of the mounting platform shown in FIG. 11, FIG. 13 illustrates a front view of the mounting platform shown in FIG. 11.

[00106] C. Ventilation Area 72

[00107] Ventilation area 72 is designed to allow cooling air to circulate under and around laptop 52 that can be mounted on mounting platform 2, as shown in FIGS. 14A-D. FIGS. 14A-D illustrate several left side views of several embodiments of mounting platform 2 as shown in FIG. 11, according to different embodiments of the present invention. Laptop 52, as well known to any who use them, generates a great deal of heat due to their power usage.

Large amounts of electrical power are provided by either rechargeable batteries (generally nickel metal hydride battery packs, lithium ion battery packs, or, in the near future, fuel cells), or an external power supply. The large amounts of electrical power are needed for the high speed circuitry, especially microprocessors, which are operating at frequencies in excess of 2 GHz. High power usage leads to high amounts of heat being generated. The large amounts of heat generated by the circuits and batteries is removed by convection, conduction and radiation. Heat removed by convection is most efficiently accomplished through small fans located in laptops 52. Heat is also removed by conduction directly from the batteries and circuitry to the laptop case and heat sinks, wherein convective cooling also occurs. Cooling by radiation generally results in more conduction cooling because the radiated heat energy comes into contact with the laptop case and heat sinks, and then is removed by conduction and/or convection. Recessed area 72 on mounting platform 2 allows heat generated by laptop 52 to radiate from the lower surface of the case to an essentially open area wherein the heat can then dissipate into the ambient surrounding atmosphere. FIGS. 14C, D illustrate different embodiments of mounting platform 2 with different shaped ventilation areas 72. As shown in FIG. 14C, recessed area 72 is formed by a generally concave shaped mounting platform 2, and in FIG. 14D, a plurality of ventilation areas 72a-d are formed in mounting platform 2. Still further, either in conjunction with ventilation area 72 or as part of an alternative embodiment of the present invention wherein mounting platform 2 is of uniform thickness, mounting platform 2 can also be perforated with holes of various shapes and sizes to further facilitate cooling. According to still a further embodiment of the present invention, mounting platform 2 can incorporate cooling fan(s) that can be powered by, for example, batteries, ordinary household A.C. current or laptop-supplied power via a USB port and cable connected to laptop 52.

[00108] B. Slide Clamp Slots 6

[00109] Referring now to FIGS. 1, 2, 6, 7, 11, 12, 13, 25A-F, and 26, slide clamp slots 6a-d are shown. Slide clamp slots (slots) 6a-d are cut-out areas in mounting platform 2 that enable slide clamps 4a-d to be located at the best possible position to retain book 50 or laptop 52 onto mounting platform 2. According to a preferred embodiment of the present invention, slots 6a-d are areas that deliberately left open during the manufacturing of mounting platform 2. According to an alternative embodiment of the present invention, slots 6a-d can be cut-away if mounting platform 2 is made of wood or metal, or even plastic. As indicated in FIGS. 25A-F, many different alternative designs are possible for slots 6a-d, and these illustrations are by no means intended to encompass all the possible variations considered to be within the scope of the embodiments of the present invention. According to still a preferred embodiment of the present invention, the number of slots 6a-d numbers four, but again, as few as one can be used according to alternative embodiments of the present invention, or more than four, depending on the design of the mounting platform 2, aesthetics, or other considerations, all of which are considered to be within the scope of the various embodiments of the present invention. Use of slots 6a-d will be discussed below in reference to slide clamps 4a-d.

[00110] D. Slide Clamps 4

[00111] While mounting platform 2 itself is of fixed dimensions (the preferred shape a "squat" X), the adjustability of the slide clamps 4 within slots 6 enables many different devices to be held by book/laptop stand 34, including, but not limited to laptops 52, books 50, video games, and LCD monitors of different sizes, among other devices. As shown in FIGS. 15 through 18, slide clamps 4 resemble "quick release" bicycle seat post clamps in form and operation. Slide clamp 4 comprises several components: molded locking lever (locking lever) 26, clamp post 18, washers 20a, b, nut 24 (that attaches to the opposite end of the clamp post 18), slide clamp handle 27, and rolling ball 48.

[00112] To use slide clamps 4, the user releases the tension by rotating locking lever 26 upwards in the direction of arrow A (FIG. 17A) till it is substantially in-line and parallel with clamp post 18. To rotate locking lever 26 in the direction of arrow A, the user can insert a finger into slide clamp handle 27, which is located at an outermost portion 29 of locking lever 26. Relief of locking tension generally occurs when the round bulbous portion ("release point") 28 of locking lever 26 reaches clamp post 18. At that point, the effective length of slide clamp 4 increases from its closed or locked condition. Slide clamp 4 can then be slid substantially easily to any desired position within slots 6. To lock slide clamp 4, the user rotates locking lever 26 in the direction of arrow B (FIG. 17A) until slide clamp tension point 30 reaches collar 20a. At that point, slide clamp 4 is at its maximum tension point. According to a preferred embodiment of the present invention, the angle that should preferably be made between locking lever 26 and clamp post 18 and still maintain enough tension to lock a book 50 and/or laptop 52 to mounting platform 2 can be as much as about 30° above a line perpendicular to clamp post 18 (i.e., if one were to draw an imaginary line perpendicular to the top of clamp post 18, locking lever 26 must be within about +/- 15° of that imaginary line). Of course, from time to time, when reading book 50, the user will have to adjust the effective tension point of all of the slide clamps 4a-d as the number of pages increases or decreases under them by increasing or decreasing the effective length of clamp post 18, as needed. The effective length is the distance between the washer on rear side 70 of mounting platform 2 and the point where locking lever 26 is attached to clamp post 18.

[00113] While slide clamps 4 can be easily removed in their entirety from mounting platform 2, operationally there is no need to do so to adjust them. Locking lever 26 and most of clamp post 18 protrude from the top of mounting platform 2, held within slot 6 by nut 24 on rear side of mounting platform 70. Against both front and rear surfaces 68, 70 of mounting platform 2 are collars 20 a, b, preferably made with a rubber or plastic material, or,

optionally, of various types of metal, that provide some compression and friction between slide clamp 4 and mounting platform 2. Thus, locking lever 26 can effectively hold even a single page of book 50 in place, be it the first or last page.

[00114] The design of slide clamps 4a-d allows for free and easy movement within slots 6a-d by simply loosening the locking lever 26, as discussed above. When slide clamp 4 is moved to the desired position, "closing" locking lever 18 both tightens slide clamp 4 to mounting platform 2 and provides rigid retention points that either secure laptop 52, LCD monitor, or the pages of book 50. Slide clamps 6 can be manufactured from molded plastic, metal, or other materials. As discussed above, there can be a minimum of one slide clamp 4, or as many as four or even more, as determined partly by aesthetic determinations and the weight/size of the object to be retained. According to a preferred embodiment of the present invention, as shown in the above-mentioned drawings, four slide clamps 4a-d operate completely independently of each other within their respective slots 6a-d, though they work in unison to provide the desired retention functionality.

[00115] FIG. 17A illustrates a side view of an alternative embodiment of slide clamp 4, and FIG. 17B illustrates an expanded side view of a portion of slide clamp 4 shown in FIG. 17A illustrating rolling ball 48 according to a preferred embodiment of the present invention. Rolling ball 48 is a substantially spherical ball that is frictionally retained or press fitted within a partially spherical hole at an outermost portion 29 of locking lever 26. Rolling ball 48 provides a substantially reduced frictional surface that enables a user to slide pages from one side to another of book 50 when retained by slide clamps 4. When the user retains book 50 and the book's pages, rolling ball 48 is in direct contact with the book's pages and presses down upon them. To turn a page after reading it, the user can slide the page out from under locking lever 26 because rolling ball 48 rotates as the page is pulled out from under it. Similarly, the user can position the now turned page to the other side of book 50 by sliding it

under locking levers 26 and their rolling balls 48 located on the opposite side of book 50. Rolling ball 48 can also be used in slide clamp 4 shown in FIGS. 15, 16, and 18, as shown. According to several alternative embodiments of the present invention, rolling ball 48 can be replaced by a substantially frictionally reduced material such as plastic, different types of glasses, stainless steel, and other metals, or even paper products. Still further, rolling ball 48 can be a rolling cylinder 48a, or bead-shaped apparatus 48b, as shown in FIG. 18B, each of which rotates about axis A-A.

[00116] E. Mounting Platform Coupler 8

[00117] Attention is now directed to FIG. 12, which illustrates a rear perspective view of mounting platform 2 and mounting platform coupler 8. Mounting platform coupler (coupler) 8 is shown in greater detail in FIGS. 19-22. Coupler 8 adjustably rotationally connects mounting platform 2 to stands 10, 60 (as shown in FIGS. 1 and 6, among others). Coupler 8 comprises several sub-components: coupler rings 36a, b; coupler clamps 38a, b; first portion coupler base 40 and second portion coupler base 42. According to a preferred embodiment of the present invention, coupler 8 can include only a first base portion 40 that can be coupled or attached directly to rear side of mounting platform 70 via screws 44a, b, or even adhesive 46. Adhesive 46 comprises any type of appropriate adhesive material suitable for adhering the materials the coupler 8 and mounting platform 2 are manufactured from. Coupler 8 can also be attached to mounting platform 2, as shown in FIG. 21, via first and second coupler base portions 40, 42, and, according to another embodiment of the present invention, via adhesive 46. Screws 44a, b retain second portion coupler base 42 to rear side of mounting platform 70, and then adhesive 46 secures second portion coupler base 40 to first portion coupler base 42, thereby securing coupler 8 to mounting platform 2.

[00118] Prior to final assembly of book/laptop stand 34, the user will slide one of the components of short or tall stands 10, 60, through coupler rings 36a, b (for example, short

stand base component 15g, as shown in FIG. 1), then complete assembly of book/laptop stand 34. If coupler clamps 38a, b are in the positions as shown in FIG. 19, mounting platform 2 is free to rotate to about the base component. The user then positions mounting platform 2 at any desired position or angle with respect to stands 10, 60, and clamps mounting platform into position by pushing in towards the base component coupler clamps 38a, b, as shown in FIG. 20. Coupler clamps 38a, b clamp mounting platform 2 to the base component at the intended position, and the user can then place book 50, laptop 52, or other devices onto mounting platform 2, and lock them into place with slide clamps 4, after they have been put into their proper position (sliding in slots 6a-d). According to a further embodiment of the present invention, pre-determined angle detents can be provided at, for example, every 5°, 10°, 15°, and so on. The angle detents can be any set of angles, and need not be the same amount from any one detent to another detent. As one of ordinary skill in the art of the present invention can appreciate, any different set of detent angles is considered to be within the scope of the several different embodiments of the present invention. FIG. 22 is a close up side view of coupler 8 according to a preferred embodiment of the present invention.

[00119] According to a preferred embodiment of the present invention, loosening both coupler clamps 38a, b provides relatively little or no resistance to rotation of mounting platform 2. Closing either coupler clamp 38a or 38b provides greater rotational friction, so that the user can rotate mounting platform 2 without fear that, if loaded with laptop 52, it will be difficult to keep in a certain position. That is, closing either of coupler clamps 38a, b provides just enough retention force to keep mounting platform 2 relatively static, yet it can still be moved or rotated, but will not rotate freely.

[00120] F. Book Strap

[00121] FIG. 23A illustrates a front view of a first book strap 54a used with book/laptop stand 34 according to an embodiment of the present invention. Book strap 54a is used to

facilitate retention of book 50 on book/laptop stand 34. As shown in FIG. 23, book strap 54a is formed from a single piece of preferably translucent material, according to a preferred embodiment of the present invention, a clear plasticized material such as vinyl or other synthetic polymer, including neoprene. As one skilled in the art of the present invention can appreciate, however, book strap 54a can be made from any substantially flexible material, including, but not limited to, leather, fabric, cloth, animal skins, paper, or other materials, whether or not they are translucent. To use book strap 54a, the user first places book 50 onto book/laptop stand 34 and secures it according to the method discussed above (and below in regard to FIG. 26), and then isolates a section of pages the user believes will be read at the present time. The user then inserts the selected group of pages through open area 56 and places first and second straps 58a, b over the top of book 50 and book/laptop stand 34 to upper securing points located on rear side of mounting platform 68, and places third and fourth straps 58c, d, under the bottom of book 50 and book/laptop stand 34 to lower additional securing points located on rear side of mounting platform 68. The effect of book strap 54a is to isolate several pages of book 50 (as shown in FIG. 24A), and to assist in retention of book 50 onto book/laptop stand 34. Following placement and securing of first through fourth straps 58a-d onto rear side of mounting platform 68, the pages are then placed under rolling balls 48 of one or more locking levers 26 of slide clamps 4. The user is now ready to read the retained book, and can easily move pages from one side of the book to the other, as shown in FIG. 24B. As shown in FIG. 33B, and according to a preferred embodiment of the present invention, book strap 54b is generally rectangular in shape with an open area 56 for the pages of book 50 to fit within. Book strap 54b operates similarly to book strap 54a in its interaction with book 50 and mounting platform 2. According to a preferred embodiment, holes 55 are spaced ½" apart for about 5" on each side and both ends of book strap 54b as shown in FIG. 23B. According to still another embodiment of the present

invention, book straps 54a, b can be constructed of a rigid material, molded with a bit of flexibility so both sides could accommodate different thicknesses of left and right sides of the book. According to still a further embodiment of the present invention, book straps 54a, b can be fabricated from one, two or more separate components, for example, a left and a right strap.

[00122] IV. Method of Using the XDeck Book/Laptop Stand

[00123] Attention is now directed toward FIG. 28, which is a flow chart of a method 100 for using book/laptop stand 34 according to an embodiment of the present invention. Method 100 generally discusses use of book/laptop stand 34 in regard to viewing/using laptop 52, but applies equally as well to books 50, except where otherwise noted and discussed. Further, for the purpose of this discussion of an exemplary embodiment of the present invention, it is presumed that there are four slide clamps as shown in the preferred embodiment of the present invention, though, as discussed above, there can be only one slide clamp 4, and as many as desired. To use book/laptop stand 34 with laptop 52, the user will assemble or have assembled book/laptop stand 34 in step 102, and position book/laptop stand 34 in step 104. The user can then preliminarily adjust the height of book/laptop stand 34 in step 106 before placing laptop 52 on to book/laptop stand 34. Adjustment of height in step 106 can comprise use of flip lock levers 17a, b to grossly adjust height of book/laptop stand 34, and can further include adjustment of height as described above using L-shaped armatures 14a, b (if present in the particular stand in use).

[00124] In step 108, the user places laptop 52 on mounting platform 2 and then in step 110, moves lower slide clamps 4c, d through slots 6c, d so that clamp posts 18c, d of lower slide clamp 4c, d contacts, or is close to contacting, the front edge of laptop 52, on both the left and right sides of lap top 52, and clamp posts 18a, b of upper slide clamps 4a, b touches, or almost touches, the left and right sides of the laptop's bottom piece as close to the LCD

screen as possible. With slide clamps 4a-d in place, the user "closes" the locking levers 26a-d of each slide clamp 4a-d, in step 110, pushing them so they are firmly up against the surface of laptop 52 itself, the clamping action also further tightening the slide clamps 4a-d at those positions. The wide range of adjustability of slide clamps 4a-d within slots 6a-d means a user can nearly always find positions for slide clamps 4a-d that do not substantially impede any edge-mounted buttons, optical media drawers, USB/FireWire/Ethernet ports, wireless Cards, among other components, of laptop 52.

[00125] In step 114, with laptop 52 properly attached to mounting platform 2, the user can then make final adjustments in positioning the book/laptop stand 34 and laptop 52 over their lap, torso, or chest, depending on the user's body position. As discussed above, the user can adjust the height of the book/laptop stand 34 and its width using twist-locks 16. In step 116, the user can make final adjustments of the tilt-angle of mounting platform 2 and attached laptop 2 using coupler 8 and coupler clamps 38a, b. With both coupling clamps 38a, b fully released, mounting platform 2 rotates substantially freely around the axis of base components 15g. Mounting platform 2 can be rotationally adjusted with just one of coupler clamps loosened, providing a frictionally retarded rotational motion thereby substantially preventing an unexpected, quick rotation of laptop 52 in a way that surprises or potentially strikes the body of the user.

[00126] While performing step 114 discussed above, if the user is using book/laptop stand 34 in a substantially supine position, a significant ergonomic benefit is derived by adjusting the angle of mounting platform 2 so that it is roughly perpendicular to the surface the user is laying on. The height of mounting platform 2 can then be adjusted so that the user can operate the keyboard and trackpad while his/her upper arms are fully resting on the laying surface alongside the user's body. Book/laptop stand 34 can then be moved to a position such that the keyboard/trackpad of laptop 52 can be operated with the lower arms

perpendicular to the laying surface. In this way, a straight line is achieved by the lower arms, wrists, and hands, and fatigue is dramatically reduced. Naturally, the design of laptops themselves allows the LCD screen to be angled for best viewing.

[00127] As discussed above, method 100 equally applies to use of book/laptop stand 34 with books 50. Instead of placing laptop 52 in step 108 onto mounting platform 2, book 50 is placed "face up" by the user onto mounting platform 2, and opened to roughly the page where the user wishes to begin reading. In step 110, lower slide clamps 4c, d are adjusted within slots 6c, d so that clamp posts 18c, d touch, or almost touch, the bottom edge of the opened book 50. Locking levers 27c, d of lower slide clamps 4c, d are then tightened (step 112) to retain the pages at the lower right and left corners of book 50. Upper slide clamps 4a, b are then adjusted within slots 6a, b so that when locking levers 6a, b are tightened, the inner surfaces of locking levers 26a, b themselves retain the opened pages at the top left and top right of book 50. Unless the user decides to read while substantially supine or steeply reclined, the action of slide clamps 4a-d both secures book 50 to mounting platform 2 and retains its pages. In step 114, the user can adjust the height (or width) of book/laptop stand 34, as discussed above, and then adjust the viewing angle (step 116). In decision step 118, the user determines whether or not to use book strap 54. If the user decides not to use book strap 54 ("No" path from decision step 118) method 100 proceeds to step 122.

[00128] Page turning (step 122) is easily accomplished by slipping a page from under rolling balls 48b, d (presuming that the user is turning pages from left to right) located at outermost portion 29b, d of locking levers 26b, d on the right side of book 50, flipping the page, then tucking it under rolling balls 48a, c of outermost portions 29a, c of locking levers 26a, c located on slide clamps 4a, c on the left side of book 50. The wide range of adjustability of the locking levers 26a-d ensures that they can be progressively tightened when the halves of book 50 begin to significantly vary in thickness due to the progression

through the pages. Slots 6a-d ensures that slide clamps 4a-d themselves never need obscure the actual text.

[00129] If the user opts to read while either completely or substantially supine or extremely reclined, this necessitates the "face" of book 50 being angled downward, toward the user. To both help secure book 50 in these circumstances and to facilitate the turning of pages by allowing the slide clamps 4a-d to not be clamped so tightly against the pages, the user can determine whether to use book strap 54 in decision step 118. If the user decides to use book strap 54 ("Yes" path from decision step 118), the user inserts book strap 54 in step 120. The user then opens book 50 so that either all the pages, or just the portion that may be read during the reading session, are held together and slipped through open area 56 of book strap 54. Book strap 54 then drapes over the top of the mounting platform 2 and loops under the bottom of mounting platform 2, attaching to posts or snaps that are located on rear side of mounting platform 70. Other mechanisms for retaining straps 58a-d of book strap 54 include buckles, and snaps, among other retention means. With book strap 54 firmly securing book 52 against mounting platform 2, slide clamps 4a-d are positioned and tightened/closed at each corner of book 50 just as much as is necessary to retain pages. When the pages are downward facing, gravity actually works for the user in this regard, pulling the unsecured pages on the left and right sides of the book's spine toward the inner surfaces of locking levers 26a-d. Then, as discussed above, in step 122, the user can easily turn pages from one side of the book to the other.

[00130] Generally, a user desiring to read book 50 using book/laptop stand 34 while either substantially or fully supine or extremely reclined will need to raise the height of the book/laptop stand 34 to achieve a preferred distance between the pages and the eyes. For most people, an ideal distance is an arm's length from the eyes to book 50. Another adjustment may be desirable when using the book/laptop stand 34 to read books 50 while

substantially or fully supine or extremely reclined: in addition to being able to rotate 360 degrees around base components 15g, mounting platform 2 itself can swivel 360° (i.e., rotate). Further more, according to an alternative embodiment of the present invention, mounting coupler 8 can include several or more predetermined angular detents of at 90°, 180°, 270°, and 360°, to accommodate taller books or achieve a preferred arrangement of slide clamps 4a-d. Further still, according to still another embodiment of the present invention, the detents can be provided at 5°, 10°, or other angular separations. As those of ordinary skill in the art of the present invention can appreciate, the separations between detent positions need not be the same angle between each detent. When used at a height high enough to facilitate supine reading, it may be desirable, particularly with heavier books, to actually flip book/laptop stand 34 90° in terms of its orientation over the user's body (versus that shown in FIG. 1, which is substantially vertical, to that of a substantially horizontal orientation). Further still, the mounting coupler 8 can have detents in its rotational adjustments, so that a user can more easily select a swivel angular position of mounting coupler 8.

[00131] Using the book/laptop stand 34 to facilitate video gaming is similar to using it with laptop computer 52. When using a console-style videogame (Xbox 360, PlayStation3, etc.), the user mounts a (thin panel) LCD monitor that serves as the monitor for the videogame to mounting platform 2 using slide clamps 4a-d, as described above. Adjustment of the angle/tilt of mounting platform 8 with an attached LCD screen and the height of the mounting platform 2 and attached screen can also be adjusted as discussed above.

[00132] As discussed above, according to further embodiment of the present invention, various other means can be employed to suspend book/laptop stand 34 over the user at the desired height. Foremost among these is tall stand 60 that rests on the floor, instead of the short stand 10, which generally rests on the surface the user is laying on. The height of mounting platform 2 over the user is adjusted by twist locks 16a, b, as shown in FIG. 6.

