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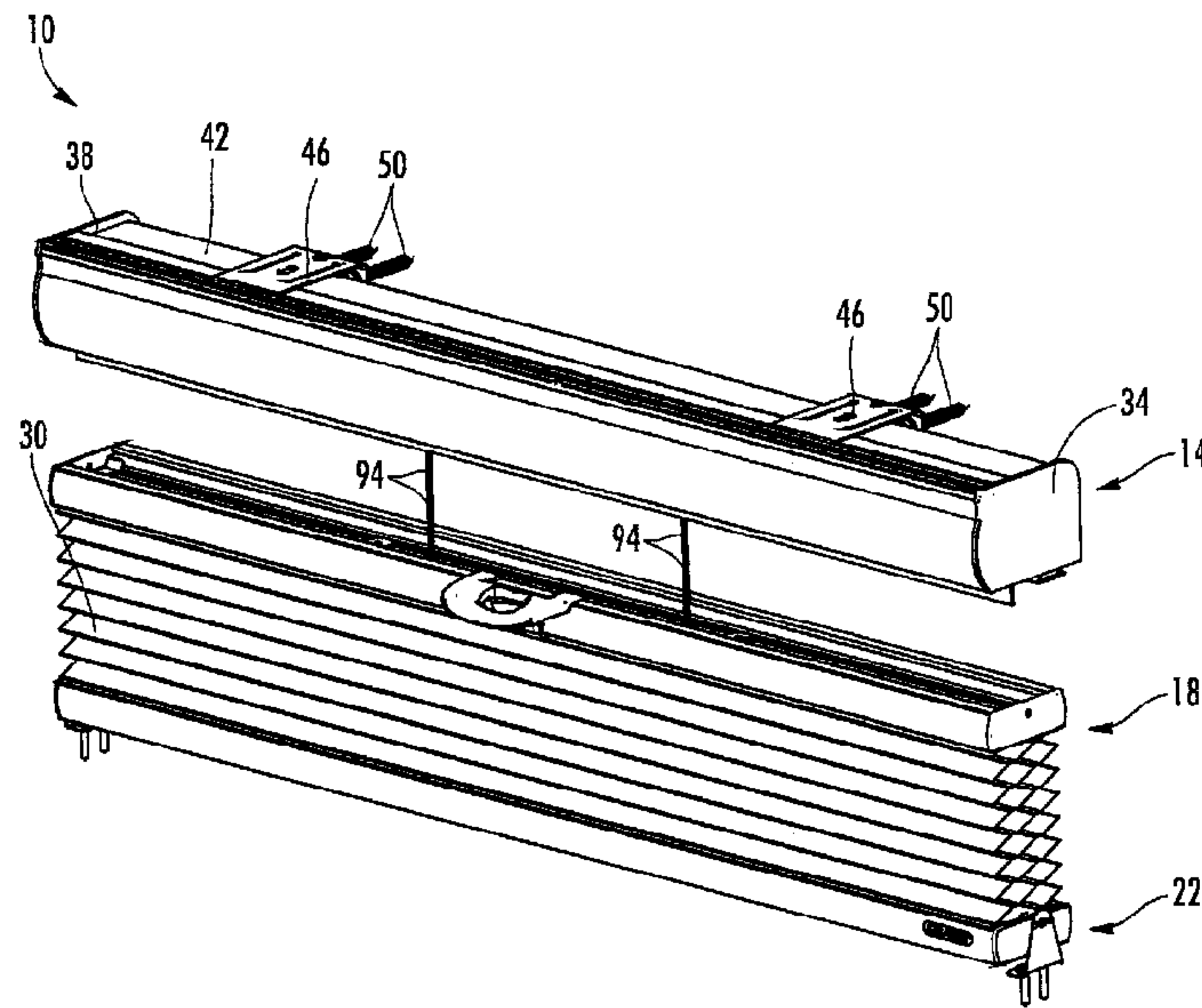
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(54) Titre : DISPOSITIF DE LEVAGE DE STORE SANS CORDE ET MECANISME DE TETE DE RAIL

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(57) Abrégé/Abstract:

A covering for an architectural opening including a first rail, a second rail moveable relative to the first rail, a third rail moveable relative to the first rail, and a lift assembly coupled to the first rail. The lift assembly includes a first drum rotatable about a first axis, a second drum rotatable about a second axis; a first lift cord coupled between the first drum and the second rail, and a second lift cord coupled between the second drum and the third rail. The first drum is offset from the second drum, and a portion of the first drum overlaps a portion of the second drum along a third axis that is perpendicular to the first axis and the second axis.

ABSTRACT

A covering for an architectural opening including a first rail, a second rail moveable relative to the first rail, a third rail moveable relative to the first rail, and a lift assembly coupled to the first rail. The lift assembly includes a first drum rotatable about a first axis, a second drum rotatable about a second axis; a first lift cord coupled between the first drum and the second rail, and a second lift cord coupled between the second drum and the third rail. The first drum is offset from the second drum, and a portion of the first drum overlaps a portion of the second drum along a third axis that is perpendicular to the first axis and the second axis.

CORDLESS SHADE LIFT SYSTEM AND HEADRAIL ARRANGEMENT

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to U.S. Provisional Patent Application No. 62/110,795, filed on February 2, 2015, and entitled “Cordless Shade Lift System and Headrail Arrangement.”

FIELD OF INVENTION

[0002] The present invention relates to architectural coverings, and more specifically to cordless window shades.

BACKGROUND

[0002a] It should be appreciated that a “cordless” shade generally refers to a shade that is positioned (or repositioned) by manually adjusting one or more rails, instead of adjusting rail position by a drawstring (or a draw cord). A “cordless” shade does not require that all cords associated with the shade be eliminated, as a “cordless” shade can include, for example, lift cords that extend between rails.

[0003] Cordless shades known as “sun-up, sun-down” shades include two shade material panels and “bottom-up, top-down” shades include a single shade material panel that may be lowered from both the bottom and top. Both of the “sun-up, sun-down” and “bottom-up, top-down” shades include an intermediate rail between a head rail and a bottom rail.

SUMMARY

[0004] The invention provides, in one aspect, a covering for an architectural opening including a first rail, a second rail moveable relative to the first rail, a third rail moveable relative to the first rail, and a lift assembly coupled to the first rail. The lift assembly includes a first drum rotatable about a first axis, a second drum rotatable about a second axis; a first lift cord coupled between the first drum and the second rail, and a second lift cord coupled between the second drum and the third rail. The first drum is non-coaxial with the second drum, and a portion

of the first drum overlaps a portion of the second drum along a third axis that is perpendicular to the first axis.

[0005] The invention provides, in yet another aspect, a cradle assembly for an architectural opening covering. The cradle assembly includes a cradle, a first drum supported within the cradle and rotatable about a first axis, and a second drum supported within the cradle and rotatable about a second axis. The cradle assembly further includes a first cord coupled to the first drum, and a second cord coupled to the second drum. The cradle includes an aperture through which the first cord and the second cord pass.

[0006] The invention provides, in yet another aspect, a covering for an architectural opening including a head rail, an intermediate rail moveable relative to the head rail, a bottom rail moveable relative to the head rail, and a lift assembly coupled to the head rail. The lift assembly includes a first spring motor, a first drive shaft coupled to the first spring motor and defining a first axis, a second spring motor, and a second drive shaft coupled to the second spring motor and defining a second axis. The lift assembly further includes a cradle supporting a first drum for rotation about the first axis and supporting a second drum for rotation about the second axis, a first lift cord coupled between the first drum and the intermediate rail, and a second lift cord coupled between the second drum and the bottom rail. The first drum is non-coaxial from the second drum, and a portion of the first drum overlaps a portion of the second drum along a third axis that is perpendicular to the first axis.

[0006a] According to one aspect of the present invention, there is provided a covering for an architectural opening comprising: a first rail; a second rail moveable relative to the first rail; a third rail movable relative to the first rail; a lift assembly coupled to the first rail; the lift assembly including: a first drum rotatable about a first axis; a second drum rotatable about a second axis; a first lift cord coupled between the first drum and the second rail; and a second lift cord coupled between the second drum and the third rail; a cradle in which the first drum and the second drum are disposed; a first cover pivotally attached to the cradle above the first drum; and a second cover pivotally attached to the cradle above the second drum, wherein the first drum is non-coaxial with the second drum, and wherein a portion of the first drum overlaps a portion of the second drum along a third axis that is perpendicular to the first axis; and wherein each of the first cover and the

second cover include a wear bar, and wherein the first lift cord is supported upon the wear bar of the first cover and the second lift cord is supported upon the wear bar of the second cover.

[0006b] According to another aspect of the present invention, there is provided a cradle assembly for an architectural opening covering, the cradle assembly comprising: a cradle; a first drum supported within the cradle and rotatable about a first axis; a second drum supported within the cradle and rotatable about a second axis; a first cord coupled to the first drum; a second cord coupled to the second drum; a first cover pivotally attached to the cradle above the first drum; and a second cover pivotally attached to the cradle above the second drum, wherein the cradle includes an aperture through which the first cord and the second cord pass, and wherein each of the first cover and the second cover include a wear bar, and wherein the first lift cord is supported upon the wear bar of the first cover and the second lift cord is supported upon the wear bar of the second cover.

[0006c] According to another aspect of the present invention, there is provided a cradle assembly for an architectural opening covering, the cradle assembly comprising: a cradle; a first drum supported within the cradle and rotatable about a first axis; a first cord coupled to the first drum; and a first cover movably attached to the cradle above the first drum; wherein the cradle includes an aperture through which the first cord passes, and wherein the first cover includes a wear bar, and wherein the first lift cord is supported upon the wear bar of the first cover.

[0007] Other aspects of the invention will become apparent by consideration of the detailed description and accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] FIG.1 is a front perspective view of a window covering in accordance with an embodiment of the invention.

[0009] FIG. 2 is a rear perspective view of the window covering of FIG.1 with portions removed to clearly show a lift assembly including two cradle assemblies.

[0010] FIG. 3 is a perspective view of one of the cradle assemblies of FIG. 2.

[0011] FIG. 4 is an exploded view of the cradle assembly of FIG. 3.

[0012] FIG. 5 is another exploded view of the cradle assembly of FIG. 3, viewed from an opposite side as the view in FIG. 4.

[0013] FIG. 6 is a cross-sectional view of the cradle assembly of FIG. 3 taken along lines 6-6 shown in FIG. 3.

[0014] FIG. 7 is a front perspective view of a window covering in accordance with another embodiment of the invention.

[0015] FIG. 8 is a rear perspective view of the window covering of FIG. 7 with portions removed to clearly show a lift assembly including two cradle assemblies.

[0016] Before any embodiments of the invention are explained in detail, it is to be understood that the invention is not limited in its application to the details of construction and the arrangement of components set forth in the following description or illustrated in the following drawings. The invention is capable of other embodiments and of being practiced or of being carried out in various ways.

DETAILED DESCRIPTION

[0017] With reference to FIGS. 1-2, a covering 10 for an architectural opening (e.g., a window, etc.) is illustrated with a head rail 14, an intermediate rail 18, and a bottom rail 22. The window covering 10 further includes a lower window covering panel 30 extending between the intermediate rail 18 and the bottom rail 22, and no material extending between the head rail 14 and the intermediate rail 18 (a.k.a. a “bottom-up, top-down” cordless shade). The intermediate rail 18 is moveable with respect to the head rail 14, and the bottom rail 22 is moveable with respect to the intermediate rail 18 and the head rail 14. The head rail 14 includes a first end cap 34 and a second end cap 38 positioned at opposite ends of the head rail 14, and a dust cover 42. A plurality of mounting brackets 46 are provided for attaching the multi-panel window covering 10 to, for example, a wall adjacent a window, a ceiling above a window, or at various positions on the window itself. In the illustrated embodiment, the brackets 46 are configured to receive a plurality of fasteners 50 for anchoring the brackets 46 to the wall, ceiling, or window structure.

[0018] With continued reference to FIG. 1, the lower window covering panel 30 is positioned beneath the open space between the intermediate rail 18 and the head rail 14. The window covering panel 30 may have different characteristics, including but limited to: light blocking ability, color, structure, or aesthetic appearance. For example, a window covering panels can be relatively sheer for allowing significant light to pass there through while obscuring vision through the window, and the other panel can be opaque so as to provide room darkening. In the illustrated embodiment, the lower window covering panel 30 are cellular fabrics. More specifically, the panel 30 is illustrated as double-cell cellular fabrics but any number of cells (i.e., single or multi-cell fabrics) may be used. In alternative embodiments, the upper and lower window covering panels are pleated fabrics. Additionally or alternatively, any combination of pleated, cellular fabrics, or other types of window covering material (e.g., Venetian blinds) can be used. In further alternative embodiments, an upper window covering panel is added between the intermediate rail 18 and the head rail 14 (a.k.a. a “sun-up, sun-down” cordless shade). Also, in alternative embodiments, the window covering is a single panel window covering (i.e., including only a head rail and a bottom rail).

[0019] With reference to FIG. 2, a lift assembly 54 for the window covering 10 is positioned within a substantially enclosed space that is at least partially defined by the dust cover 42 and the end caps 34, 38 of the head rail 14. The dust cover 42 and other portions have been removed in FIG. 2 for clarity purposes. The lift assembly 54 is coupled to the head rail 14 and includes a first spring motor 58, a second spring motor 62, a first drive shaft 66 (i.e., a drive rod), a second drive shaft 70, a first cradle assembly 74, and a second cradle assembly 78. U.S. Patent No. 7,143,802 provides additional disclosure regarding the components contained in the first and second spring motor 58, 62. In the illustrated embodiment, the first spring motor 58 is drivingly coupled to the first drive shaft 66 and the second spring motor 62 is drivingly coupled to the second drive shaft 70. The first cradle assembly 74 and the second cradle assembly 78 are both coupled to each of the first and second drive shafts 70, 74. As explained in greater detail below, the first and second spring motors 58, 62 are provided for assisting a user with lifting the intermediate and bottom rails 18, 22 (including the lower window covering panel 30) between the fully extended and fully retracted positions.