Using mounting deck 12 in conjunction with tall stand 60 can be a preferred way to use book/laptop stand 34 while seated or slightly reclined in a chair, as mounting deck 12 can easily emulate a tiltable table-like surface. Mounting deck 12 can also be used with a bed-frame mount, a bedrail mount (for hospital beds), and a wall-mounted articulating arm.

[00133] When mounting deck 12 is used in conjunction with short stand 10, simply loosening twist locks 16a, d atop short stand base components 15 can allow them to be folded inward, rotating clockwise on the left and counter-clockwise on the right until they're touching rear side of mounting platform 70. The book/laptop stand 34 can then easily be stored under a bed, for example, or leaned up against a wall, taking up very little floor space. Short stand 10 (and tall stand 60) is also designed to be stored or transported easily, as it's comprised of several individual pieces that interlock, as discussed in detail above.

[00134] The present invention has been described with reference to certain exemplary embodiments thereof. However, it will be readily apparent to those skilled in the art that it is possible to embody the invention in specific forms other than those of the exemplary embodiments described above. This may be done without departing from the spirit and scope of the invention. The exemplary embodiments are merely illustrative and should not be considered restrictive in any way. The scope of the invention is defined by the appended claims and their equivalents, rather than by the preceding description.

[00135] All United States patents and applications, foreign patents, and publications discussed above are hereby incorporated herein by reference in their entireties.

WHAT IS CLAIMED IS:

1. A stand for use in holding a viewable object for a user, comprising:

a base;

a mounting platform that includes a plurality of slots and a plurality of clamps, wherein each slot contains a clamp, and further wherein the clamp is configured to secure the viewable object to the generally x-shaped mounting platform, wherein,

each of the clamps includes a locking lever, and further wherein

each locking lever includes a roller configured to allow a user to move a portion of the viewable object when desired; and

a mounting platform coupler configured to frictionally engage the generally x-shaped mounting platform at a user selectable angle to the base.

2. The stand according to claim 1, wherein the mounting platform is generally x-shaped.

3. The stand according to claim 1, wherein the mounting platform comprises:

a first substantially planar surface configured to hold the viewable object in a planar relationship with the user; and

a second substantially planar surface substantially parallel to the first substantially planar surface; and

a recessed area formed between the first and second substantially planar surfaces, wherein the recessed area is configured to ventilate excess heat generated by the viewable object.

4. The stand according to claim 1, wherein the mounting coupler is configured to frictionally engage the base at any one of a set of predetermined detent angles.

5. The stand according to claim 1, wherein the base is configured to be adjusted in width and/or height, and further wherein a plurality of detent angles and positions are provided to adjust the width and/or height of the base.

6. The stand according to claim 1, further comprising:

an adjustable stabilizer armature adjustable in height above the base, wherein the adjustable stabilizer armature is configured to provide a wedging force to an underside of an

object such that the stand is substantially stable and is substantially incapable of tipping, swaying or leaning as a result of securing the viewable object to the mounting platform.

7. The stand according to claim 1, wherein the base comprises:

a first and second L-shaped cross bar, the first and second L-shaped cross bars including a first end and a second end; and

a first and second base leg, the first and second base legs including a substantially horizontal portion and an angled portion, wherein

the first and second base legs are configured to frictionally engage the first end of the first and second L-shaped cross bars at the angled portion of the first and second base legs, and wherein

the first and second L-shaped cross bars are configured to frictionally engage each other at their respective second ends.

8. The stand according to claim 7, wherein the angled portion of the first and second base legs can be formed at an angle from about 48° to about 68° with respect to the substantially horizontal portion.

9. The stand according to claim 7, wherein the angled portion of the first and second base legs can be formed at an angle from about 53° to about 63° with respect to the substantially horizontal portion.

10. The stand according to claim 7, wherein the angled portion of the first and second base legs can be formed at an angle of about 58° with respect to the substantially horizontal portion.

11. The stand according to claim 7, wherein the base further comprises:

a rotational coupler configured to rotationally couple the substantially horizontal portion to the angled portion of each of the first and second base legs.

12. The stand according to claim 11, wherein the angled portion of the first and second base legs are configured to be adjusted at a plurality of angles, and wherein a plurality of detent angles are provided to adjust the angled portion of the first and second base legs.

13. The stand according to claim 12, wherein the detent angles are substantially equally spaced at about 5° apart.

14. The stand according to claim 12, wherein the detent angles are not substantially equally spaced apart.

15. The stand according to claim 7, wherein the first and second cross bars are replaced by a single cross bar having a first and second end, and the single cross bar is configured to frictionally engage the angled portion of the first and second base legs.

16. The stand according to claim 7, further comprising:

means for adjusting a width of the stand.

17. The stand according to claim 16, wherein the means for adjusting the width of the stand comprises:

adjustment of the frictional engagement at the second ends of the first and second L-shaped cross bars thereby adjusting the distance between the first and second base legs.

18. The stand according to claim 1, wherein the base comprises:

a substantially "[" shaped cross bar, wherein the cross bar includes a first and second end; and

a first and second base leg, the first and second base legs including a substantially horizontal portion and an angled portion rotationally coupled to the substantially horizontal portion, wherein

the first and second base legs are configured to frictionally engage the first and second end of the substantially "[" shaped cross bar at the angled portion of the first and second base legs respectively.

19. The stand according to claim 18, wherein the substantially "[" shaped cross bar comprises:

a first and second substantially "L" shaped cross bar part, each of the first and second cross bar part comprising a first and second end; and

a substantially straight cross bar part, the substantially straight cross bar part comprising a first and second end, wherein,

the first end of the "L" shaped cross bar parts are configured to frictionally engage the angled portion of the first and second base leg, respectively, and

the second end of the "L" shaped cross bar parts are configured to frictionally engage the first and second end of the substantially straight cross bar part, respectively.

20. The stand according to claim 18, wherein the angled portion of the first and second base legs is rotated to form an angle from about 48° to about 68° with respect to the substantially horizontal portion.

21. The stand according to claim 18, wherein the angled portion of the first and second base legs can be rotated to form an angle from about 53° to about 63° with respect to the substantially horizontal portion.

22. The stand according to claim 18, wherein the angled portion of the first and second base legs can be rotated to form an angle of about 58° with respect to the substantially horizontal portion.

23. The stand according to claim 18, wherein the angled portion of the first and second base legs are configured to be adjusted at a plurality of angles, and wherein a plurality of detent angles are provided to adjust the angled portion of the first and second base legs.

24. The stand according to claim 23, wherein the detent angles are substantially equally spaced at about 5° apart.

25. The stand according to claim 23, wherein the detent angles are not substantially equally spaced apart.

26. The stand according to claim 18, wherein each of the first and second base legs are further configured to rotationally fold together such that the substantially horizontal portion and the angled portion are substantially parallel and adjacent one another.

27. The stand according to claim 18, wherein the angled portion of each of the first and second base legs further comprise:

a first outer tube;

a first inner tube spring coupled to the first outer tube; and

a twist lock configured to retain the first inner tube at a user selectable height with respect to the first outer tube as a result of the spring force applied by the spring between the first outer tube and the first inner tube.

28. The stand according to claim 18, wherein the base further comprises:

a rotational coupler configured to rotationally couple the substantially horizontal portion to the angled portion of each of the first and second base legs.

29. The stand according to claim 1, wherein the user can occupy a range of positions from a substantially supine position to a substantially sitting up position.

30. The stand according to claim 1, further comprising:

means for adjusting a width of the stand.

31. The stand according to claim 30, wherein the means for adjusting the width of the stand comprises:

means for adjusting the width of the "[" shaped cross bar, wherein the means for adjusting the width of the "[" shaped cross bar comprises

a first and second substantially "L" shaped cross bar part, each of the first and second cross bar part comprising a first and second end; and

a substantially straight cross bar part, the substantially straight cross bar part comprising a first and second end, wherein,

the first end of the "L" shaped cross bar parts are configured to frictionally engage the angled portion of the first and second base leg, respectively, and

the second end of the "L" shaped cross bar parts are configured to frictionally engage the first and second end of the substantially straight cross bar part, respectively, wherein adjustment of the width of the "[" shaped cross bar comprises

adjustment of the frictional engagement at the second end of the first L-shaped cross bar and the substantially straight cross bar, or,

adjustment of the frictional engagement at the second end of the second L-shaped cross bar, or

adjustment of the frictional engagement at the second end of the 1st L-shaped cross bar and the substantially straight cross bar, and

adjustment of the frictional engagement at the second end of the 2nd L-shaped cross bar and the substantially straight cross bar.

32. The stand according to claim 1, wherein the plurality of slots comprises:

a first upper pair of slots, each of the respective upper pair of slots having both a substantially horizontal portion, and an angled portion that is formed at about a 45° angle with respect to the substantially horizontal portion; and

a second lower pair of slots, each of the respective lower pair of slots having both a substantially horizontal portion, and an angled portion that is formed at about a 140° angle with respect to the substantially horizontal portion.

33. The stand according to claim 1, wherein each roller comprises a substantially spherical ball rotationally attached to the respective locking lever.

34. The stand according to claim 1, wherein each roller comprises a substantially cylindrical rolling cylinder rotationally attached to the respective locking lever.

35. The stand according to claim 1, wherein the roller comprises a frictionally reduced surface attached to the respective locking lever.

36. The stand according to claim 1, wherein the viewable object comprises a laptop computer, and wherein

the slots are configured to allow a user to adjust the clamps to accommodate a plurality of different sized laptops.

37. The stand according to claim 1, further comprising:

a removable strap attached to the mounting platform, and configured to segregate a user selectable portion of the viewable object.

38. The stand according to claim 37, wherein the viewable object comprises a book, and the user selectable portion comprises at least one page of the book.

39. A method of enabling a user to hold and view a viewable object in a stand, wherein the stand comprises a base, a generally x-shaped mounting platform that includes a

plurality of slots and clamps, the clamps including locking levers with rollers, the stand further comprising a mounting platform coupler, the method comprising:

providing a user with the stand, wherein the user employs the stand to hold and adjustably view the viewable object by:

adjusting a height of the base;

coupling the generally x-shaped mounting platform to the base;

positioning the viewable object onto the generally x-shaped mounting platform;

clamping the viewable object onto the mounting platform with the clamps;

adjusting a viewing angle of the mounting platform with respect to the user using the mounting platform coupler; and

moving a first portion of the viewable object from a first and second clamp to a third and fourth clamp by rolling the first portion out from under the first and second clamp and inserting and rolling the first portion under the third and fourth clamps, such that a second and subsequent portions of the viewable object can now be viewed, and wherein the second and subsequent portions of the viewable object and the viewable object remains substantially undisturbed while the first portion is being moved.

40. The method according to claim 39, further comprising:

isolating a user-selected portion of the viewable object with a removable strap attached to the generally x-shaped mounting platform.

41. The method according to claim 39, further comprising:

adjusting a width of the stand.

42. The method according to claim 39, wherein the user is substantially supine.

43. The stand according to claim 39, wherein each roller comprises a substantially spherical ball rotationally attached to the respective locking lever.

44. The method according to claim 39, wherein each roller comprises a substantially cylindrical rolling cylinder rotationally attached to the respective locking lever.

45. The method according to claim 39, wherein the roller comprises a frictionally reduced surface attached to the respective locking lever.

46. The method according to claim 39, further comprising:

segregating a user selectable portion of the viewable object with a removable strap attached to the mounting platform.

47. The method according to claim 46, wherein the viewable object comprises a book, and the user selectable portion comprises at least one page of the book.

48. The method according to claim 39, wherein the viewable object comprises a laptop, wherein the step of moving a first portion is not performed, and wherein the method further comprises:

adjusting the position of one or more of the clamps within their respective slots to allow a user to accommodate a plurality of different sized laptops.

49. The method according to claims 39 further comprising:

adjusting the position of one or more of the clamps within their respective slots to allow a user to accommodate a plurality of different sized books.

50. The method according to claim 39, wherein the step of adjusting the height of the base comprises:

raising the height of the base by loosening a twist lock on the base to allow the user to raise the height of the base; and

lowering the height of the base by loosening the twist lock on the base to allow the user to lower the height of the base.

51. The method according to claim 50, wherein,

the base includes a first and second base leg,

each of the base legs including the twist lock,

a first outer tube and a first inner tube, and

a spring coupled between the first outer tube and the first inner tube, and

wherein the steps of raising and lowering the height of the base comprises:

raising the inner tube up in relation to the outer tube via an expansion force provided by the spring; and

lowering the inner tube in relation to outer tube by preventing the inner tube from dropping via the expansion force provided by the spring.

52. The method according to claim 39, further comprising:

lifting an adjustable stabilizing armature that is coupled to the stand against an underside of an object, thereby providing a wedging force such that the stand is substantially stable and substantially incapable of tipping, leaning or swaying with the viewable object mounted on the mounting platform.

53. A method of using a stand to hold and view a viewable object, wherein the stand comprises a base, a generally x-shaped mounting platform that includes a plurality of slots and clamps, the clamps including locking levers with rollers, the stand further comprising a mounting platform coupler, the method comprising:

adjusting a height of the base;

coupling the generally x-shaped mounting platform to the base;

positioning the viewable object onto the generally x-shaped mounting platform;

clamping the viewable object onto the mounting platform with the clamps;

adjusting a viewing angle of the mounting platform with respect to the user using the mounting platform coupler; and

moving a first portion of the viewable object from a first and second clamp to a third and fourth clamp by rolling the first portion out from under the first and second clamp and inserting and rolling the first portion under the third and fourth clamps, such that a second and subsequent portions of the viewable object can now be viewed, and wherein the second and subsequent portions of the viewable object and the viewable object remains substantially undisturbed while the first portion is being moved.

54. The method according to claim 53, further comprising:

isolating a user selected portion of the viewable object with a removable strap attached to the generally x-shaped mounting platform.

55. The method according to claim 53, further comprising:

adjusting a width of the stand.

56. The method according to claim 53, wherein the user is substantially supine.

57. The stand according to claim 53, wherein each roller comprises a substantially spherical ball rotationally attached to the respective locking lever.

58. The method according to claim 53, wherein each roller comprises a substantially cylindrical rolling cylinder rotationally attached to the respective locking lever.

59. The method according to claim 53, wherein the roller comprises a frictionally reduced surface attached to the respective locking lever.

60. The method according to claim 53, further comprising:

segregating a user selectable portion of the viewable object with a removable strap attached to the mounting platform.

61. The method according to claim 60, wherein the viewable object comprises a book, and the user selectable portion comprises at least one page of the book.

62. The method according to claim 53, wherein the viewable object comprises a laptop, wherein the step of moving a first portion is not performed, and wherein the method further comprises:

adjusting the position of one or more of the clamps within their respective slots to allow a user to accommodate a plurality of different sized laptops.

63. The method according to claims 53 further comprising:

adjusting the position of one or more of the clamps within their respective slots to allow a user to accommodate a plurality of different sized books.

64. The method according to claim 53, wherein the step of adjusting the height of the base comprises:

raising the height of the base by loosening a twist lock on the base to allow the user to raise the height of the base; and

lowering the height of the base by loosening the twist lock on the base to allow the user to lower the height of the base.

65. The method according to claim 64, wherein

the base includes a first and second base leg,

each of the base legs including the twist lock,

a first outer tube and a first inner tube, and

a spring coupled between the first outer tube and the first inner tube, and

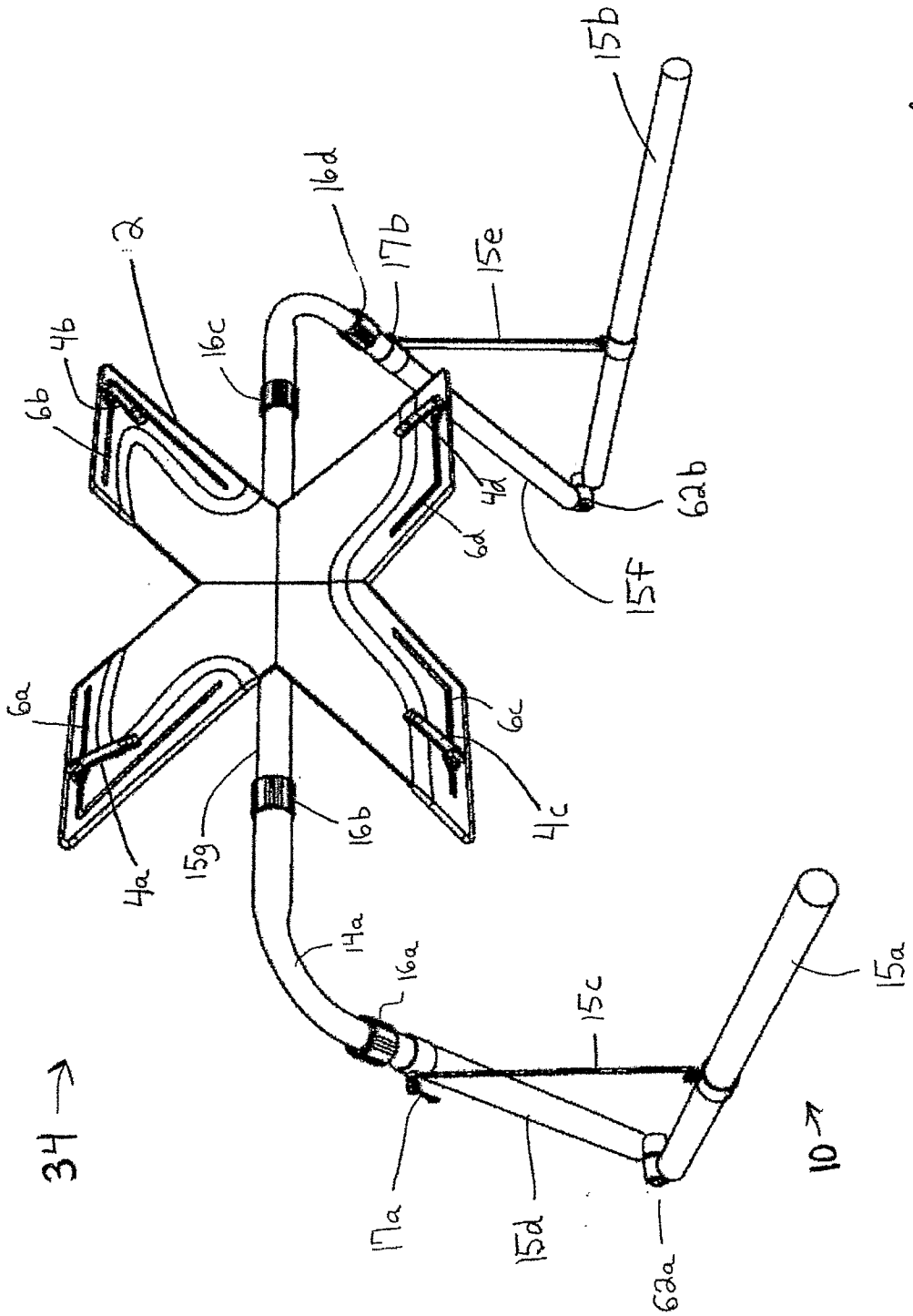
wherein the steps of raising and lowering the height of the base comprises:

raising the inner tube up in relation to the outer tube via an expansion force provided by the spring; and

lowering the inner tube in relation to outer tube by preventing the inner tube from dropping via the expansion force provided by the spring.