[0020] With continued reference to FIG. 2, each of the first and second cradle assemblies 74, 78 includes a first winding drum 86 and a second winding drum 90. Lift cords 94 are partially wound around the winding drums 86, 90 and extend from the winding drums 86, 90 to the intermediate rail 18 and the bottom rail 22. The first spring motor 58 is connected to the drive shaft 66, and the drive shaft 66 is connected to the winding drum 86 for winding on and winding off the lift cord 94 connected between the head rail 14 and the bottom rail 22. Likewise, the second spring motor 62 is connected to the drive shaft 70, and the drive shaft 70 is connected to the winding drum 90 for winding on and winding off the lift cord 94 connected between the head rail 14 and the intermediate rail 18. More specifically, the drive shafts 66, 70 are received within a square-shaped aperture 98 formed within the first and second drums 86, 90. In the illustrated embodiment, two lift cords 94 are provided between the head rail 14 and the bottom rail 22, and two other lift cords 94 are provided between the head rail 14 and the intermediate rail 18. One winding drum 86, 90 is provided for each lift cord 94 used in the window covering 10. Accordingly, in the illustrated embodiment, four winding drums 86, 90 are provided for the four lift cords 94 shown with two winding drums 86 for the two lift cords 94 extending between the head rail 14 and the bottom rail 22, and two winding drums 90 for the two lift cords 94 extending between the head rail 14 and the intermediate rail 18. In the illustrated embodiment, each cradle assembly 74, 78 includes two lift cords 94 with one lift cord 94 extending between the head rail 14 and the bottom rail 22 and the other lift cord 94 extending between the head rail 14 and the intermediate rail 18.

[0021] In other words, the first spring motor 58 is provided for working together with lift cords 94 connected between the head rail 14 and the bottom rail 22, and the second spring motor 62 is provided for working together with the lift cords 94 connected between the head rail 14 and the intermediate rail 18. The spring motors 58, 62 include a spring therein to store energy as the window covering is extended so that the stored energy can be utilized to assist lifting the window covering material from a more extended position to a more retracted position.

[0022] The lift cords 94 extend through internal holes or openings of the window covering panel 30 so as not to be visible in the cellular panels and only minimally visible through the pleated panels. As the window covering panel 30 is extended or retracted, the lift cords move relative to the panels 30 so that the panel 30 is compressed or extended. Two of the lift cords 94

extend only to the intermediate rail 18. Accordingly, extending or retracting the unwound the length of these two lift cords 94 adjusts the position of the intermediate rail 18 relative to the head rail 14 and thereby the amount of exposure of the opening between the head rail 14 and the intermediate rail 18. The other two lift cords 94 extend through the intermediate rail 18, through the lower window covering panel 30 and are attached to the bottom rail 22. Accordingly, extending or retracting the unwound length of these two later described lift cords 94 adjust the position of the bottom rail 22 relative to the head rail 14 and, together with the positioning of the intermediate rail 18 relative to the head rail 14 one determines the amount of exposure of the lower window covering panel 30 between the intermediate rail 18 and the bottom rail 22.

[0023] With continued reference to FIG. 2, the winding drums 86, 90 for each pair of lift cords 94 are provided in front to back relationships immediately above the lift cord paths through the material panel 30. Accordingly, in each pair of lift cords 94, one lift cord engages the forward winding drum 90 and the other lift cord engages the rearward winding drum 86. The forward winding drums 90 are engaged on the same drive shaft 70 and are thereby connected to the same spring motor assembly 62. The rearward winding drums 90 are engaged on the other drive shaft 66 and are thereby connected to the other spring motor assembly 58. The two lift cords 94 connected to the bottom rail 22 are engaged with the rearward winding drums 86 and the two lift cords 94 connected to the intermediate rail 18 are engaged with the forward winding drums 90. Accordingly, both lift cords 94 connected to the bottom rail 22 are operated by the same spring motor assembly 58 and both lift cords 94 connected to the intermediate rail 18 are operated by the other spring motor assembly 62.

[0024] With reference to FIGS. 3-6, the first cradle assembly 74 is illustrated in greater detail. In the illustrated embodiment, the first cradle assembly 74 is identical to the second cradle assembly 78. As illustrated in FIG. 3, the cradle assembly 74 includes a cradle 102 and the first winding drum 86 is supported within the cradle 102 for rotation about a first axis 106. The second winding drum 90 is also supported within the cradle 102 for rotation about a second axis 110. The first axis 106 is parallel to and offset from (i.e., non-coaxial with) the second axis 110. A first lift cord 94a is coupled between the first drum 86 and the bottom rail 22 (shown in FIGS. 1-2) and a second lift cord 94b is coupled between the second drum 90 and the intermediate rail 18 (also shown in FIGS. 1-2). The first drum 86 is offset from the second drum

90, and at least a portion of the first drum 86 overlaps a portion of the second drum 90 along a third axis 114 that is perpendicular to the first axis 106 and the second axis 110. In other words, the first drum 86 and the second drum 90 overlap in at least one axial location along the head rail 14. In the illustrated embodiment, the first drum 86 overlaps entirely with the second drum 90 along the third axis 114. In other words, the first and second drums 86, 90 are positioned in a side-by-side arrangement within a single, common cradle 102.

[0025] In an alternative embodiment, the a cradle supports a first drum for rotation about a first axis and a second drum for rotation about a second axis, with the second drum positioned above the first drum in a stacked configuration. The first axis is offset from (i.e., non-coaxial with) the second axis. With the drums positioned one above the other, at least a portion of the first drum overlaps a portion of the second drum along a third, vertical axis that is perpendicular to the first axis and the second axis.

[0026] With reference to FIGS. 3 and 4, the cradle 102 includes a pair of first supports 118 extending along the first axis 106 upon which the first drum 86 is rotatably supported. The cradle 102 also includes a pair of second supports 122 extending along the second axis 110 upon which the second drum 90 is rotatably supported. In the illustrated embodiment, the first spring motor 58 is drivingly coupled to the first drive shaft 66 (see FIG. 2), which is coupled to the first drum 86 for co-rotation therewith. Similarly, the second spring motor 62 is drivingly coupled to the second drive shaft 70 (see FIG. 2), which is coupled to the second drum 90 for co-rotation therewith. In the illustrated embodiment, the first drive shaft 66 also defines the first rotational axis 106 of the first drum 86 and the second drive shaft 70 also defines the second rotational axis 110 of the second drum 90.

[0027] With continued reference to FIG. 4, the cradle assembly 74 further includes a first cover 126 pivotally attached to the cradle 102 above the first drum 86 and a second cover 130 pivotally attached to the cradle 102 above the second drum 90. Specifically, the first cover 126 is pivotable about a first pivot axis 134 and the second cover 130 is pivotable about a second pivot axis 138. Each of the first cover 126 and the second cover 130 include a wear bar 142 received within notches 146 formed on the covers 126, 130. The first lift cord 94a is supported upon the wear bar 142 of the first cover 126 and the second lift cord 94a is supported upon the

wear bar 142 of the second cover 130 (FIG. 6). In other words, the lift cords 94a, 94b are threaded from the winding drums 86, 90 over the wear bars 142. The lift cords 94a, 94b bias the wear bar 142 and cause the covers 126, 130 to pivot into engagement with a portion of the drums 86, 90, respectively. This results in a braking force between the winding drum 86, 90 and the pivoting cover 126, 130 to resist the rotation of the winding drum 86, 90.

[0028] With reference to FIG. 5, the cradle 102 include a rib 150 is formed in the bottom the cradle 102 underneath each of the first and second drums 86, 90. The rib 150 is provided to aid with winding the lift cords 94 onto the drums 86, 90. More specifically, the rib 150 translates the lift cords 94, or pushes the lift cords 94, along the drums 86, 90 as each lift cord 94 wraps around the respective drum 86, 90. By directing the cords 94 laterally along the drums 86, 90, the rib 150 prevents the lift cord 94 from wrapping around itself. With reference to FIG. 6, an aperture 154 (i.e., opening) is formed in the cradle 102 bottom. The first lift cord 94a and the second lift cord 94b both pass through the aperture 154 defined by the cradle 102. In the illustrated embodiment, the aperture 154 has a funnel cross-sectional shape. The funnel like aperture 154 for the lift cords 94a 94b can reduce a potential misalignment between the head rail 14, the cradle assembly 74, and a plurality of cord route holes positioned through the lower window covering panel 30.

[0029] With reference to FIG. 2, the covering 10 includes two cradle assemblies 74, 78 with two spring motors 58, 62 incorporated in the head rail 14 so that both the bottom rail 22 and the intermediate rail 18 can be operated independently. As such, the lift assembly 54 includes the second cradle assembly 78 that supports a second instance of the first and second winding drums 86, 90. The first cradle assembly 74 is spaced from the second cradle assembly 78 along the respective drive shafts 66, 70, and in turn the first axis 106 and the second axis 110 (see FIGS. 2 and 3). In the illustrated embodiment, the first cradle assembly 74 is identical to the second cradle assembly 78.

[0030] The lift assembly 54 and head rail 14 arrangement according to the invention include cord take-up drums 86, 90 for the lift cords 94a, 94b to the bottom rail 22 and intermediate rail 18 that are provided immediately above the lift cord paths. In other words, the lift cords 94a, 94b hang straight down from the cradle assembly 74 (FIG. 6). Since the lift cords 94 follow the

same paths, the cords to a given rail are of equal length. In other words, the lengths of the lift cords 94b coupled to the intermediate rail 18 are equal and the lengths of the lift cords 94a coupled to the bottom rail 22 are equal. In addition, since the same cord path is used for both lift cords from each of the drums down through the shade, the straight cord paths having low drag or friction. With all cord paths straight, the assembly of the lift assembly 54 is also improved with the cord path direct and straight through the shade.

[0031] With reference to FIG. 3, the winding drums 86, 90 are arranged in the cradle 102 in a forward and rearward arrangement (i.e., a side-by-side arrangement). The winding drums 86, 90 are spaced only a minimal distance apart and require no more space front to back (i.e., along the third axis 114) in the head rail 14 than a conventional cordless shade. As shown in FIG. 2, the cord drums 86, 90 are linked and driven by a longitudinal drive shaft 66, 70 that passes through each winding drum 86, 90 and into the spring assist motor 58, 62. One driveshaft accommodates all winding drums associated for a given rail, the lift cord 94 travel paths are simplified, and the spring motor 58, 62 positioning is flexible.

[0032] Another embodiment of a covering 10a is shown in FIGS. 7 and 8. Like features and components are shown with like reference numerals plus the letter "a." The covering 10a includes a head rail 14a, a bottom rail 22a, and a window covering panel 30a extended therebetween. The main difference between the covering 10 of FIGS. 1 and 2 and the covering 10a of FIGS. 7 and 8 is the covering 10a only includes two total rails 14a, 22a. More specifically, the covering 10a also includes a first end cap 34a, a second end cap 38a, a dust cover 42a, brackets 46a, and fasteners 50 that are all similar to the covering 10.

[0033] With reference to FIG. 8, the covering 10 includes a lift assembly 54a includes a first spring motor 58a, a first drive shaft 66a (i.e., a drive rod), a first cradle assembly 74a, and a second cradle assembly 78a. In the illustrated embodiment, the first spring motor 58a is drivingly coupled to the first drive shaft 66a. The first cradle assembly 74a and the second cradle assembly 78a are each coupled to the first drive shaft 66a. The first spring motor 58a is provided for assisting a user with lifting the bottom rail 22a (including the window covering panel 30a) between the fully extended and fully retracted positions. The first and second cradle assemblies 74a, 78a of FIG. 8 are identical to the first and second cradle assembly 74, 78 of FIG.

2, except that the first and second cradle assemblies 74a, 78a each include a cradle 102a rotatably supporting only a single winding drum 86a and a single pivoting cover 126a. In other words, half of the cradle 102a is left empty in the cradle assemblies 74a, 78a of FIG. 8 since only a single rail (i.e., the bottom rail 22a) is being controlled. As such, the cradle assemblies are modular and can be used in a variety of window covering applications. By using identical cradle assemblies that can be utilized on different types of coverings, the number of stock components required to manufacture the different types of coverings is reduced.

[0034] Various features and advantages of the invention are set forth in the following claims.

CLAIMS:

1. A covering for an architectural opening comprising:
 - a first rail;
 - a second rail moveable relative to the first rail;
 - a third rail movable relative to the first rail;
 - a lift assembly coupled to the first rail; the lift assembly including:
 - a first drum rotatable about a first axis;
 - a second drum rotatable about a second axis;
 - a first lift cord coupled between the first drum and the second rail; and
 - a second lift cord coupled between the second drum and the third rail;
 - a cradle in which the first drum and the second drum are disposed;
 - a first cover pivotally attached to the cradle above the first drum; and
 - a second cover pivotally attached to the cradle above the second drum,

wherein the first drum is non-coaxial with the second drum, and wherein a portion of the first drum overlaps a portion of the second drum along a third axis that is perpendicular to the first axis; and wherein each of the first cover and the second cover include a wear bar, and wherein the first lift cord is supported upon the wear bar of the first cover and the second lift cord is supported upon the wear bar of the second cover.
2. The covering of claim 1, wherein the first axis is parallel to the second axis.
3. The covering of claim 1, wherein the first drum entirely overlaps the second drum along the third axis.

4. The covering of claim 1, wherein the cradle includes an aperture through which the first lift cord and the second lift cord pass.

5. The covering of claim 1, wherein the cradle includes a first support extending along the first axis upon which the first drum is rotatable, and a second support extending along the second axis upon which the second drum is rotatable.

6. The covering of claim 1, wherein the third rail is moveable relative to the second rail.

7. The covering of claim 1, wherein the lift assembly further includes:

a first spring motor and a first drive shaft drivingly coupled to the first spring motor; wherein the first drive shaft is coupled to the first drum for co-rotation.

8. The covering of claim 7, wherein the lift assembly further includes:

a second spring motor and a second drive shaft drivingly coupled to the second spring motor; wherein the second drive shaft is coupled to the second drum for co-rotation.