66. The method according to claim 53, further comprising:

lifting an adjustable stabilizing armature that is coupled to the stand against an underside of an object, thereby providing a wedging force such that the stand is substantially stable and substantially incapable of tipping, leaning or swaying with the viewable object mounted on the mounting platform.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16d
17b
15e
2
16c
4b
6b
62b
4d
6d
15f
6a
6c
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17a
15d
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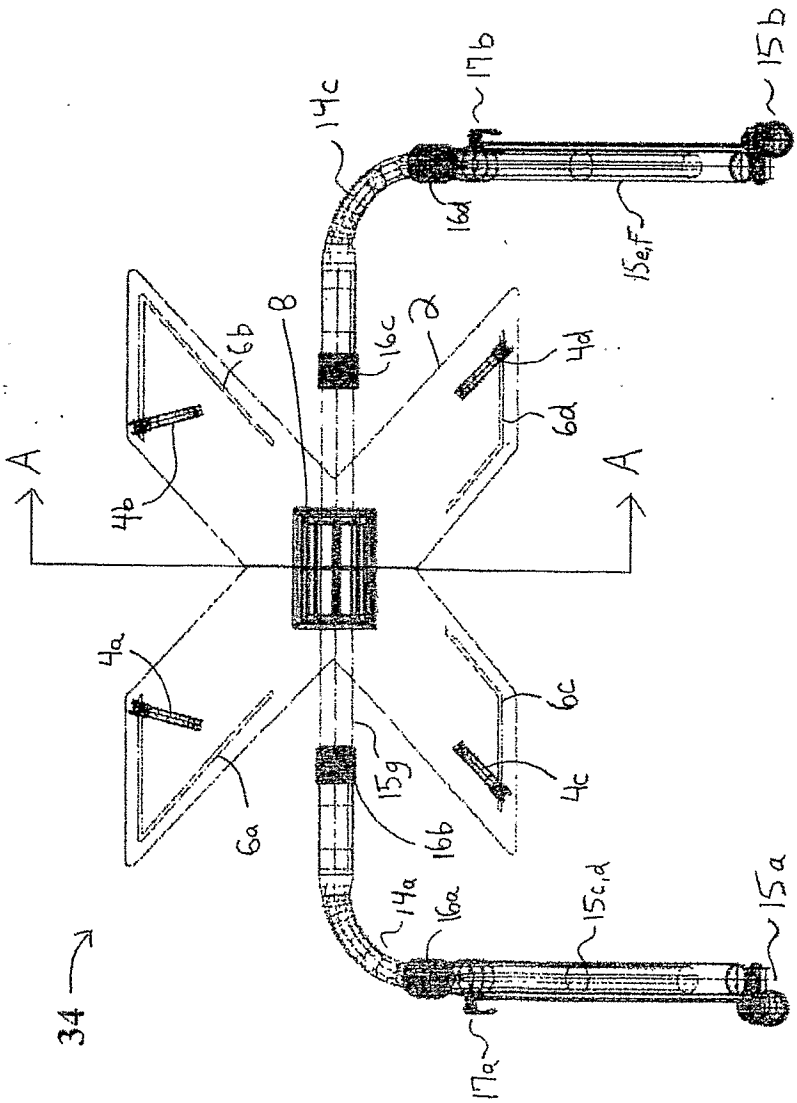
FIG. 1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4b
4c
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8
14a
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FIG. 2

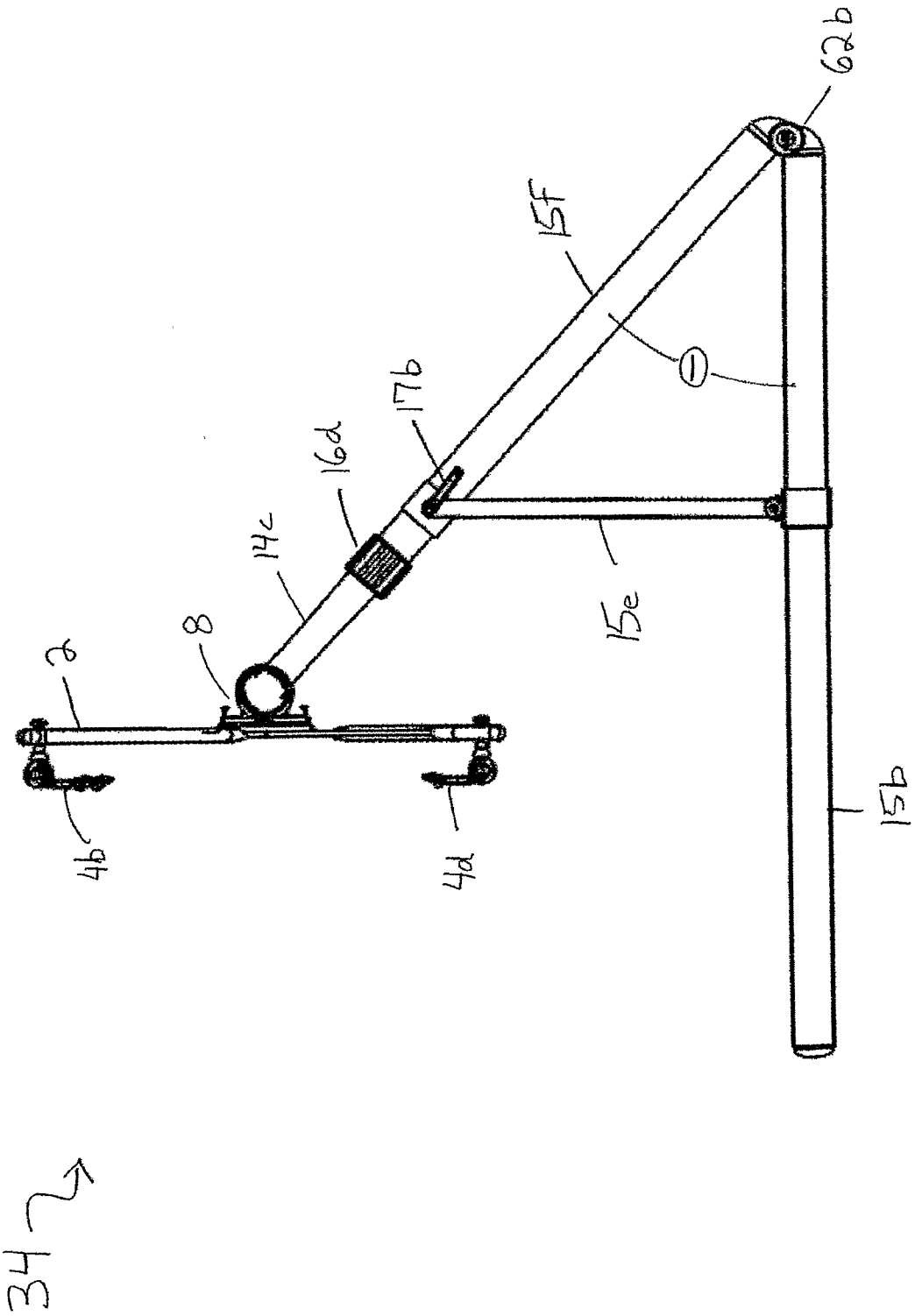


FIG. 3

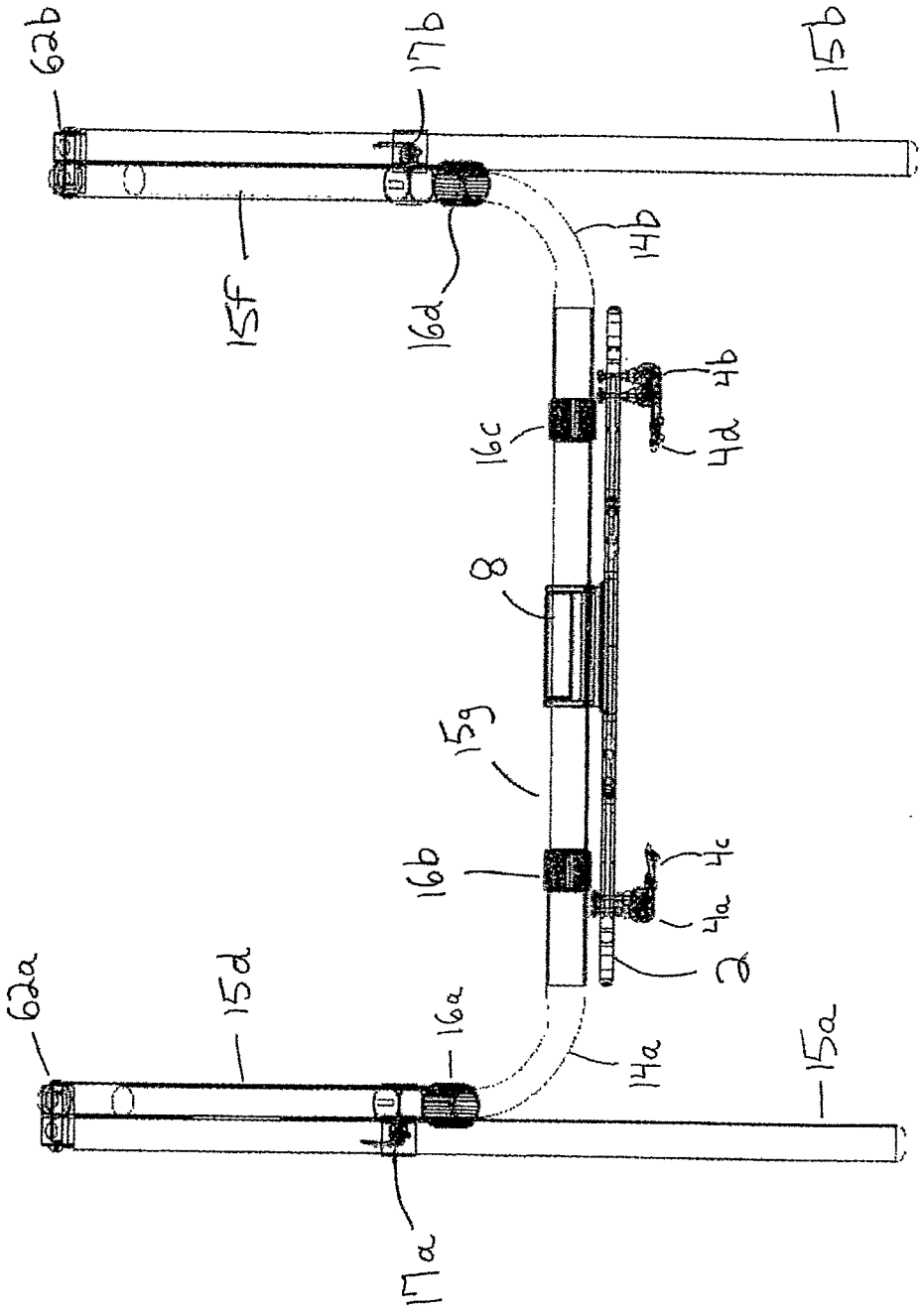

62b
17b
15b
15F
16d
14b
4b
4d
16c
8
15g
16b
4c
4a
2
62a
15d
16a
14a
15a
17a

FIG. 4

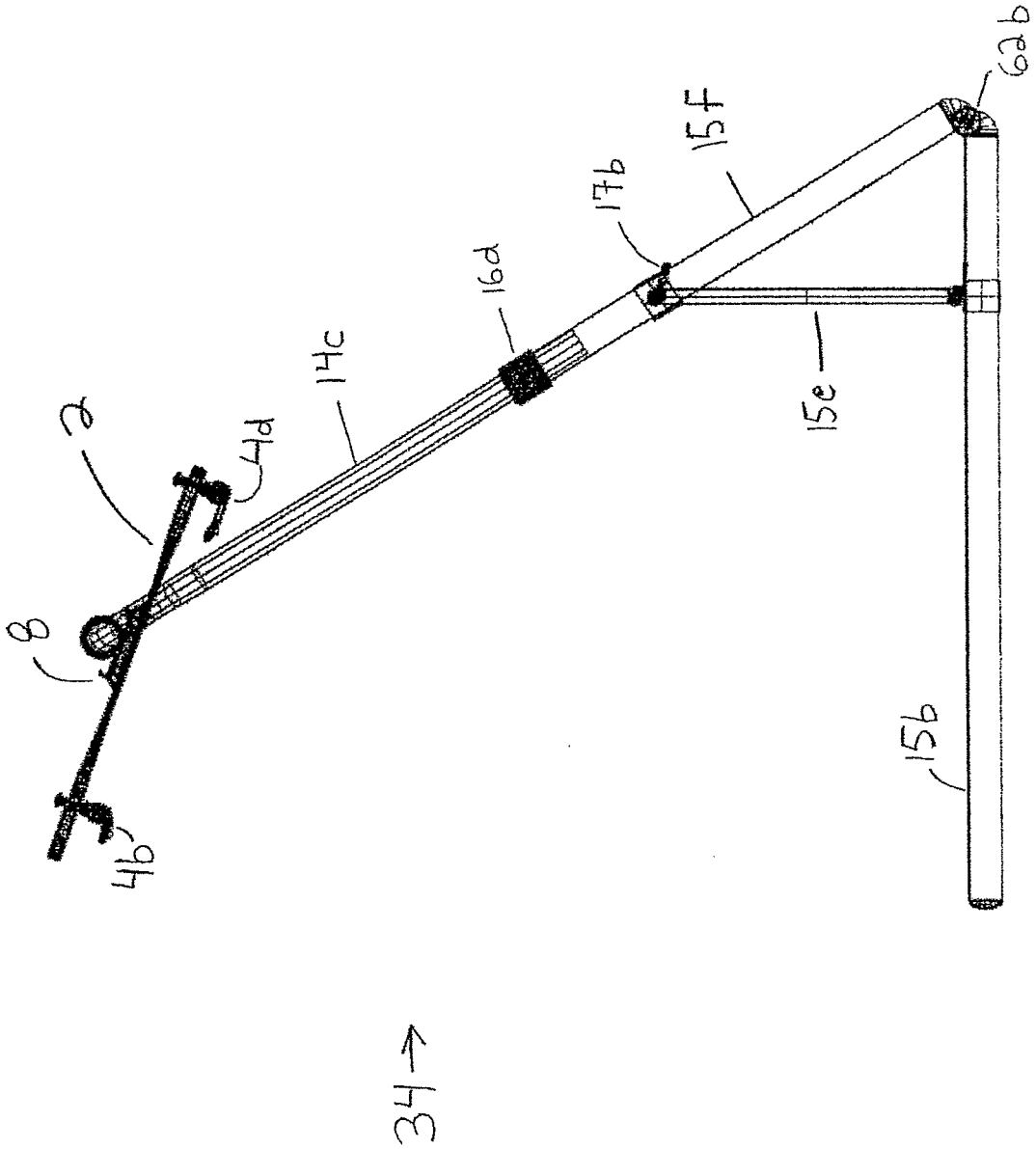
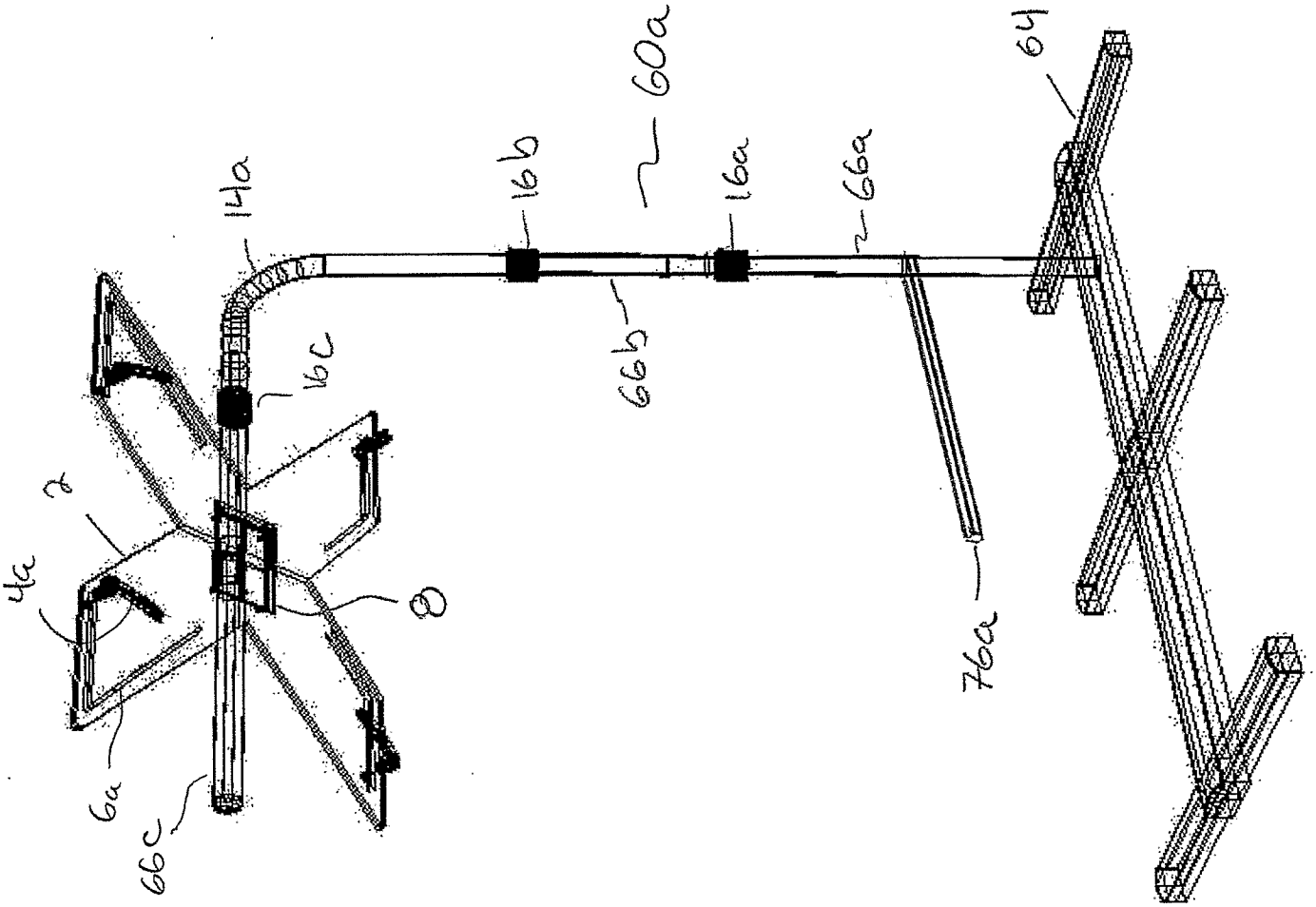