9. A cradle assembly for an architectural opening covering, the cradle assembly comprising:

a cradle;

a first drum supported within the cradle and rotatable about a first axis;

a second drum supported within the cradle and rotatable about a second axis;

a first cord coupled to the first drum;

a second cord coupled to the second drum;

a first cover pivotally attached to the cradle above the first drum; and

a second cover pivotally attached to the cradle above the second drum,

wherein the cradle includes an aperture through which the first cord and the second cord pass, and wherein each of the first cover and the second cover include a wear bar, and wherein the first lift cord is supported upon the wear bar of the first cover and the second lift cord is supported upon the wear bar of the second cover.

10. The cradle of claim 9, wherein the cradle includes a first support extending along the first axis upon which the first drum is rotatable, and a second support extending along the second axis upon which the second drum is rotatable.

11. A cradle assembly for an architectural opening covering, the cradle assembly comprising:

a cradle;

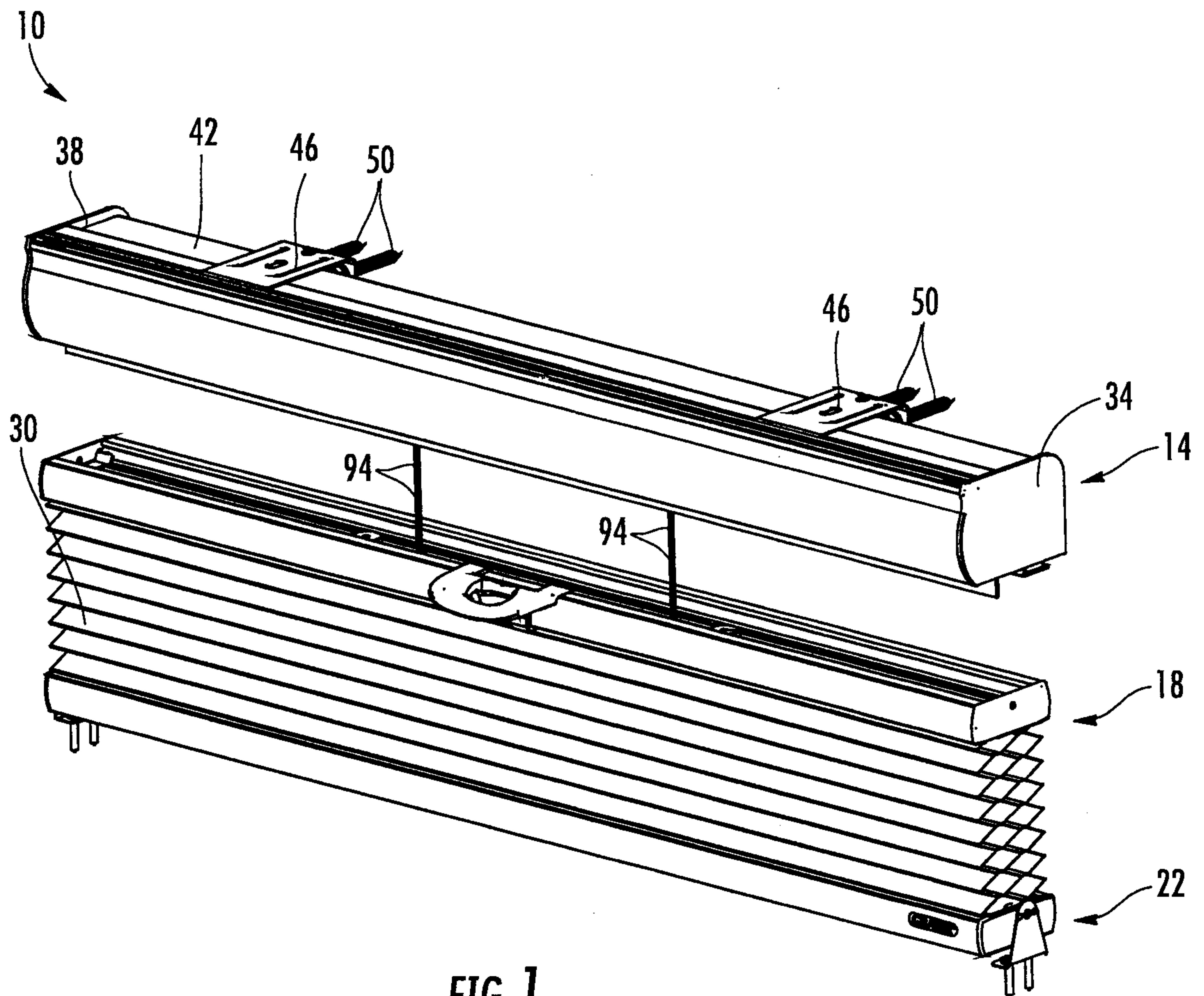
a first drum supported within the cradle and rotatable about a first axis;

a first cord coupled to the first drum; and

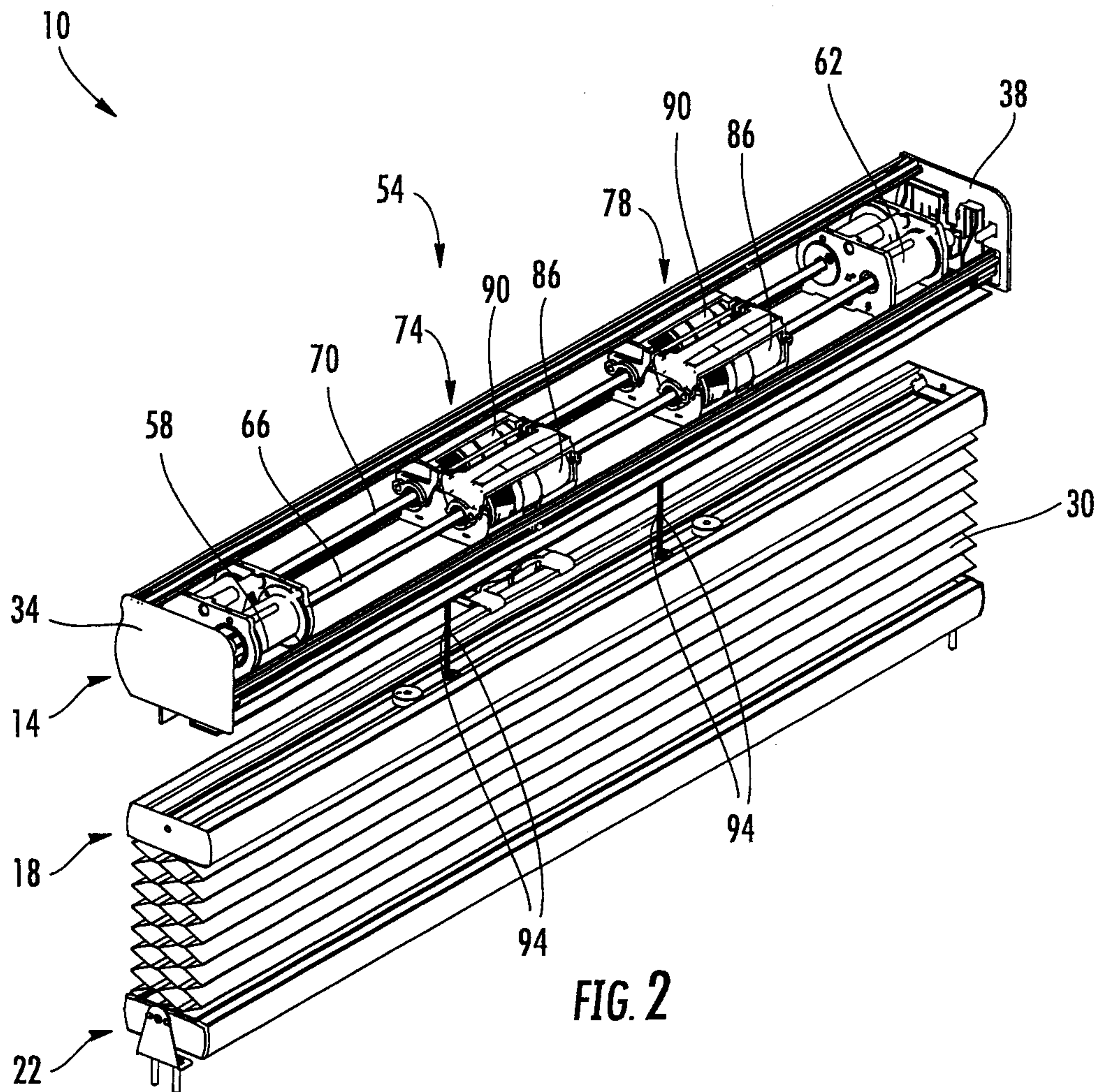
a first cover movably attached to the cradle above the first drum;

wherein the cradle includes an aperture through which the first cord passes, and wherein the first cover includes a wear bar, and wherein the first lift cord is supported upon the wear bar of the first cover.

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3/8

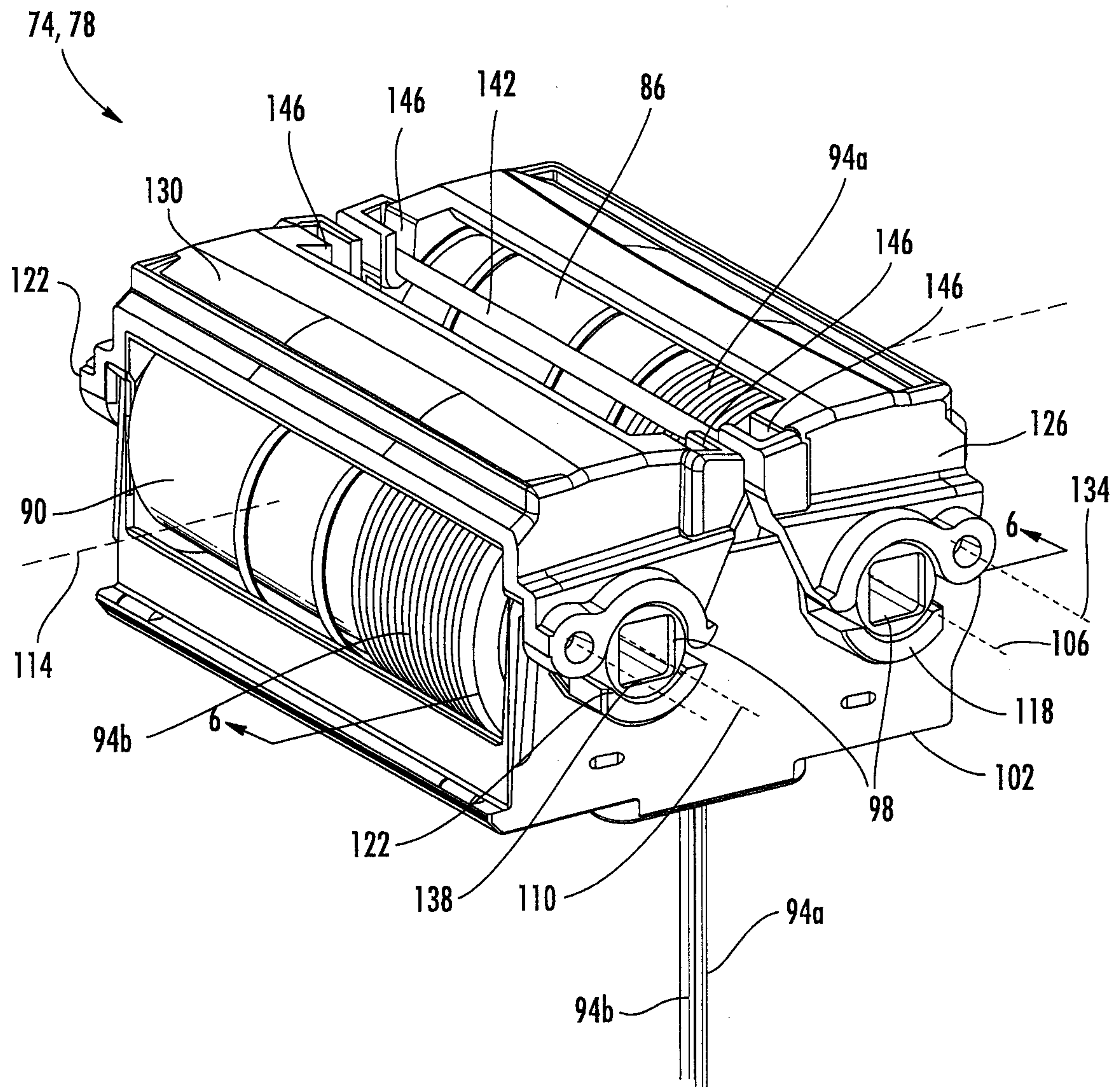


FIG. 3

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74, 78

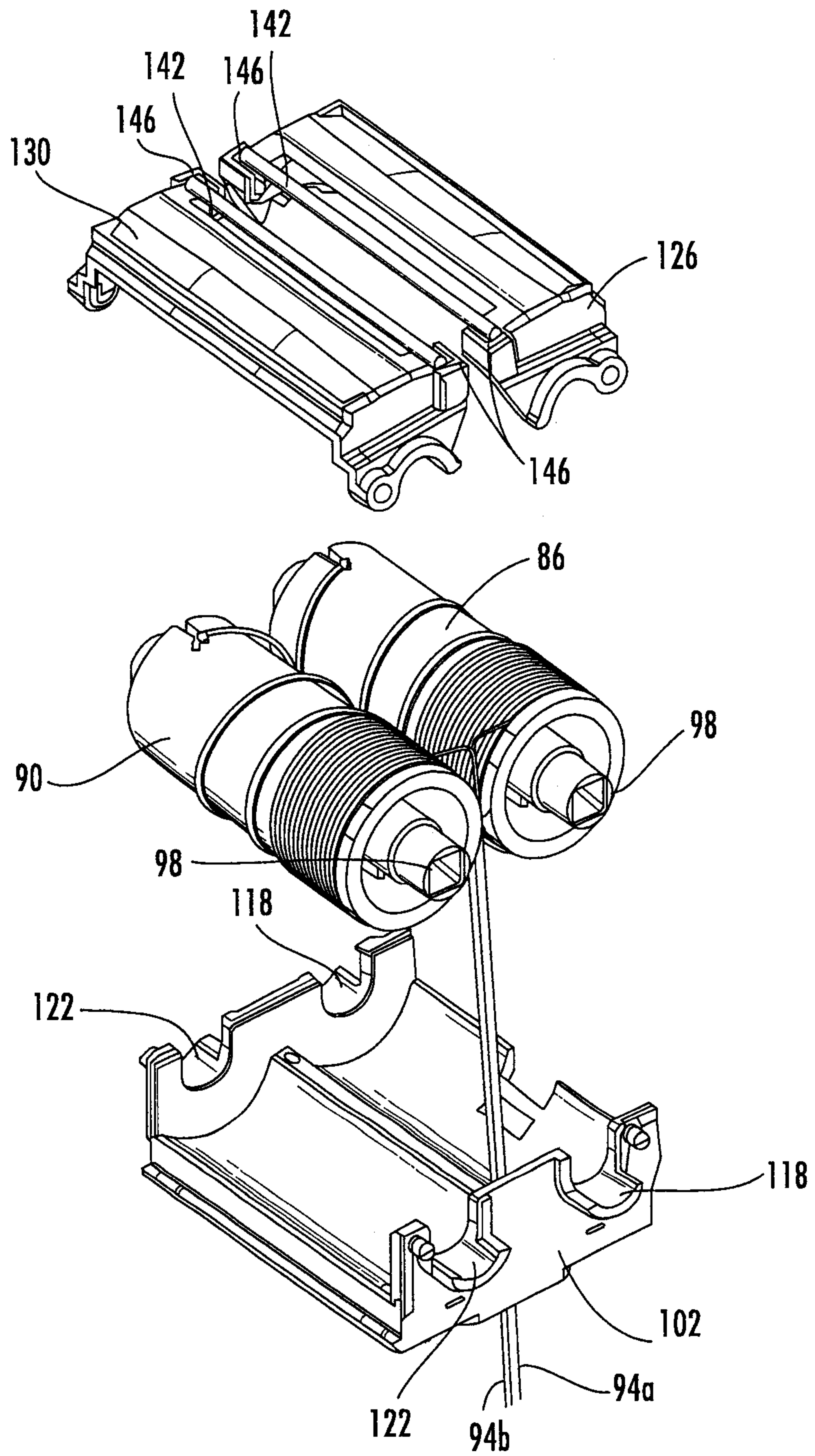


FIG. 4

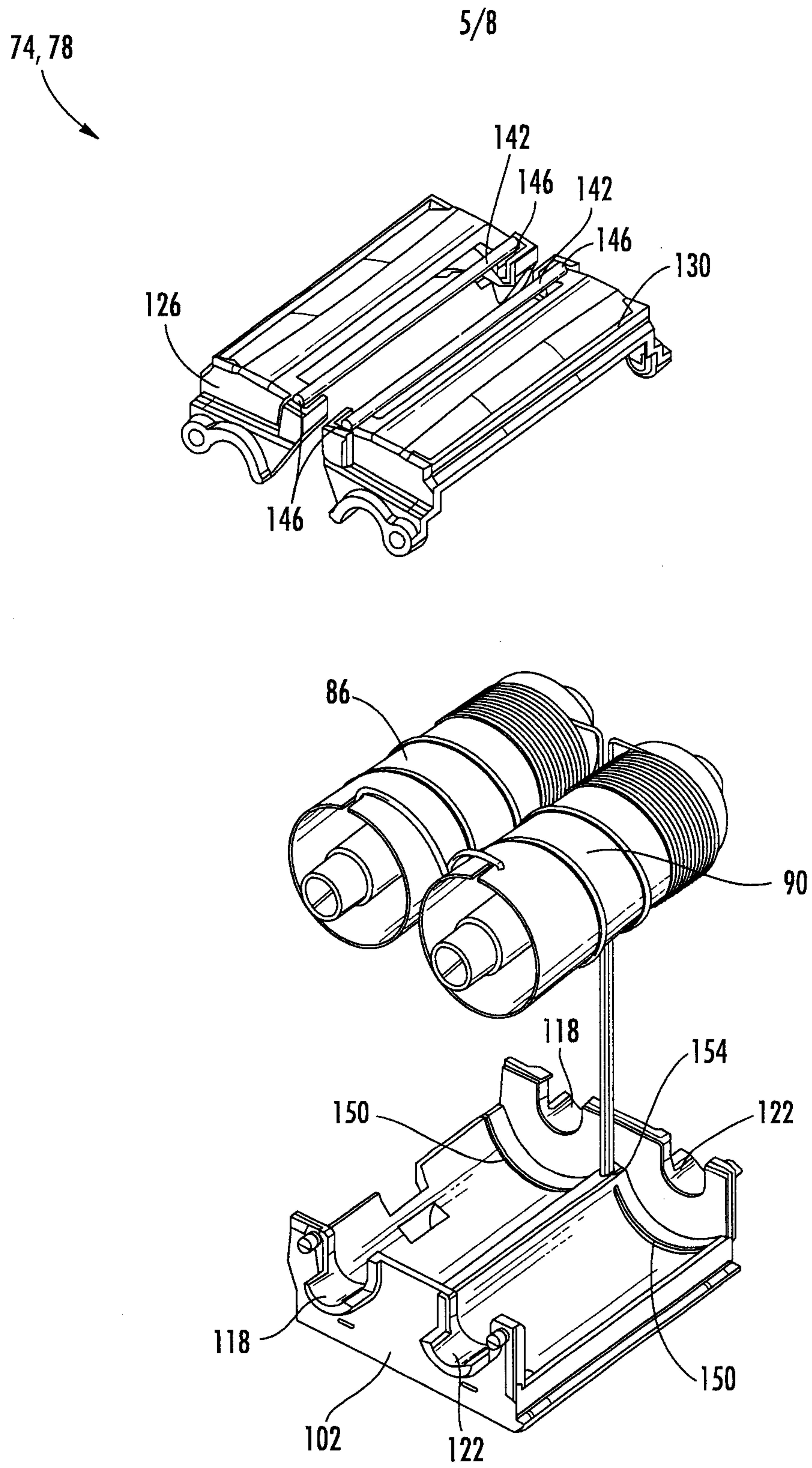


FIG. 5