FIG. 5

FIG. 6A



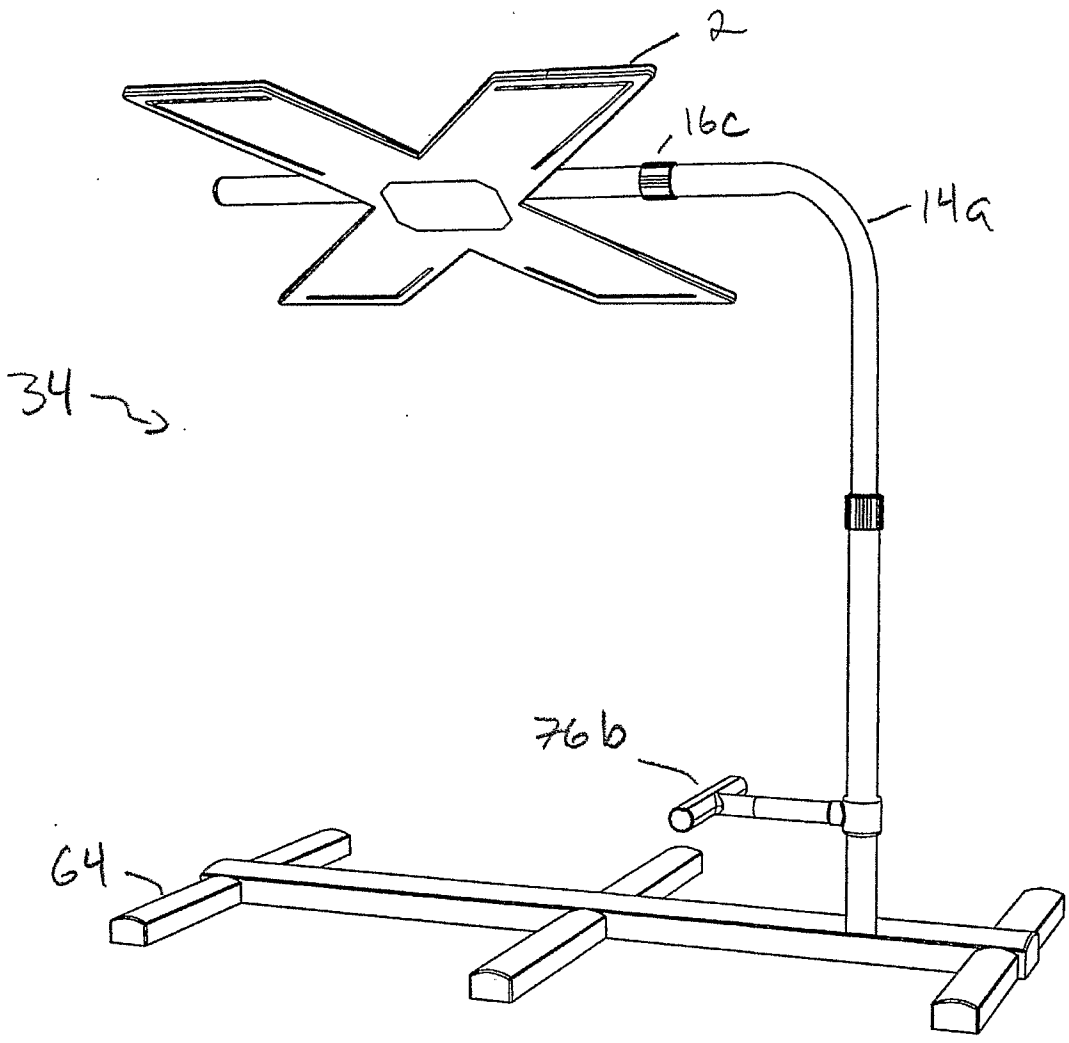


FIG. 6B

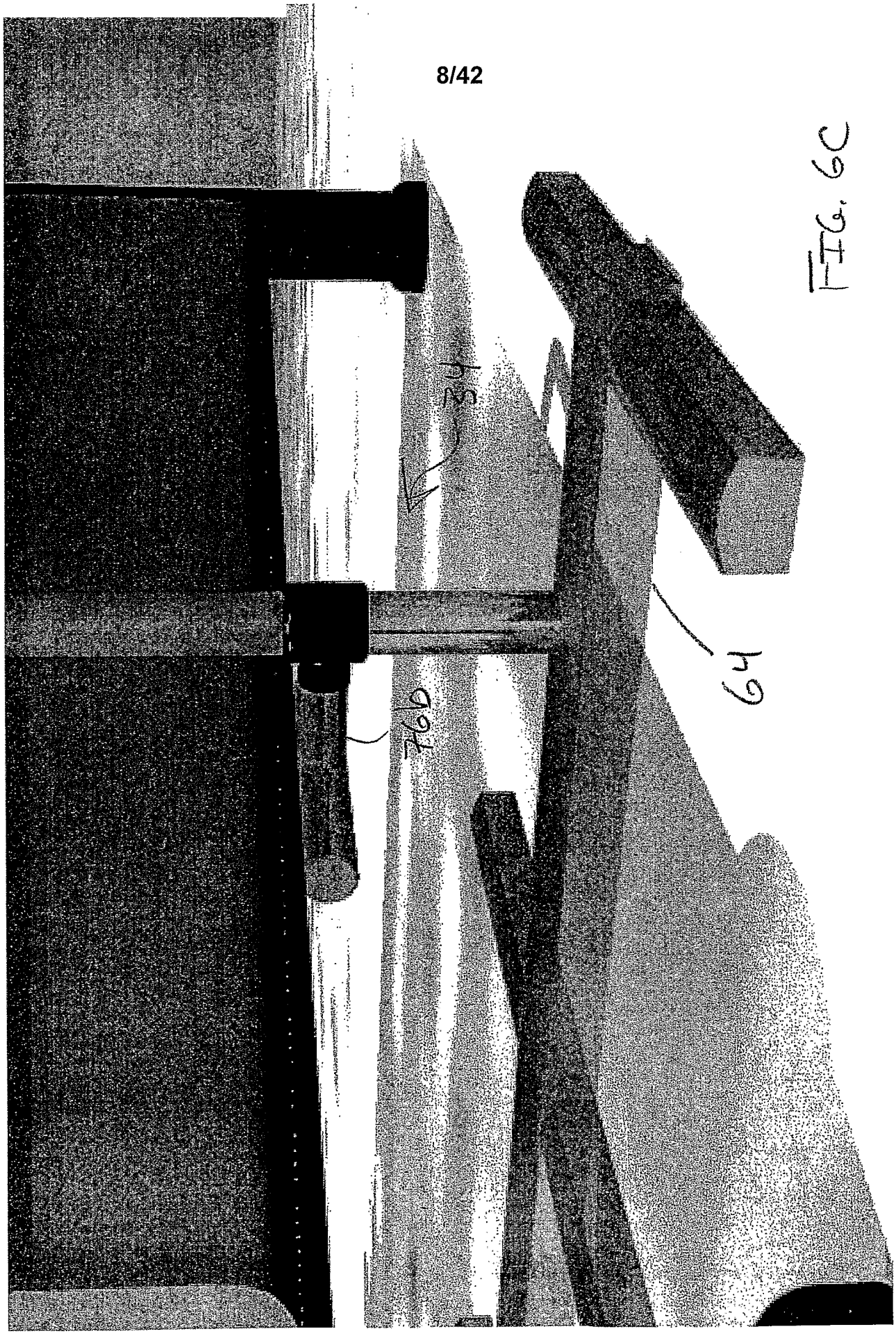
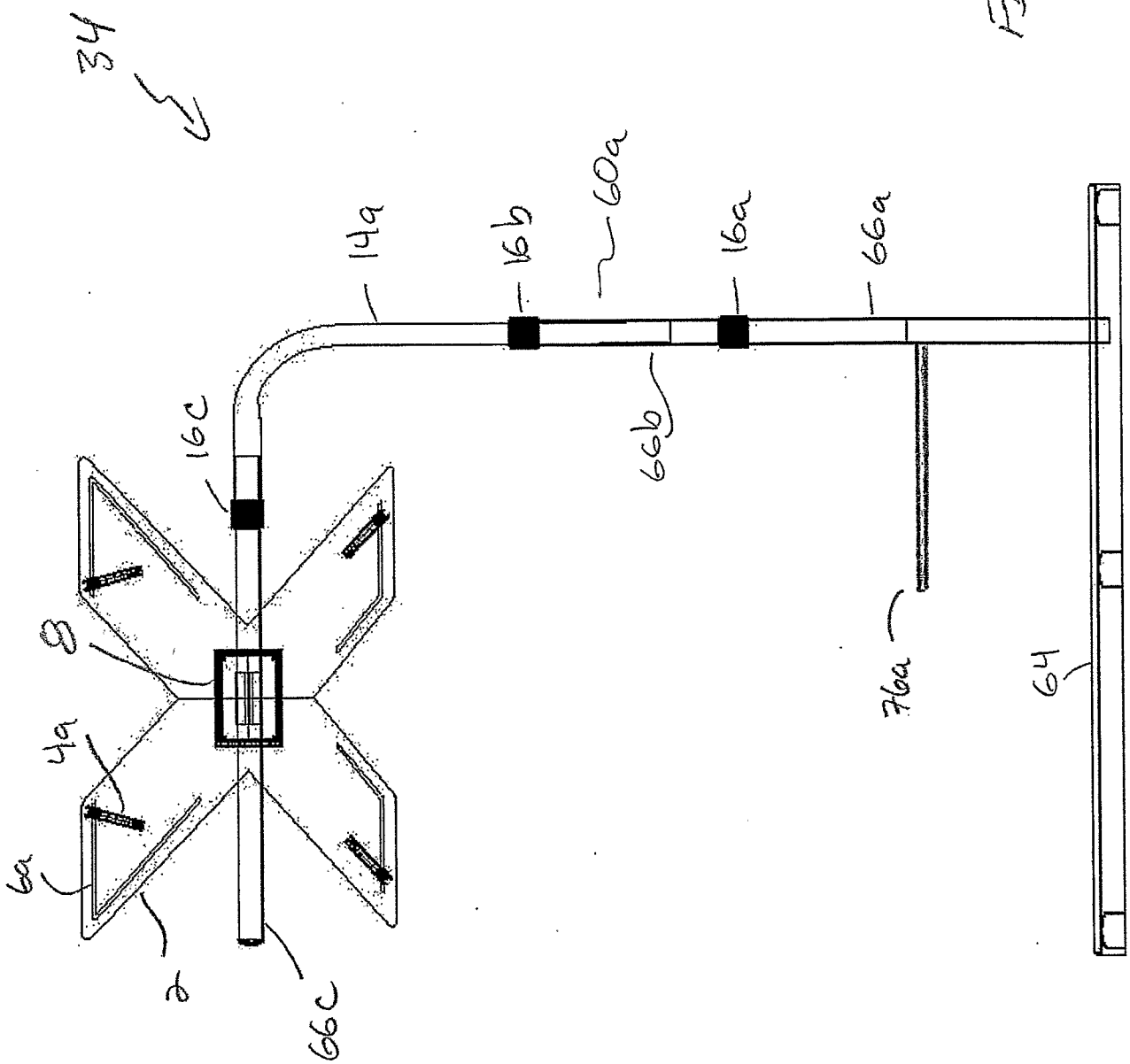
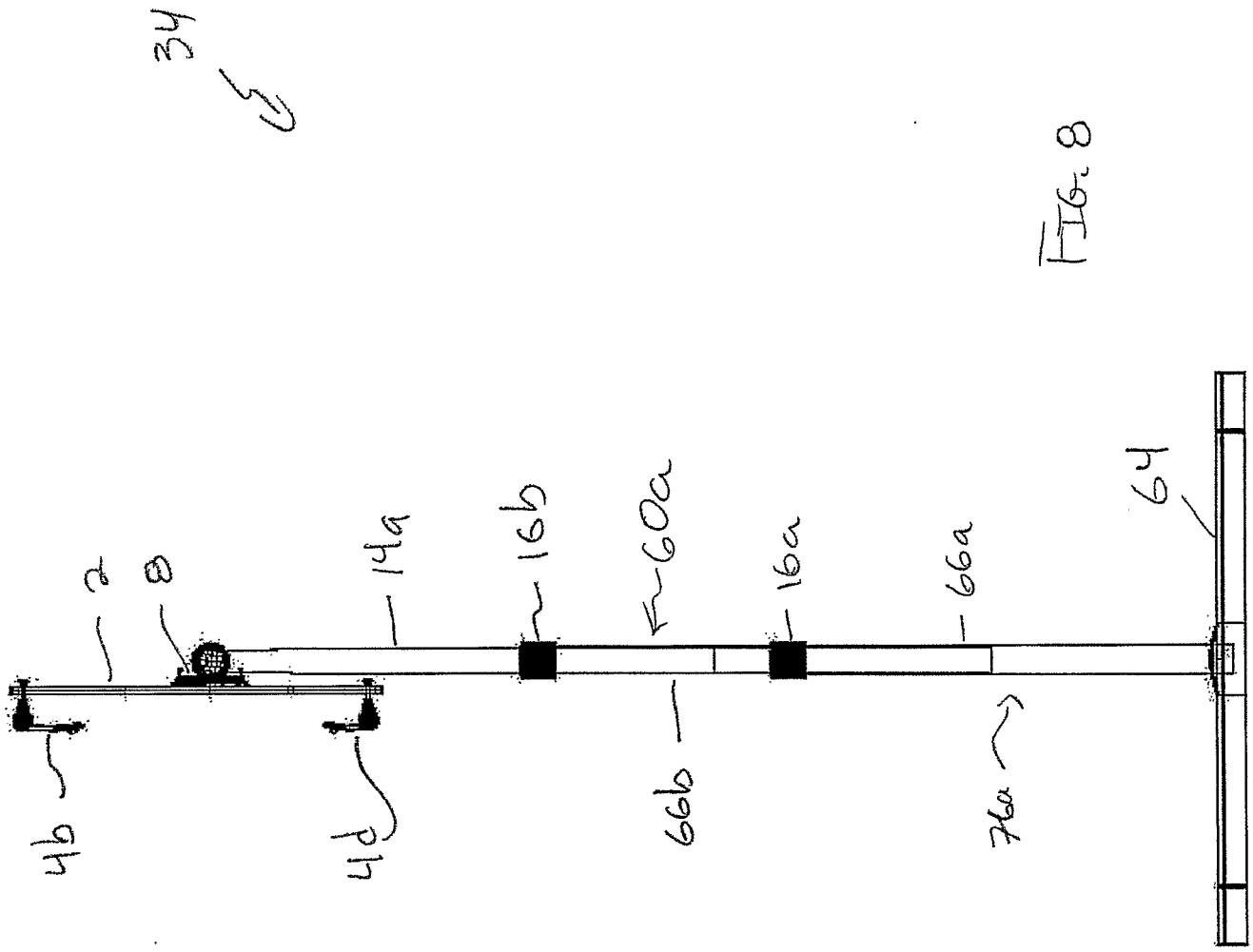


FIG. 6C

FIG. 7




34
FIG. 8
2
8
14a
16b
60a
16a
66a
64
46
46b
46d
66b
76a

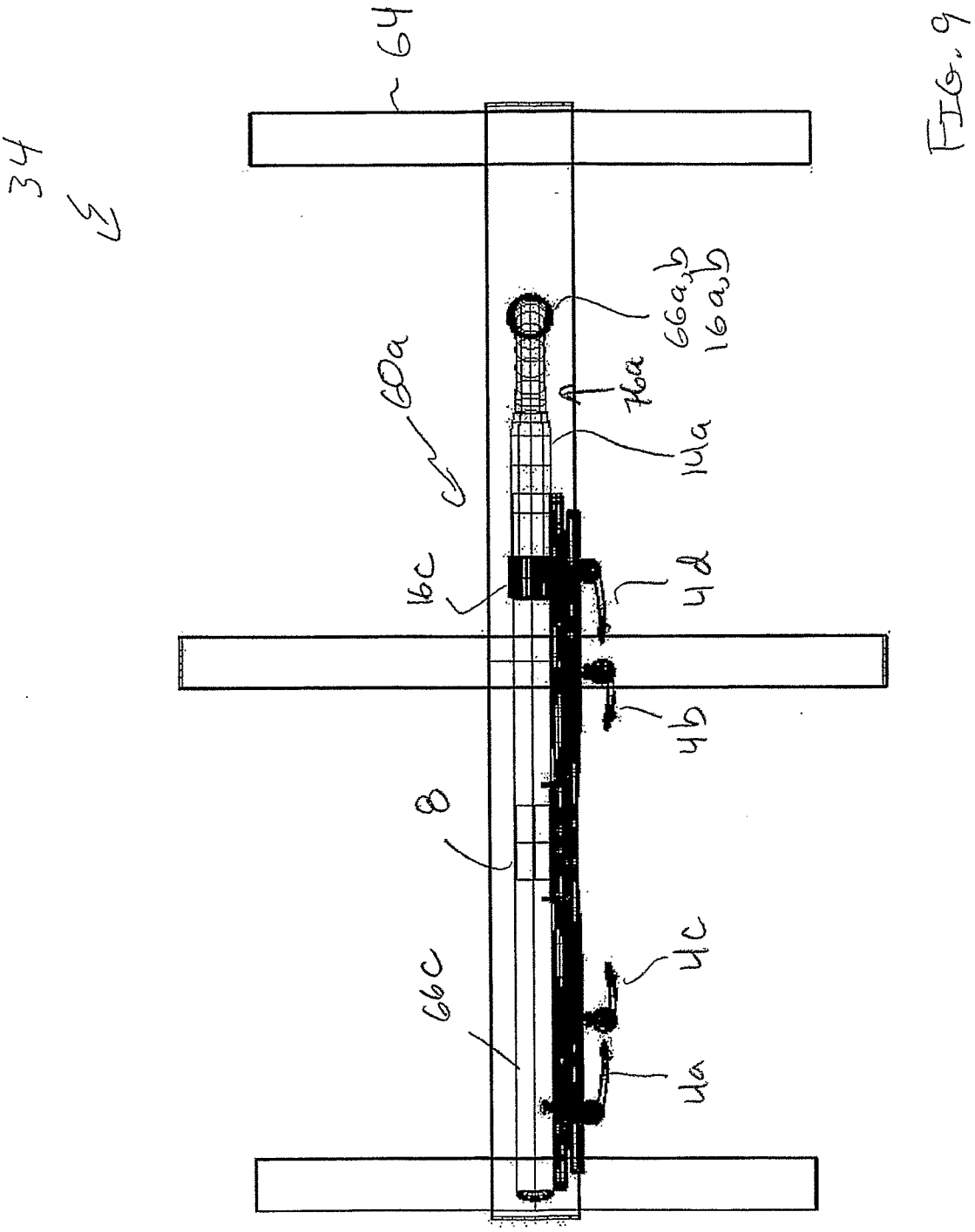


FIG. 9

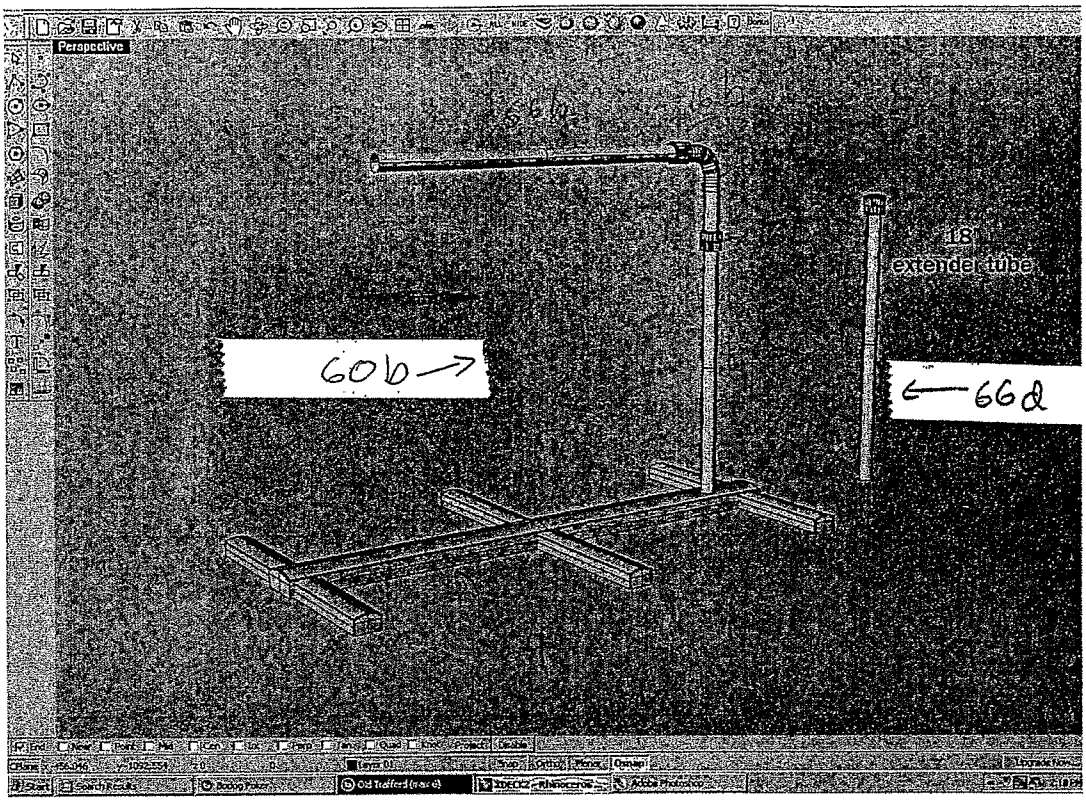


FIG. 10A

FIG. 10B

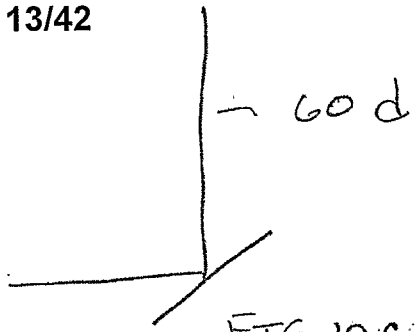


FIG. 10C

FIG. 10D

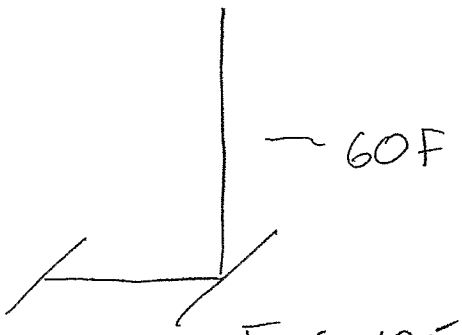


FIG. 10E

FIG. 10F

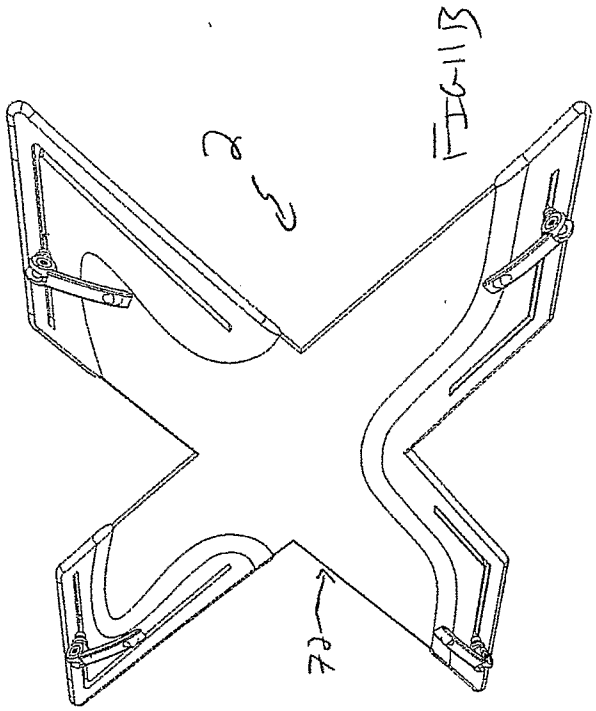


FIG. 11B

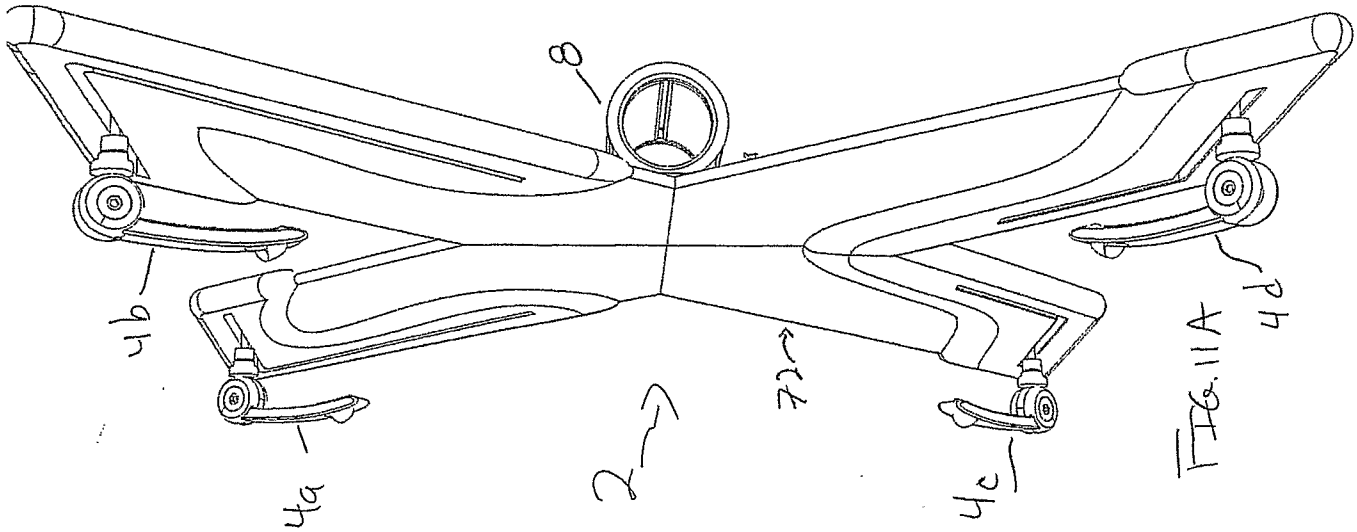


FIG. 11A

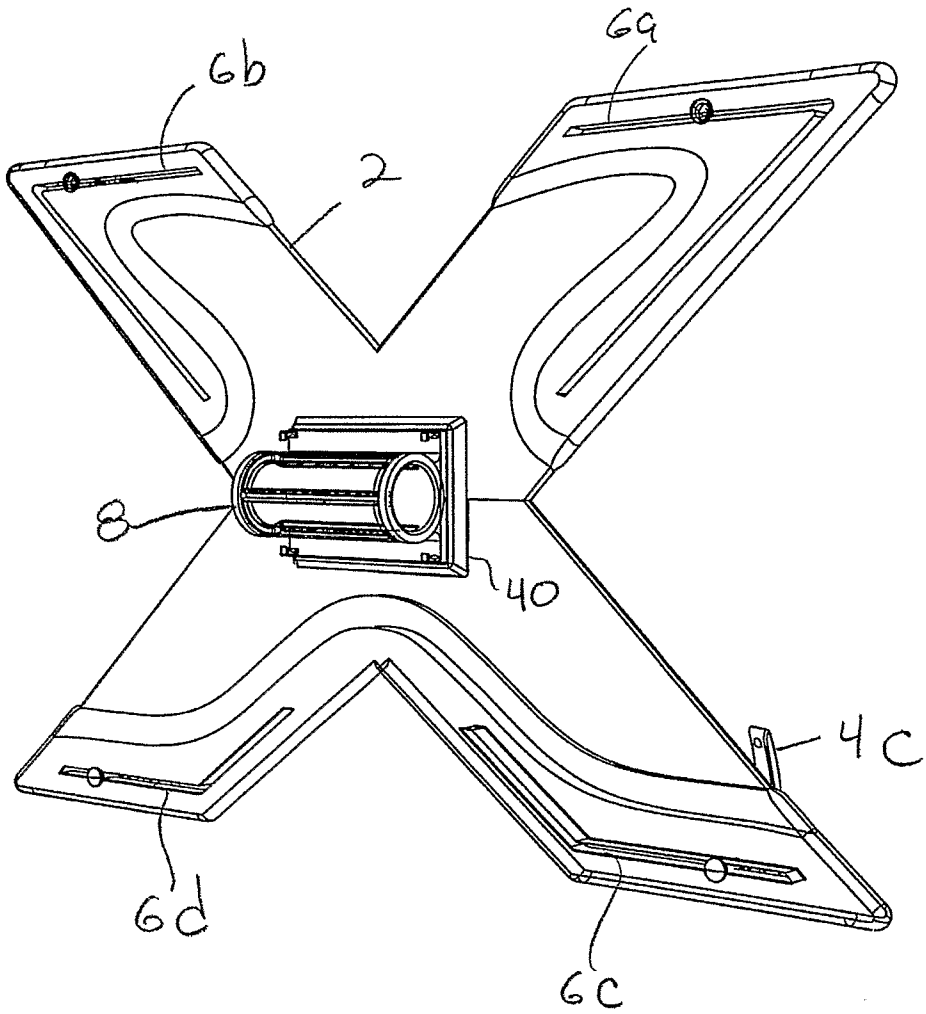


FIG. 12

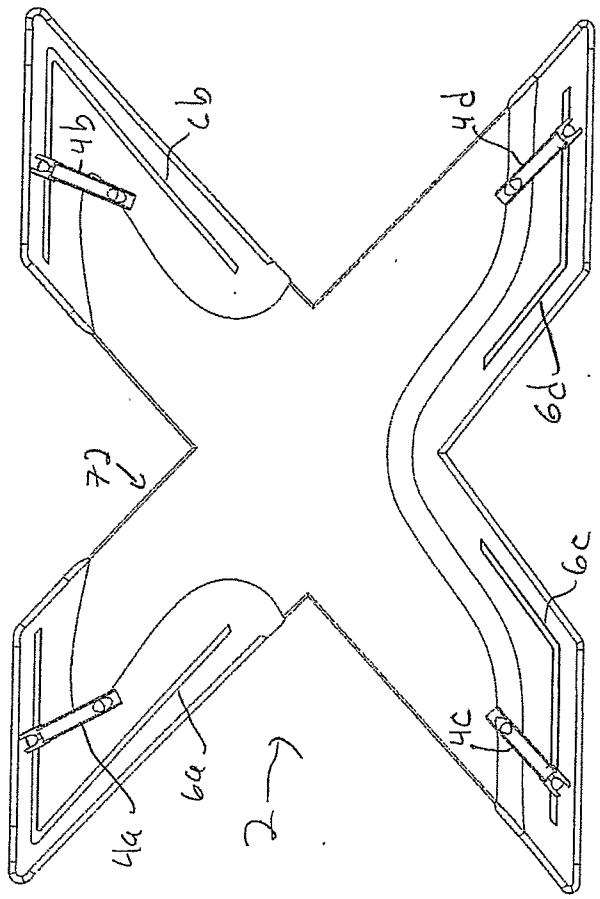


FIG. 13

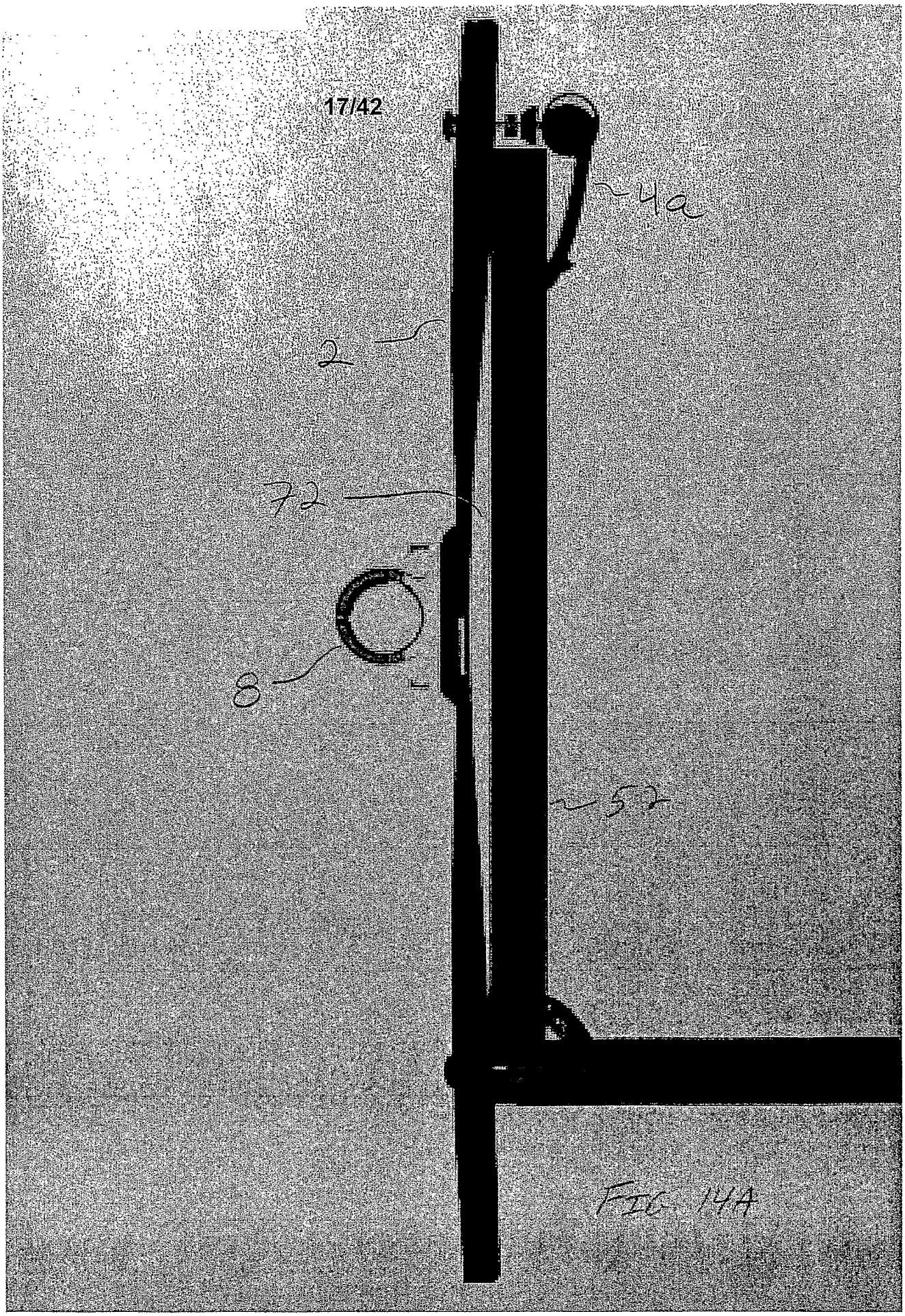
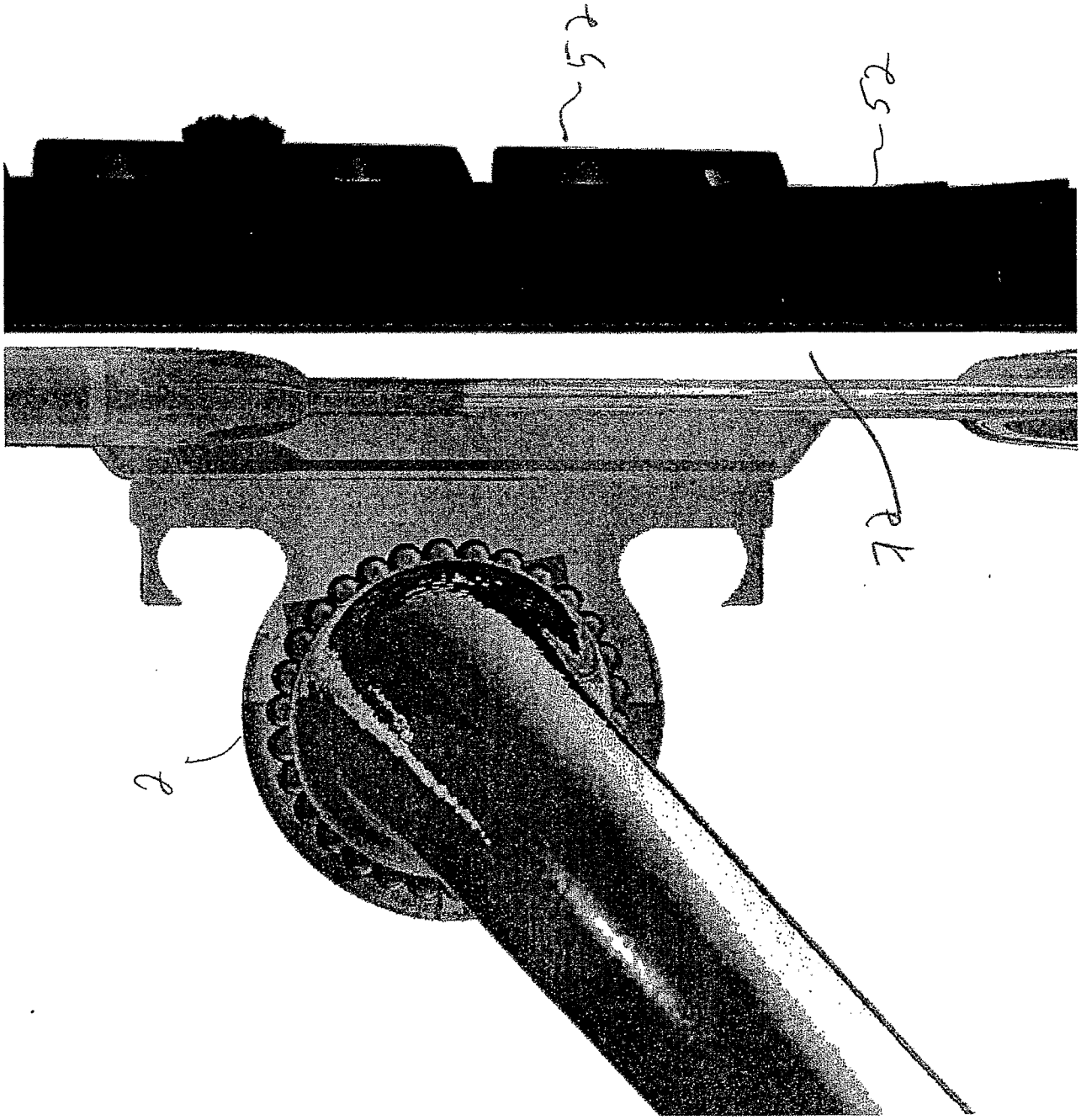


FIG. 14A

FIG. 14B



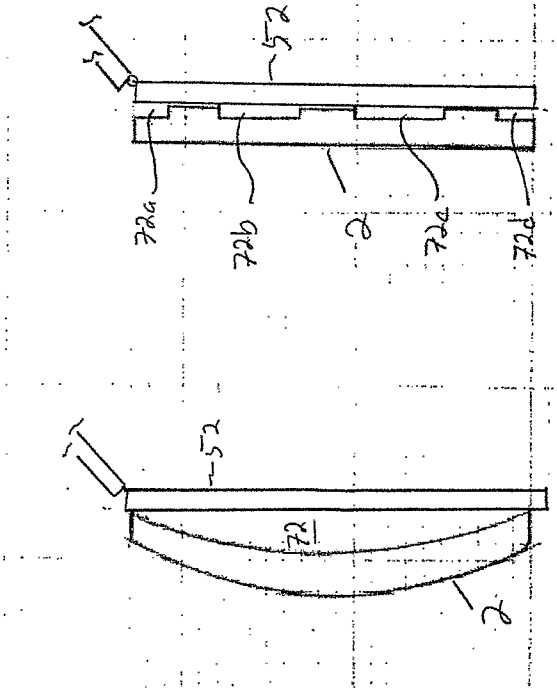


FIG. 14D

FIG. 14C

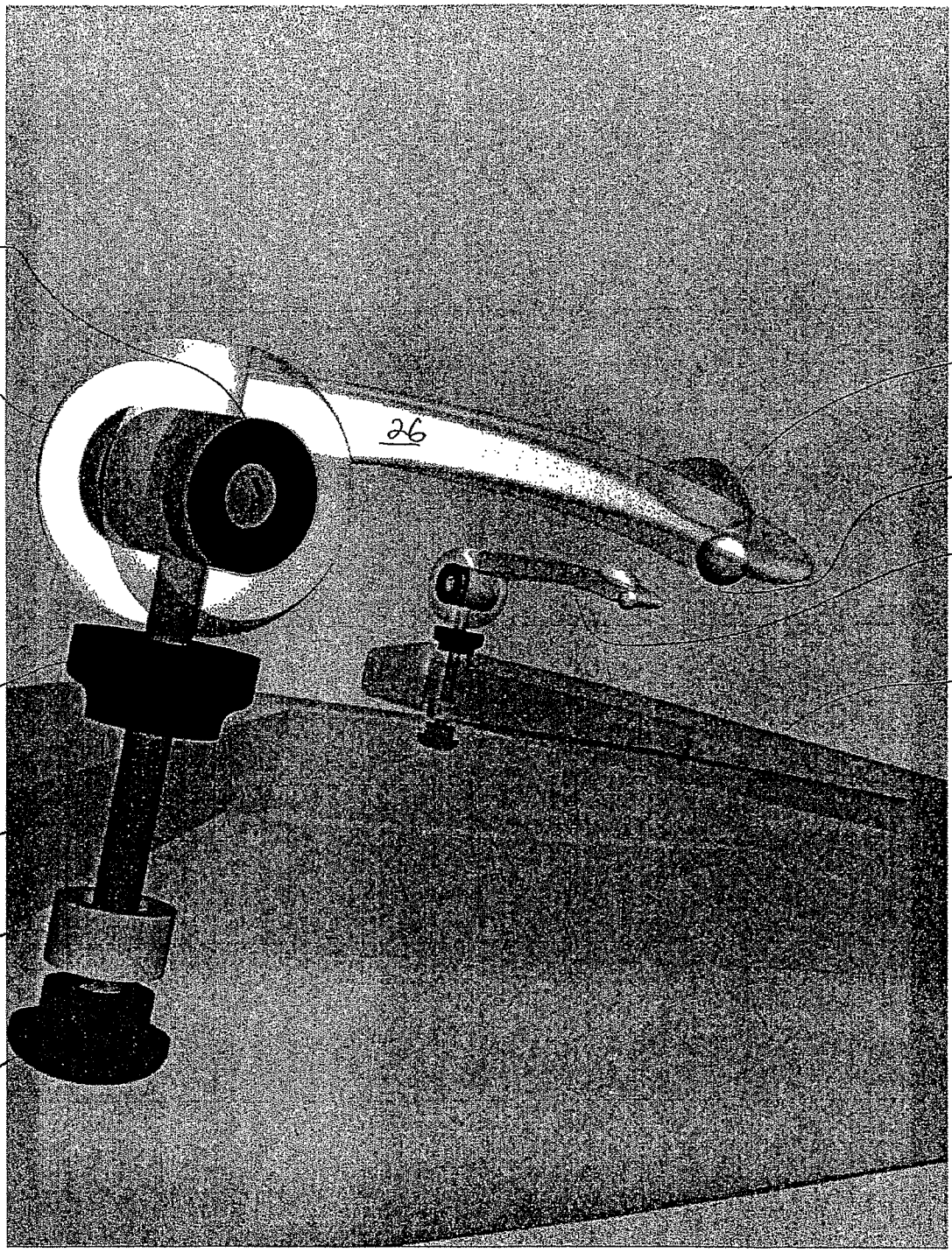


FIG. 15

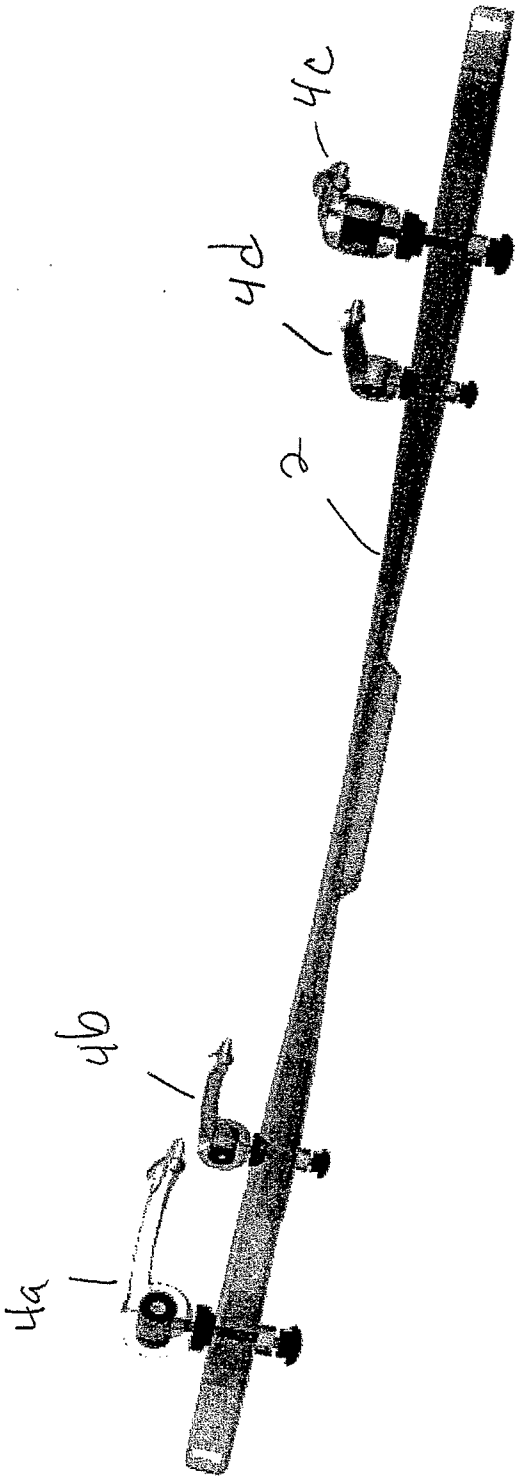


FIG. 16

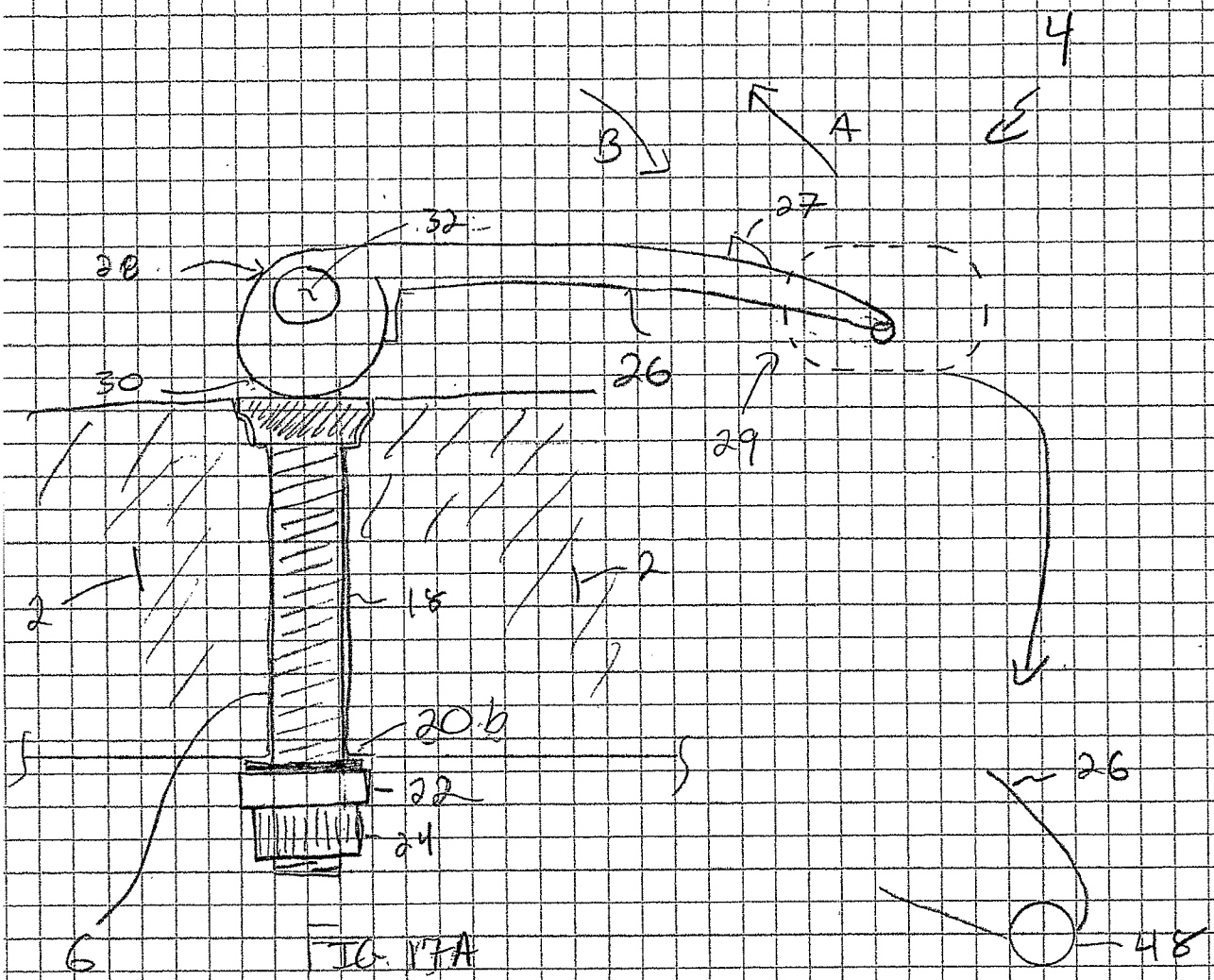


FIG. 17A

FIG. 17B

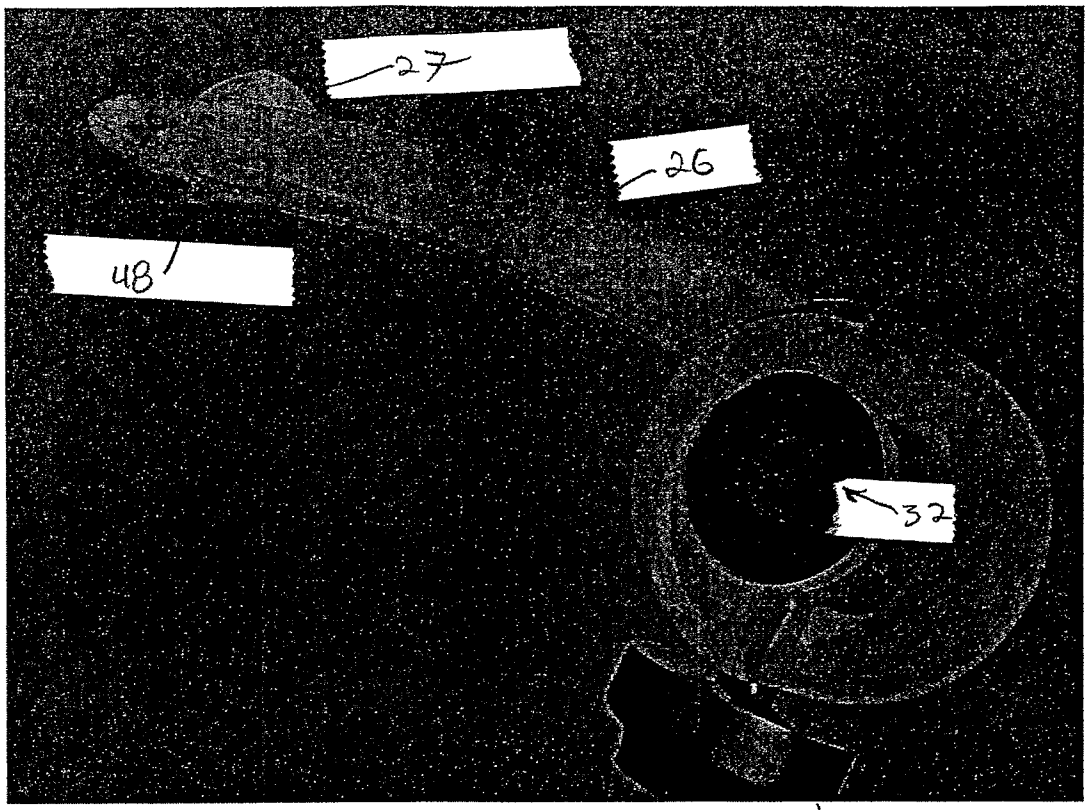


FIG. 18A

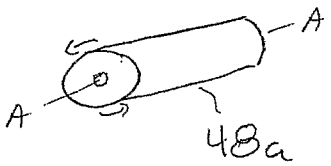


FIG. 18B

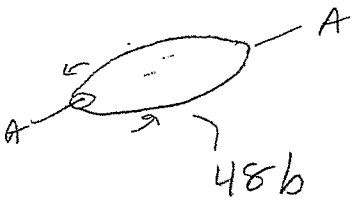


FIG. 18C

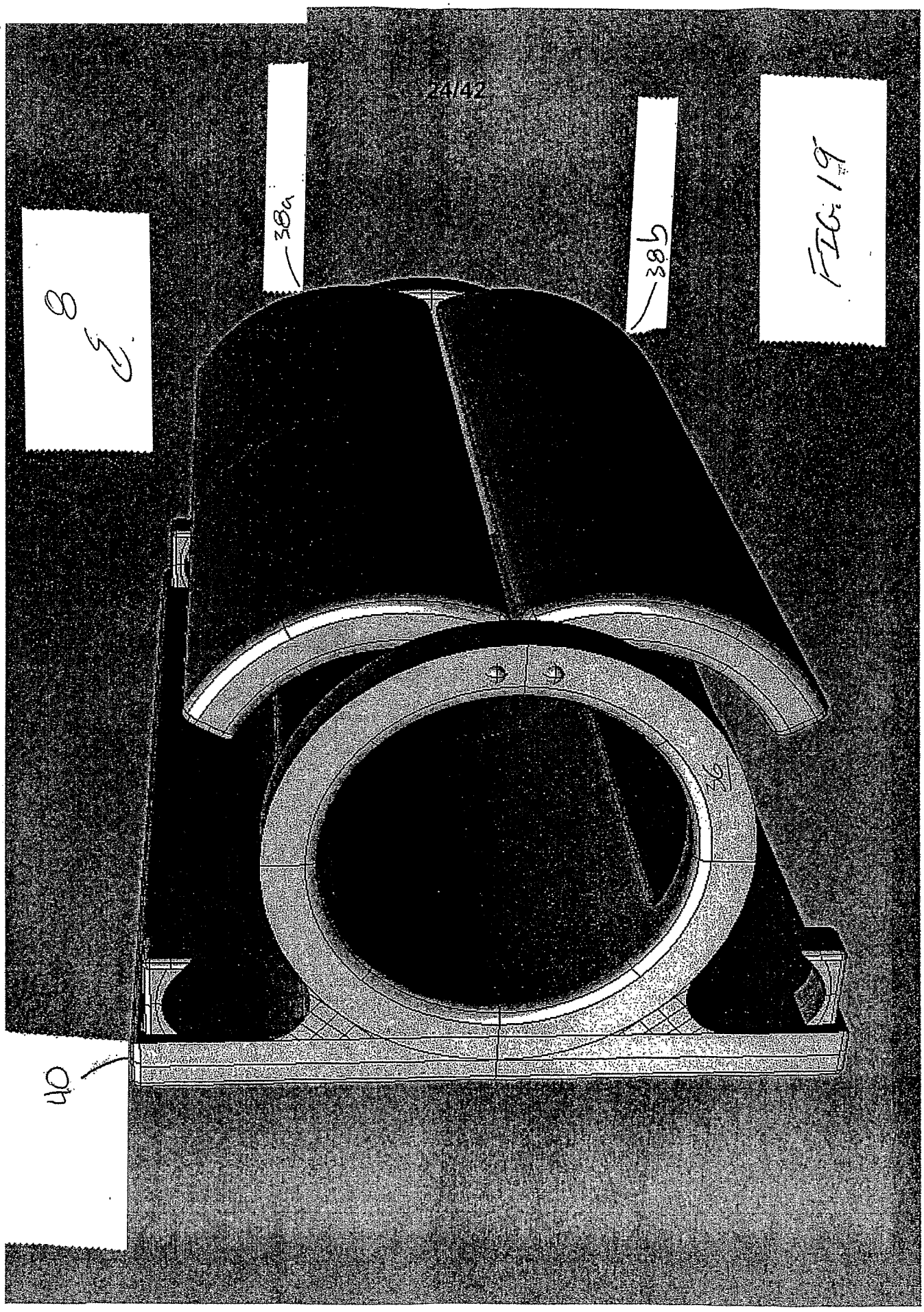


FIG. 19
38a
38b
40

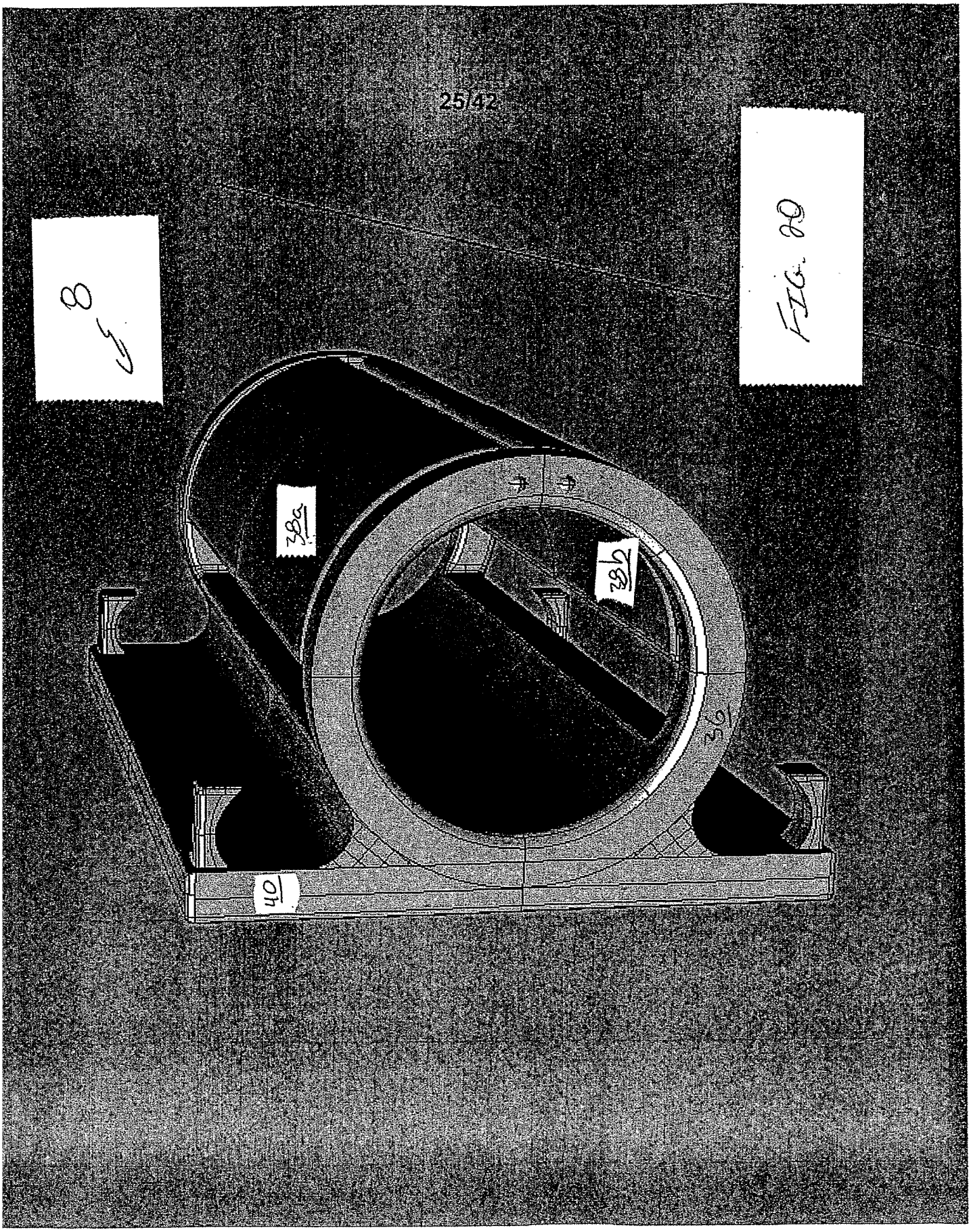


FIG. 8
FIG. 8D
382a
382
391
401

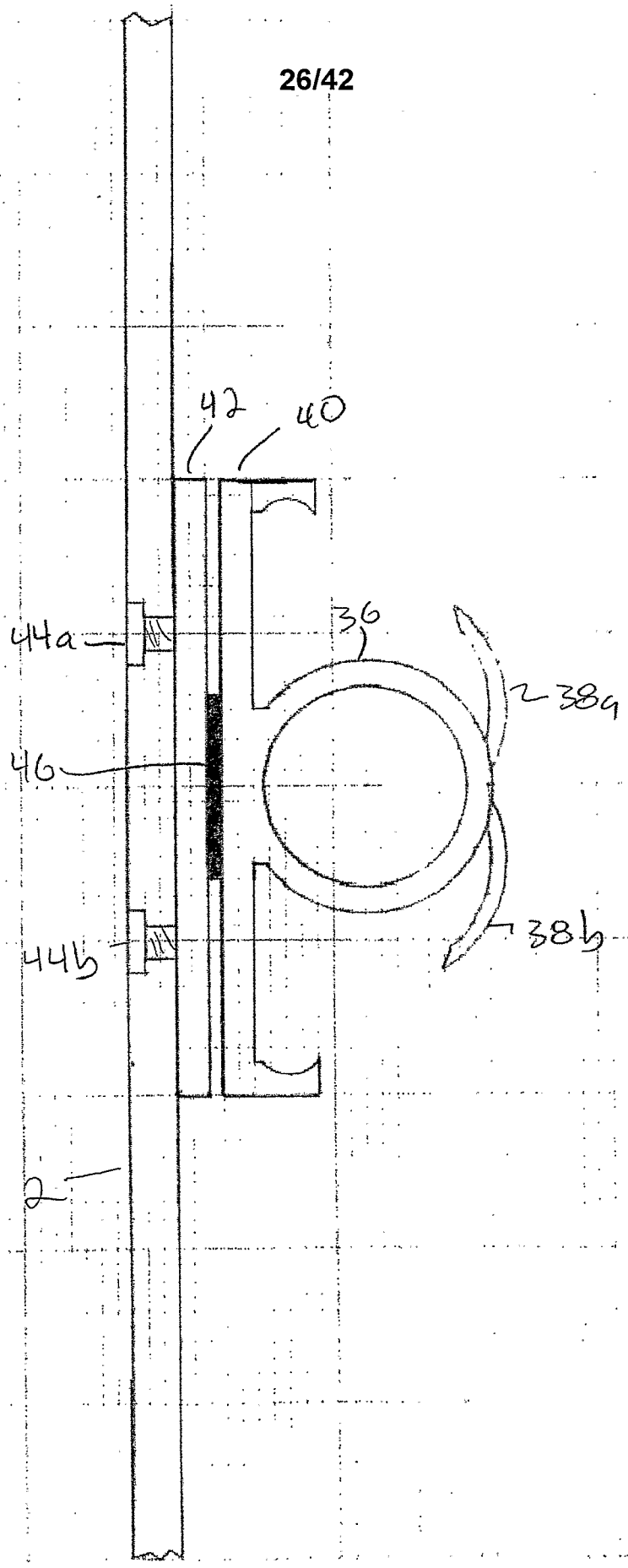
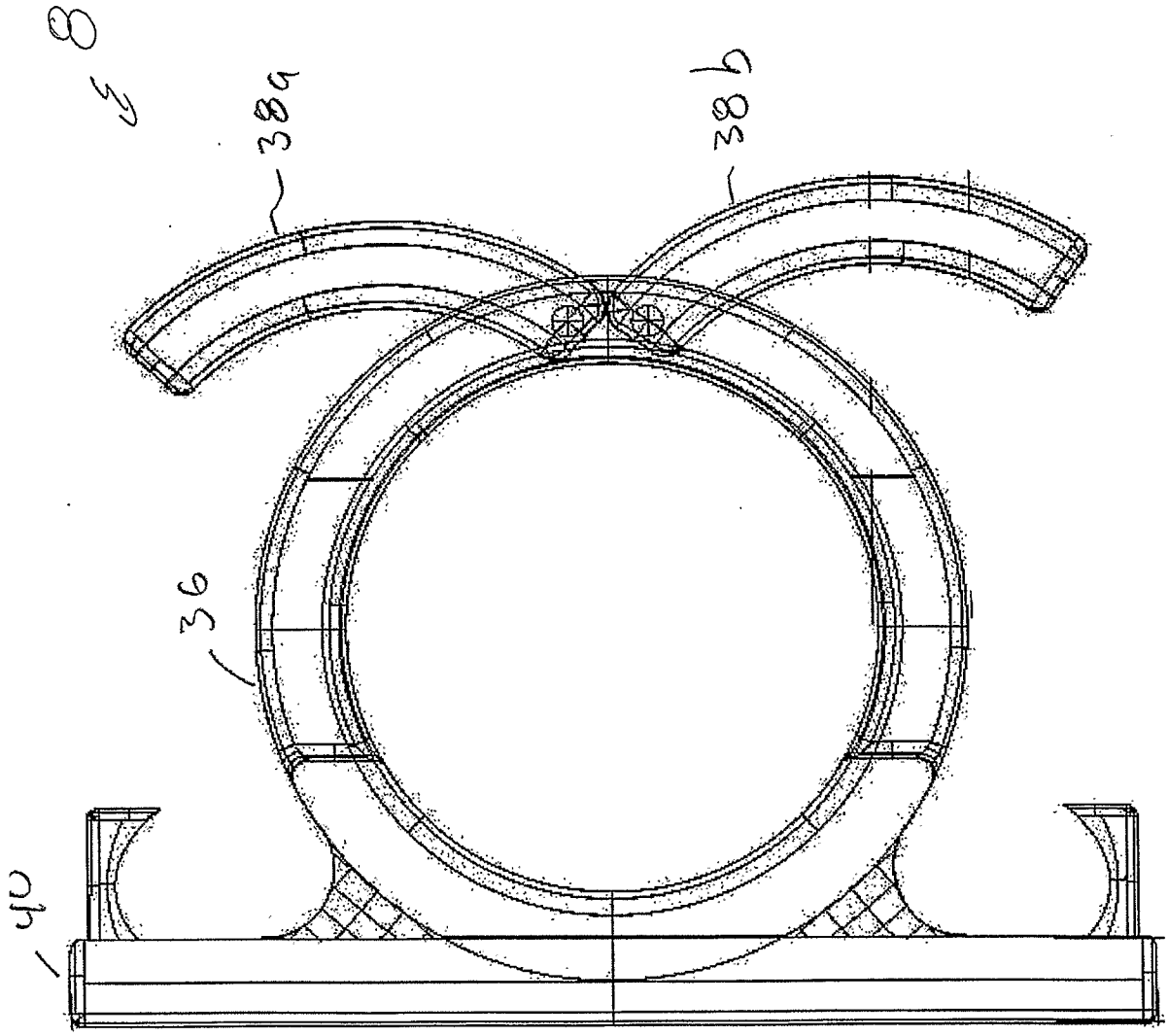


FIG. 21

FIG. 22



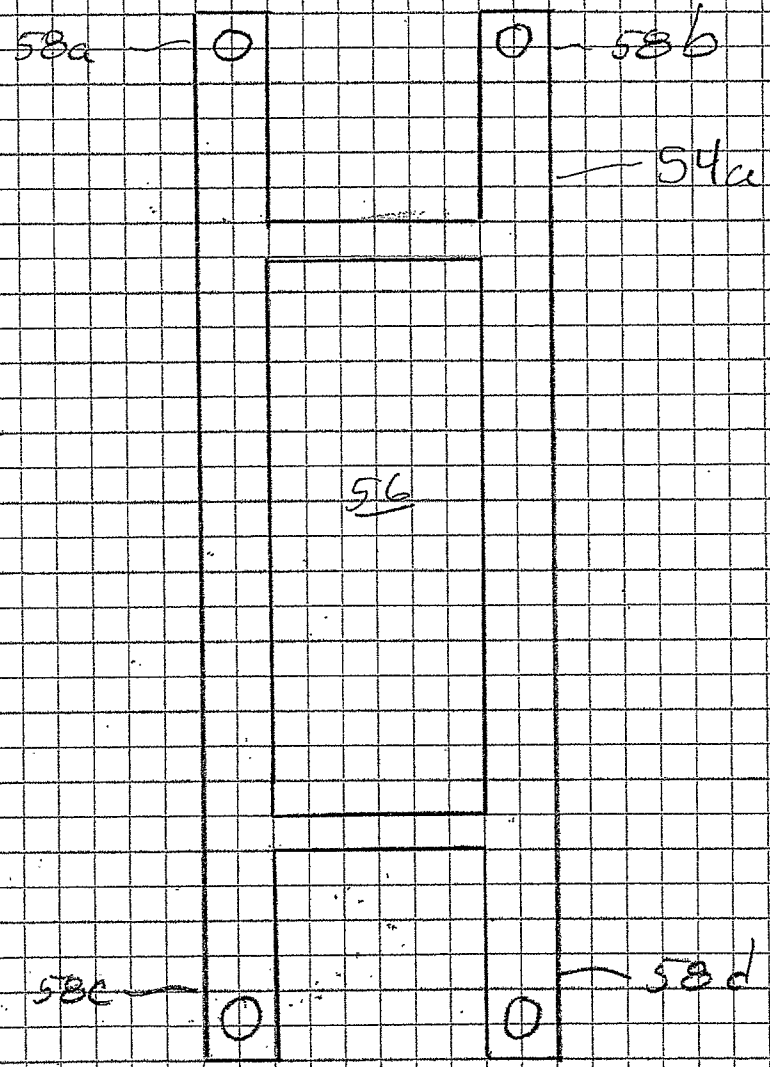


FIG. 23A

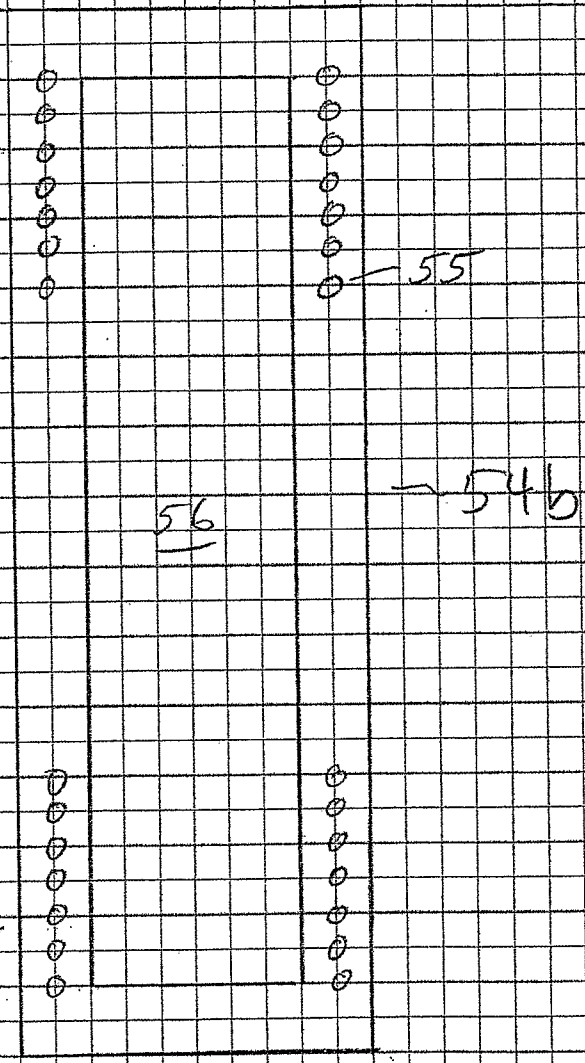


FIG. 23B

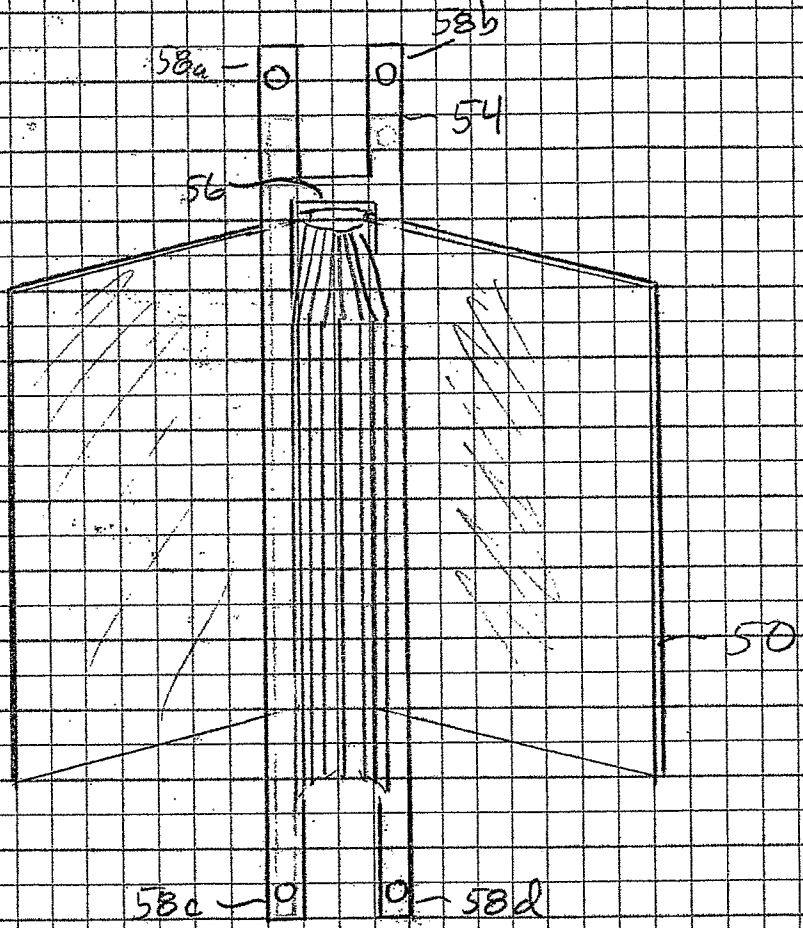


FIG. 24A

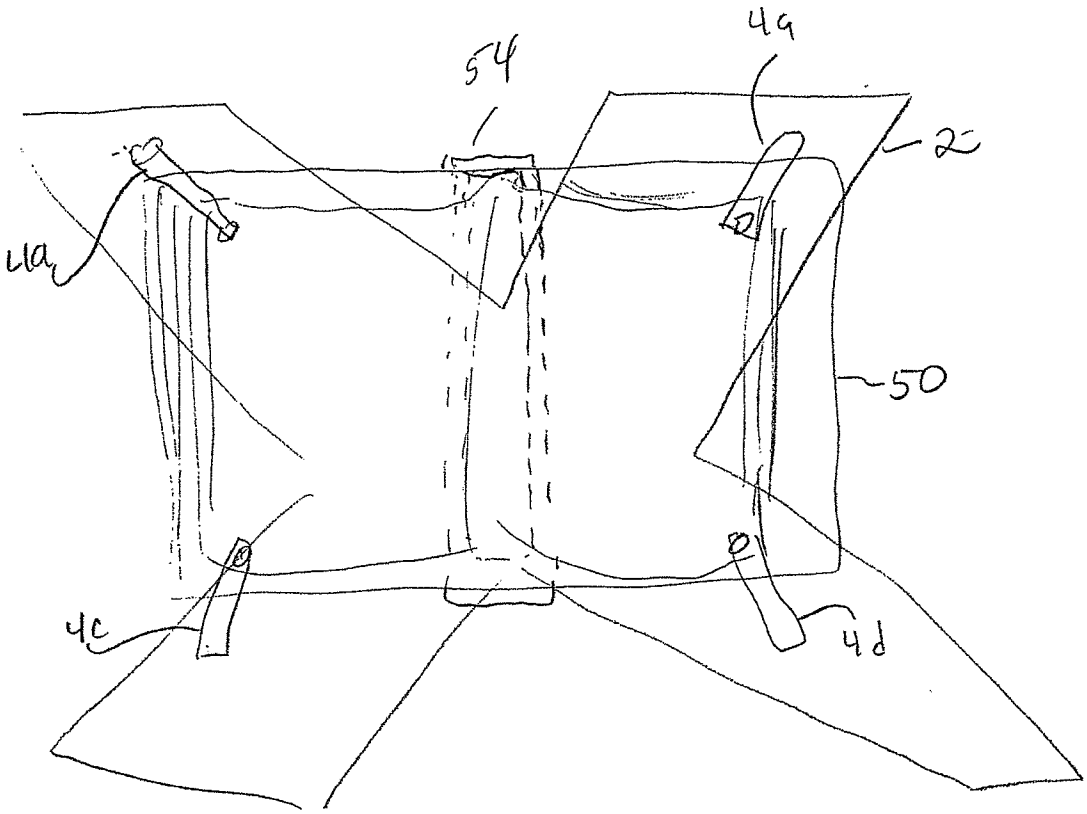


FIG 24B

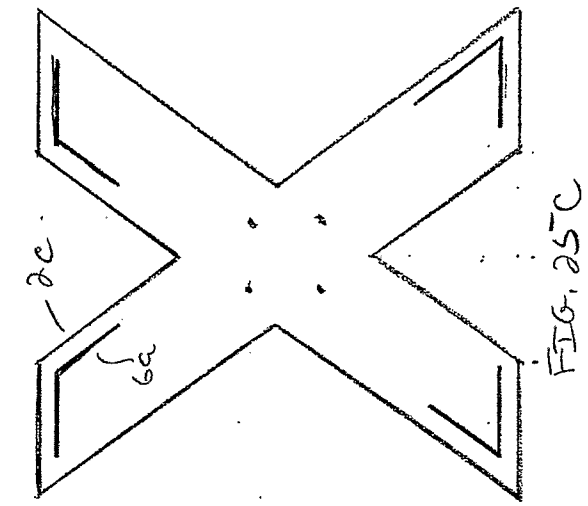


FIG. 25C

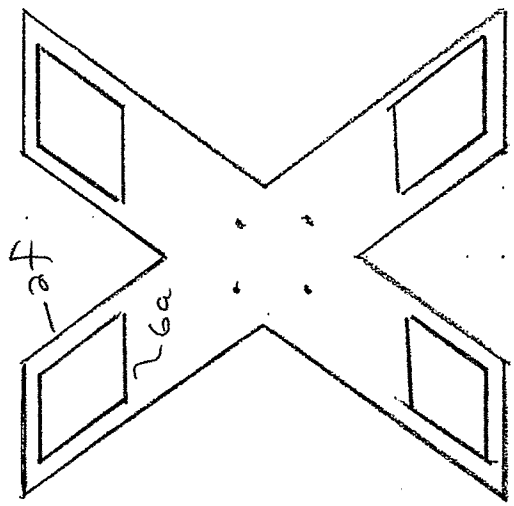


FIG. 25F

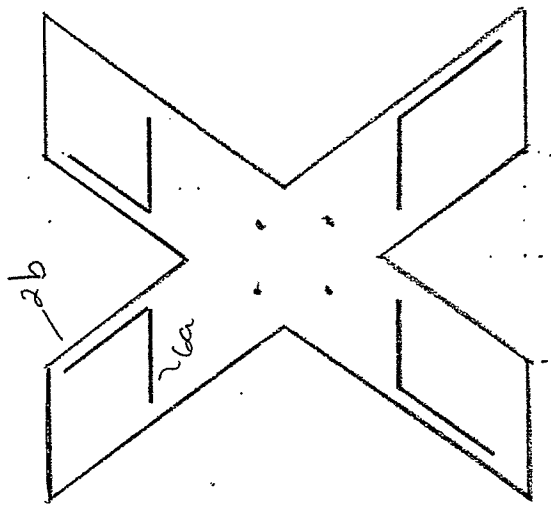


FIG. 25B

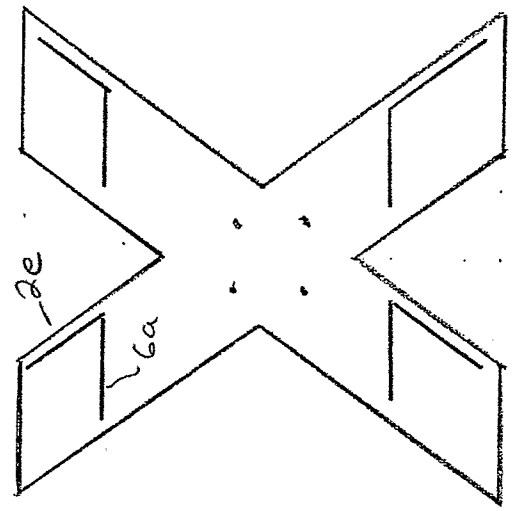


FIG. 25E

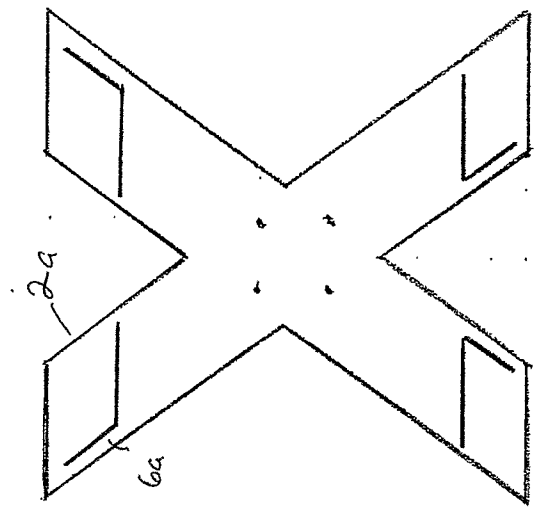


FIG. 25A

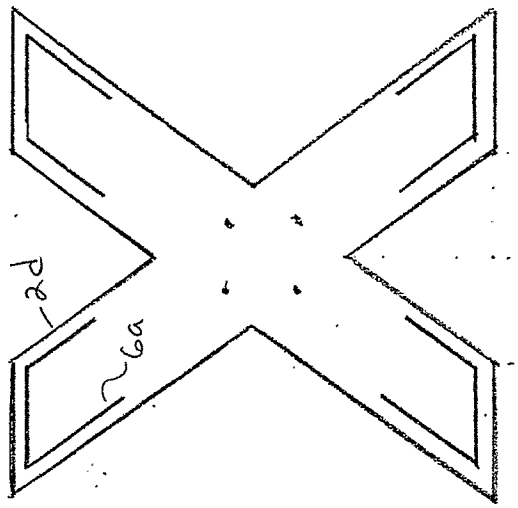


FIG. 25D

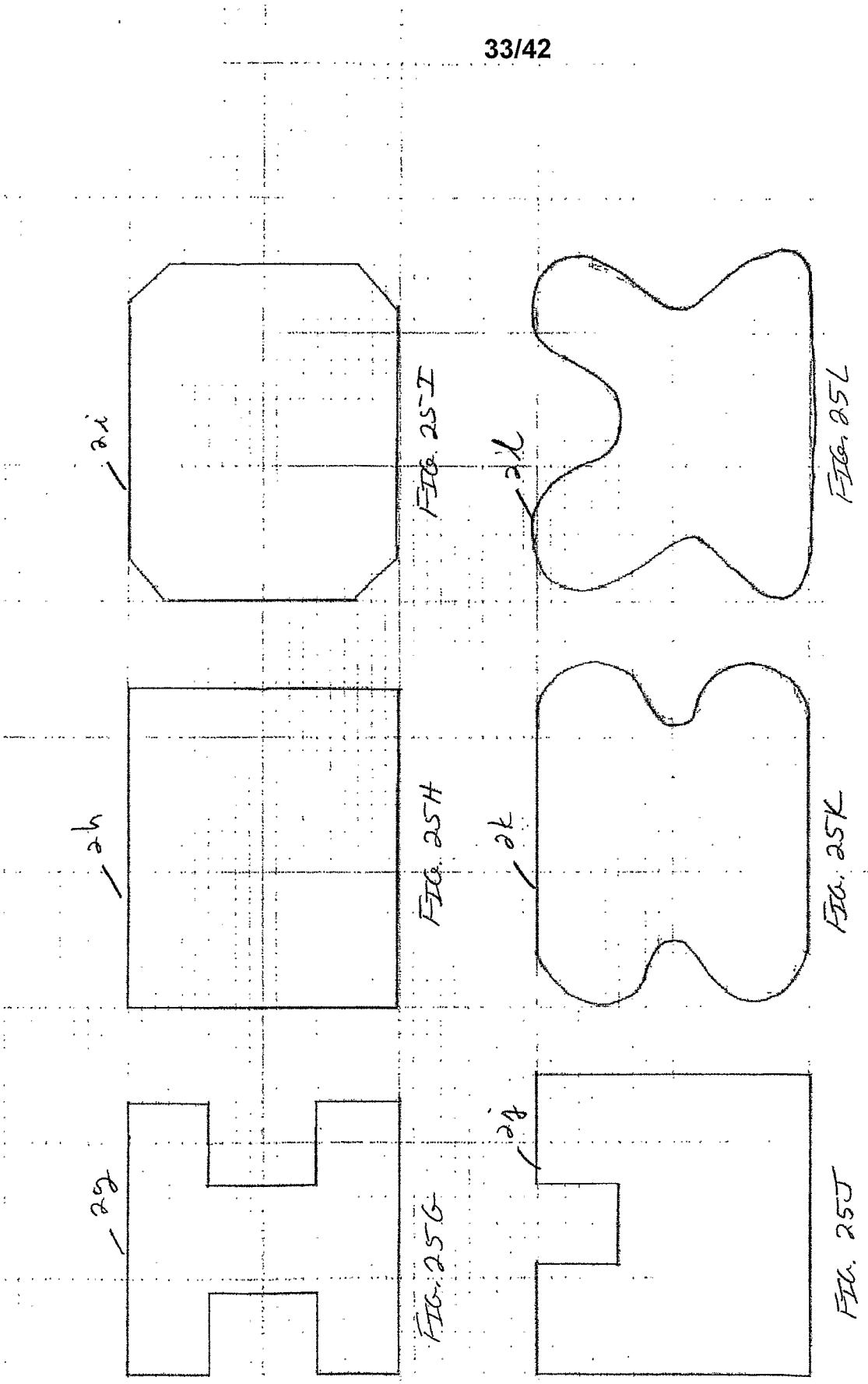


FIG. 25I

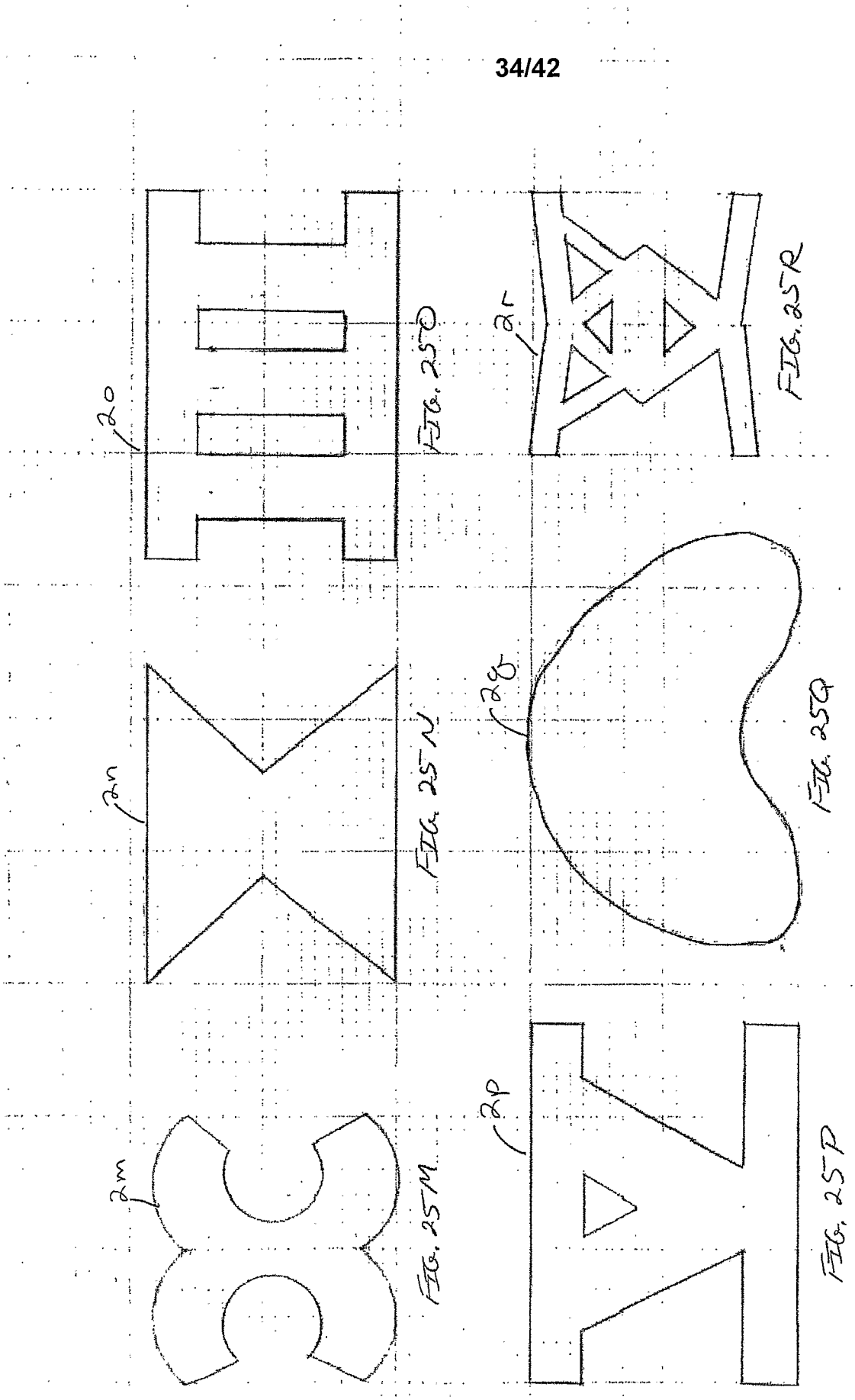
FIG. 25L

FIG. 25H

FIG. 25K

FIG. 25G

FIG. 25J


20
FIG. 25O
2r
FIG. 25R
2n
FIG. 25N
2q
FIG. 25Q
2m
FIG. 25M
2p
FIG. 25P

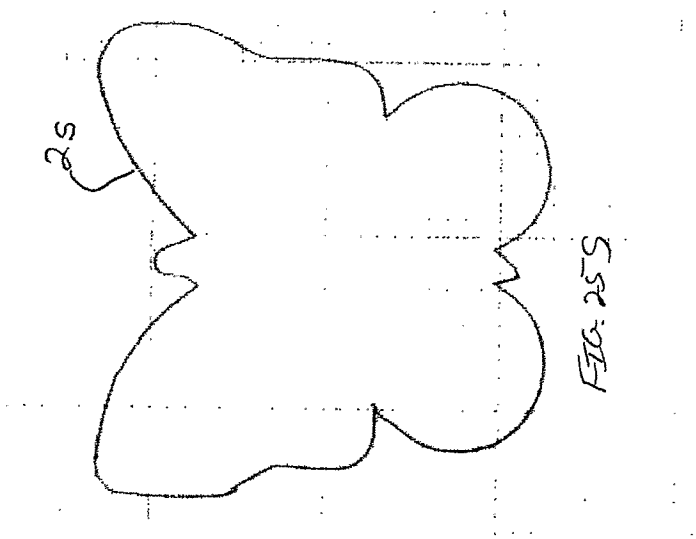


FIG. 25S

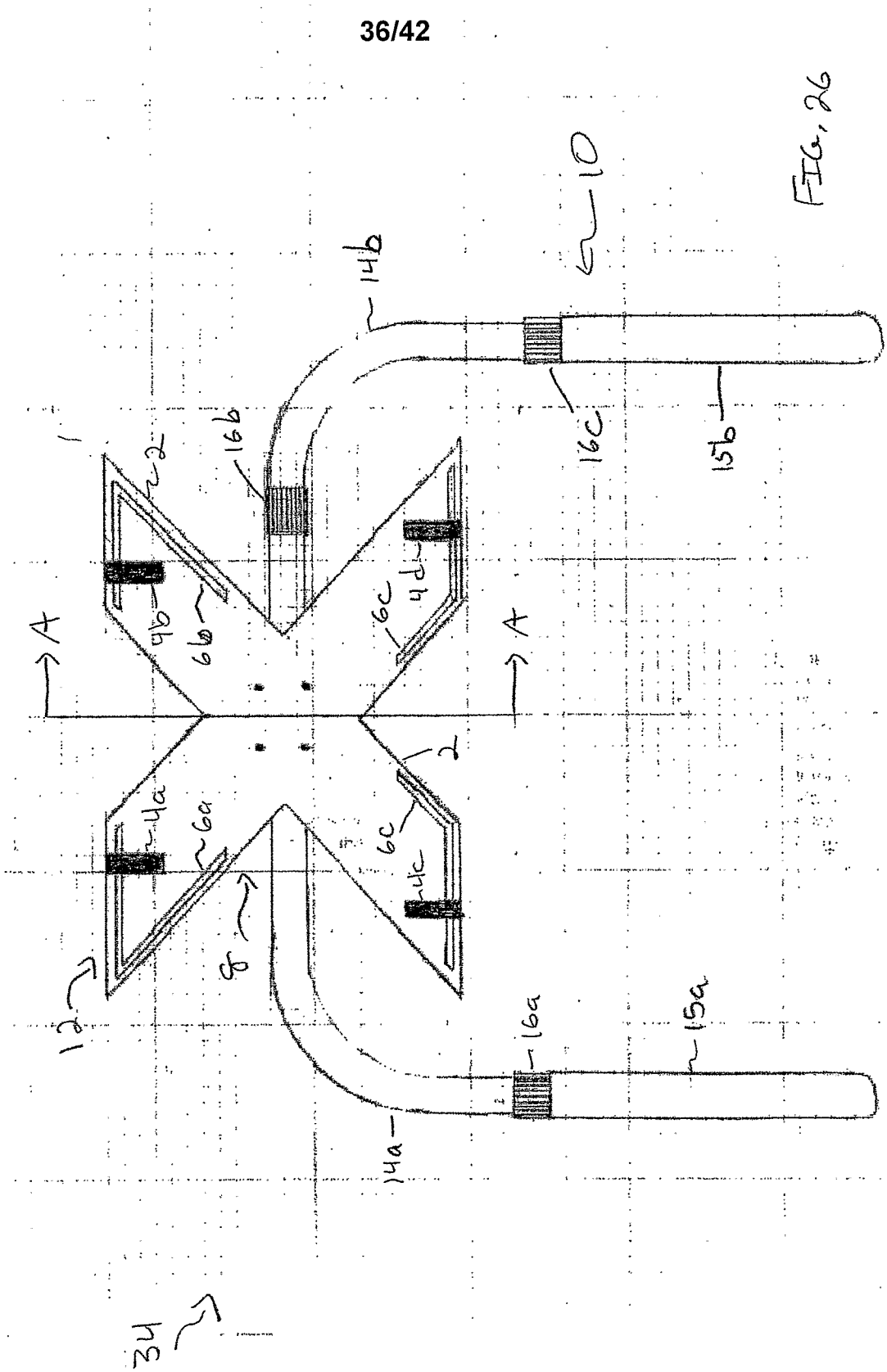


FIG. 26

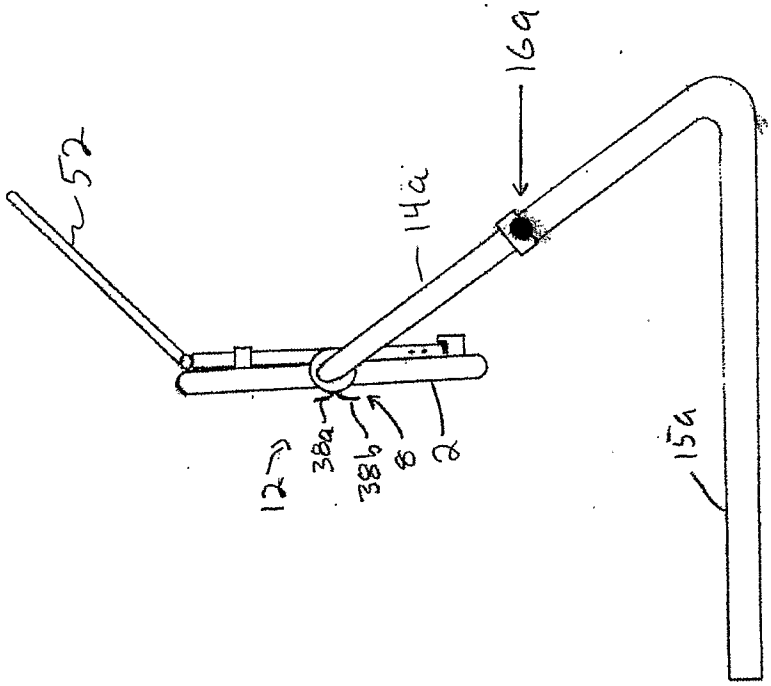


FIG. 27

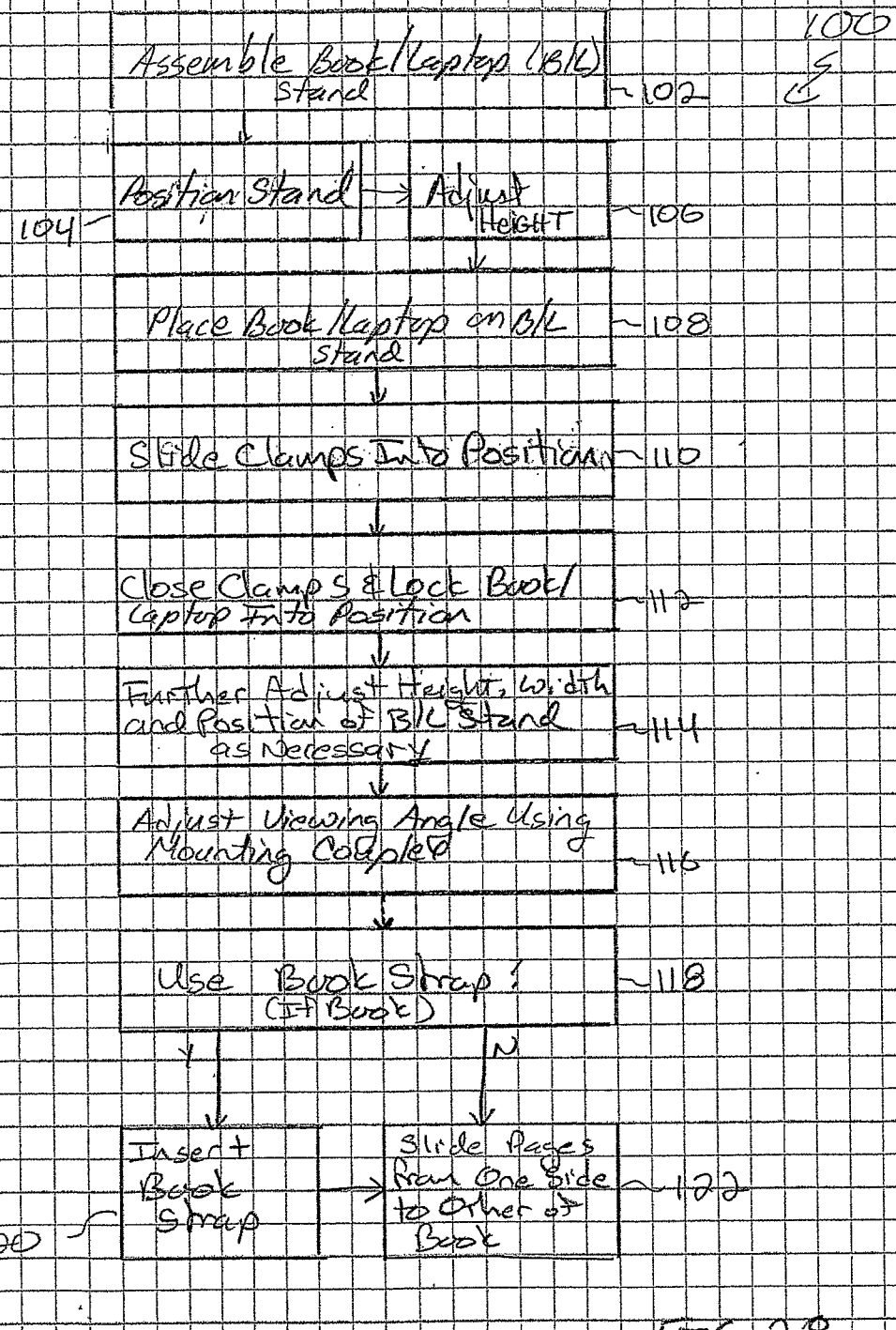
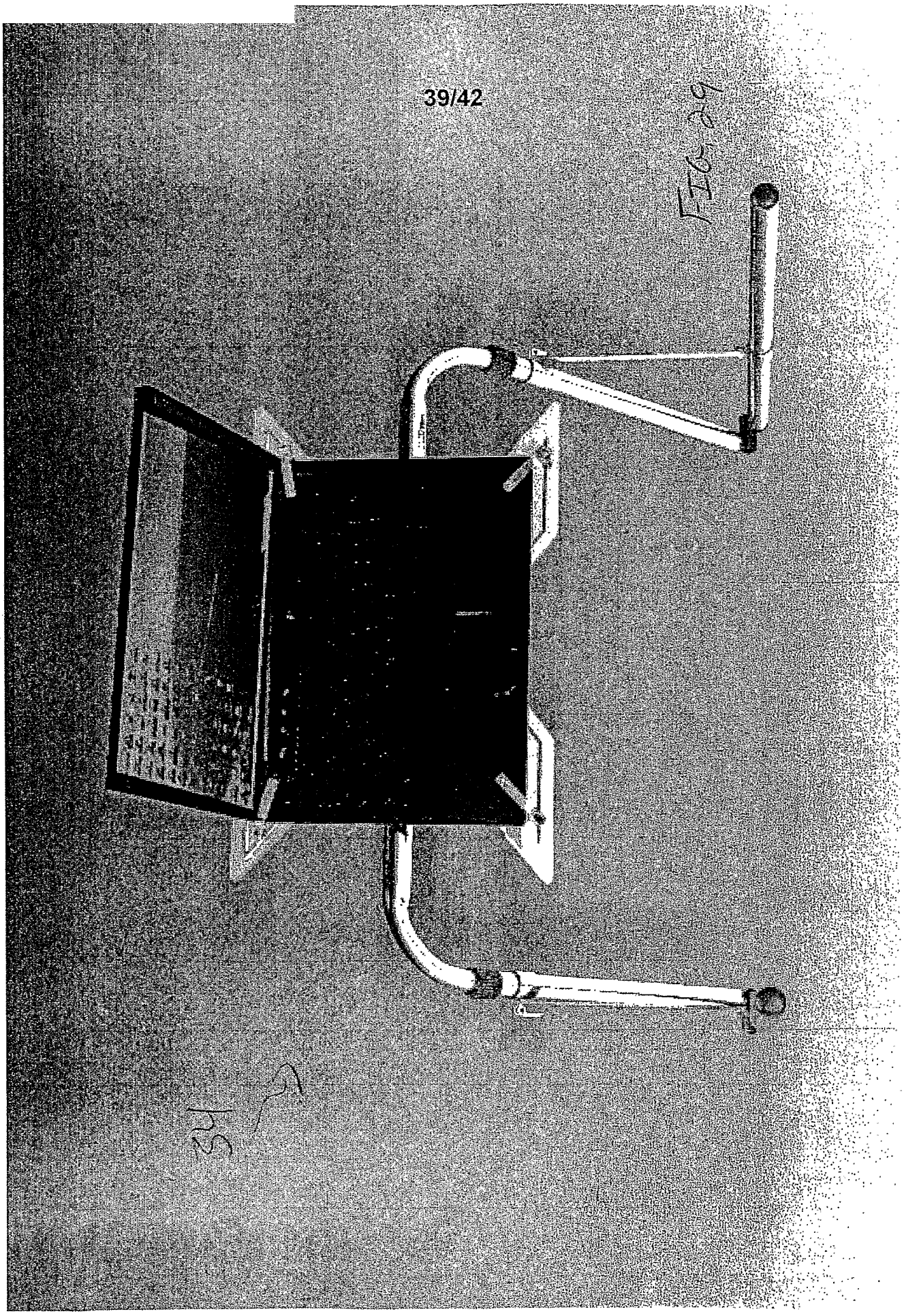

Assemble Book/Laptop (B/L) Stand
102
100
Position Stand
Adjust Height
104
106
Place Book/Laptop on B/L Stand
108
Slide Clamps Into Position
110
Close Clamps & Lock Book/Laptop Into Position
112
Further Adjust Height, Width and Position of B/L Stand as Necessary
114
Adjust Viewing Angle Using Mounting Coupler
116
Use Book Strap? (If Book)
118
Y
N
Insert Book Strap
120
Slide Pages From One Side to Other of Book
122

FIG. 28



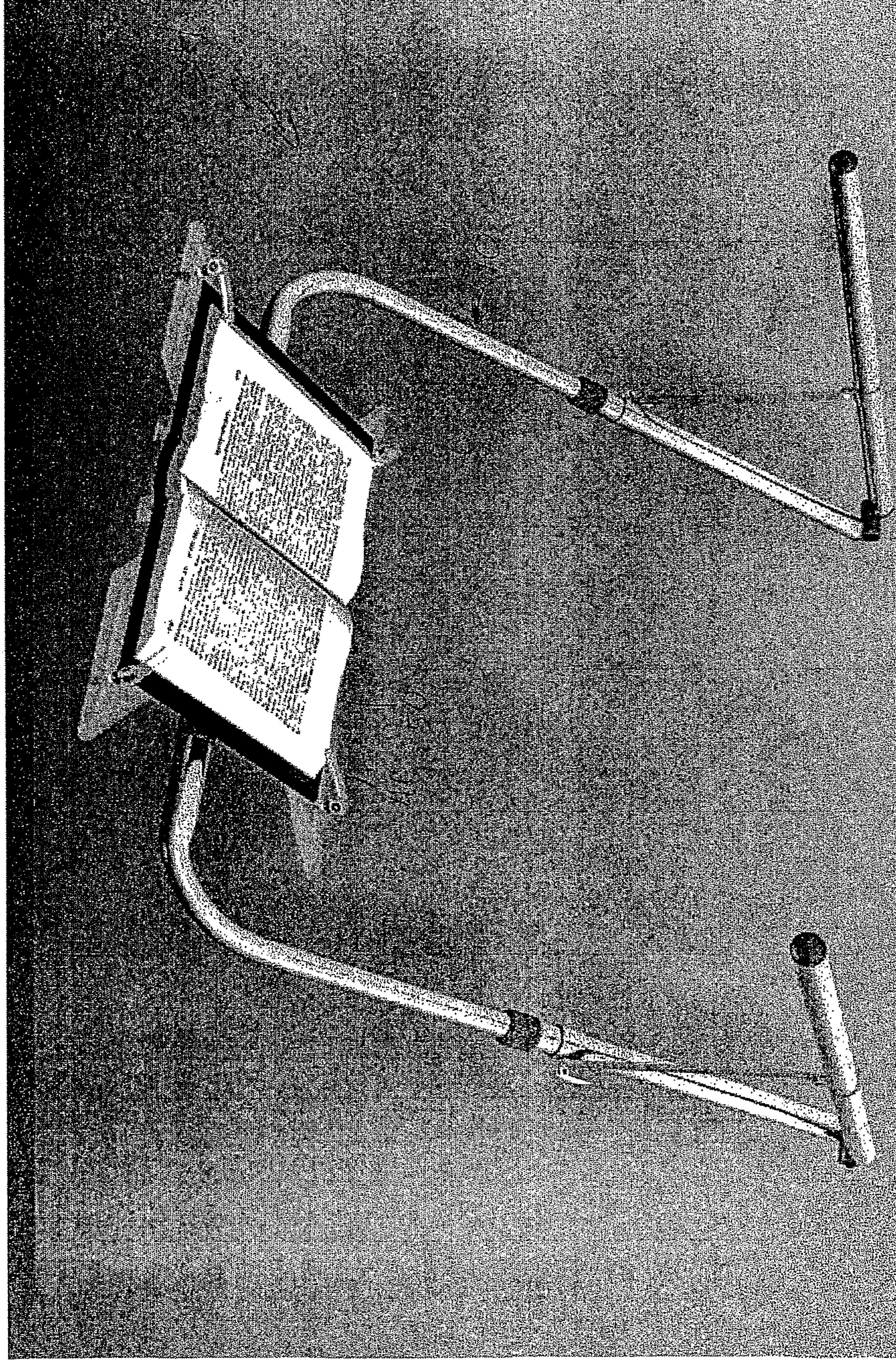


FIG 30

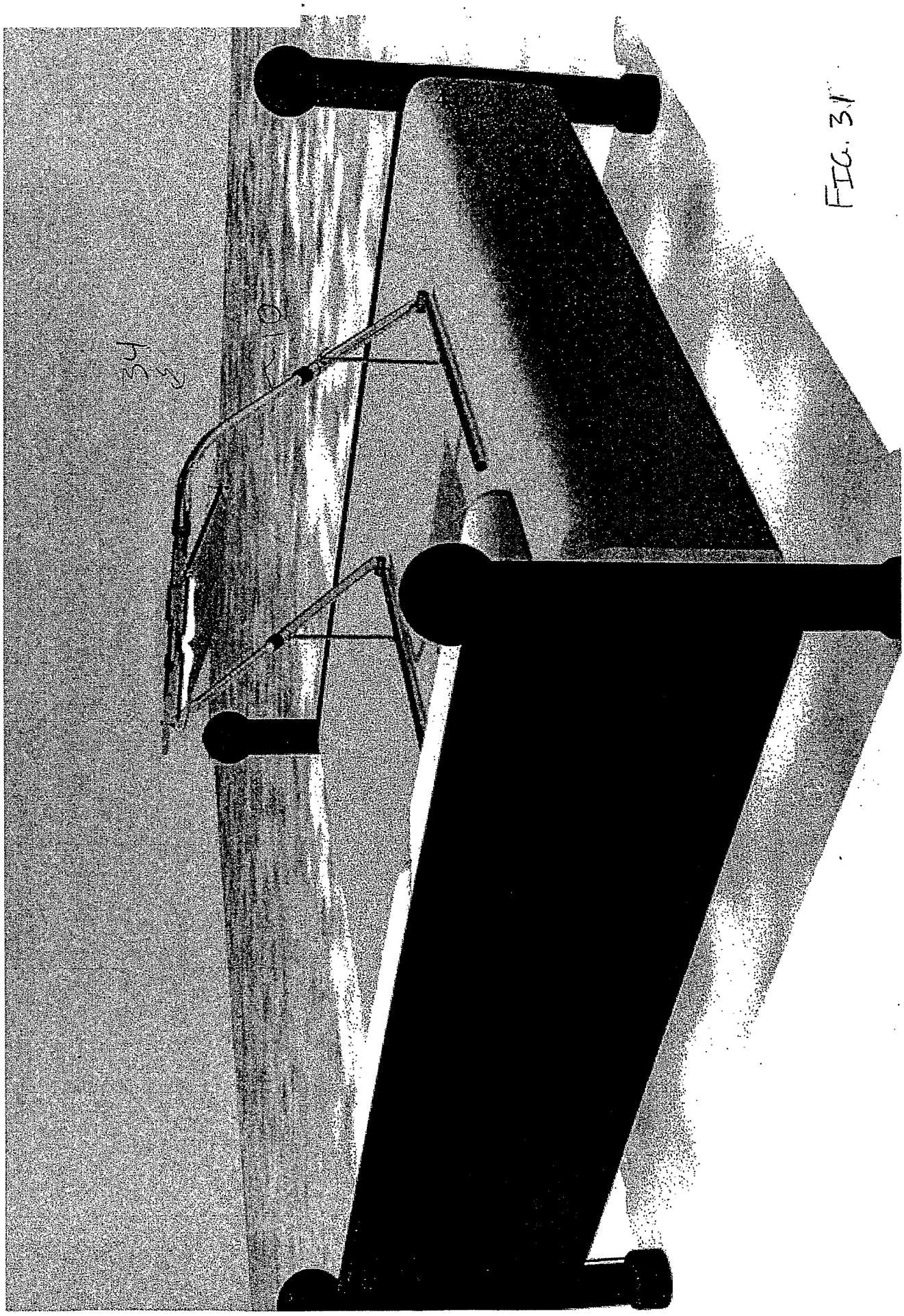


FIG. 3A

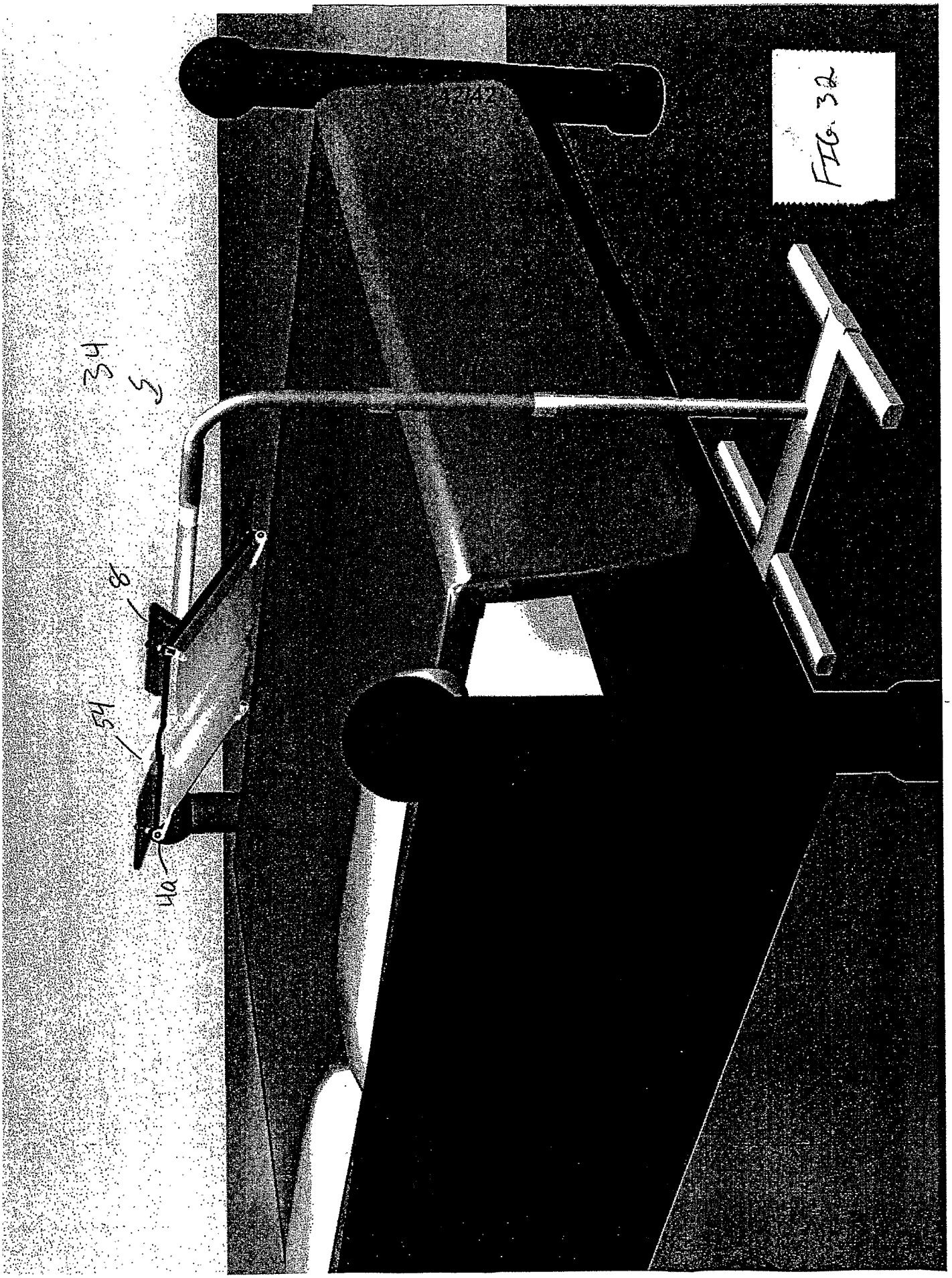


FIG. 32