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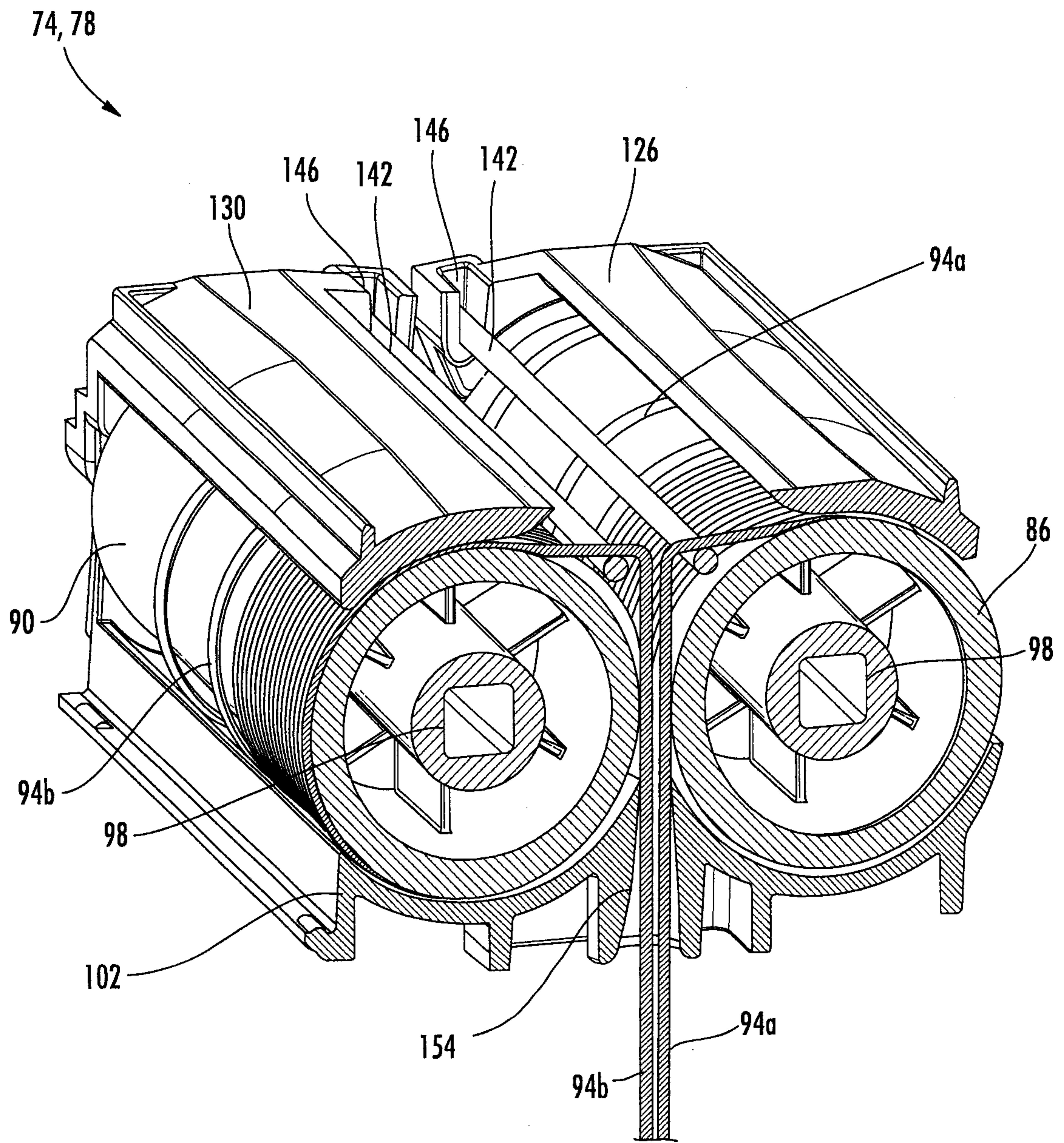


FIG. 6

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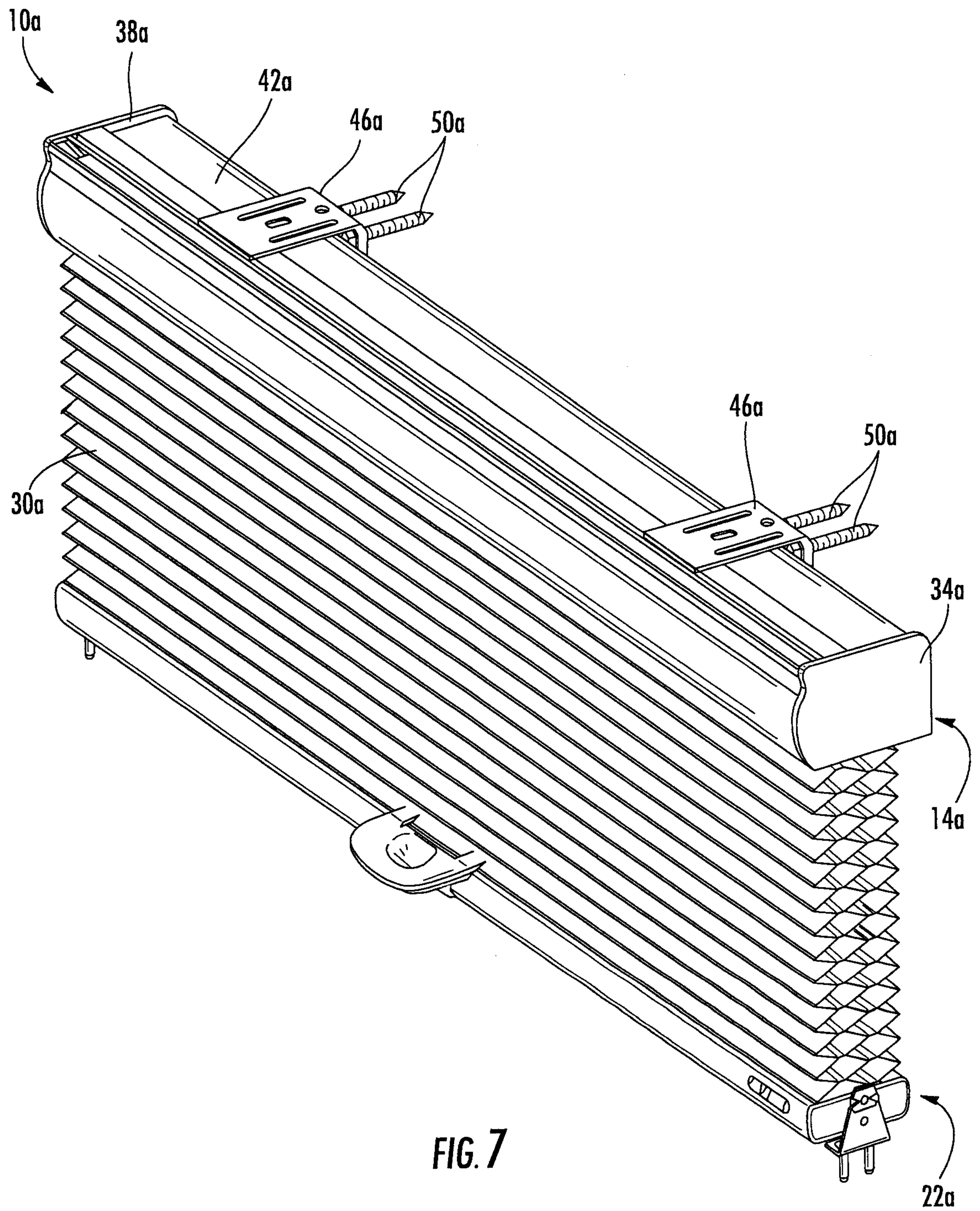


FIG. 7

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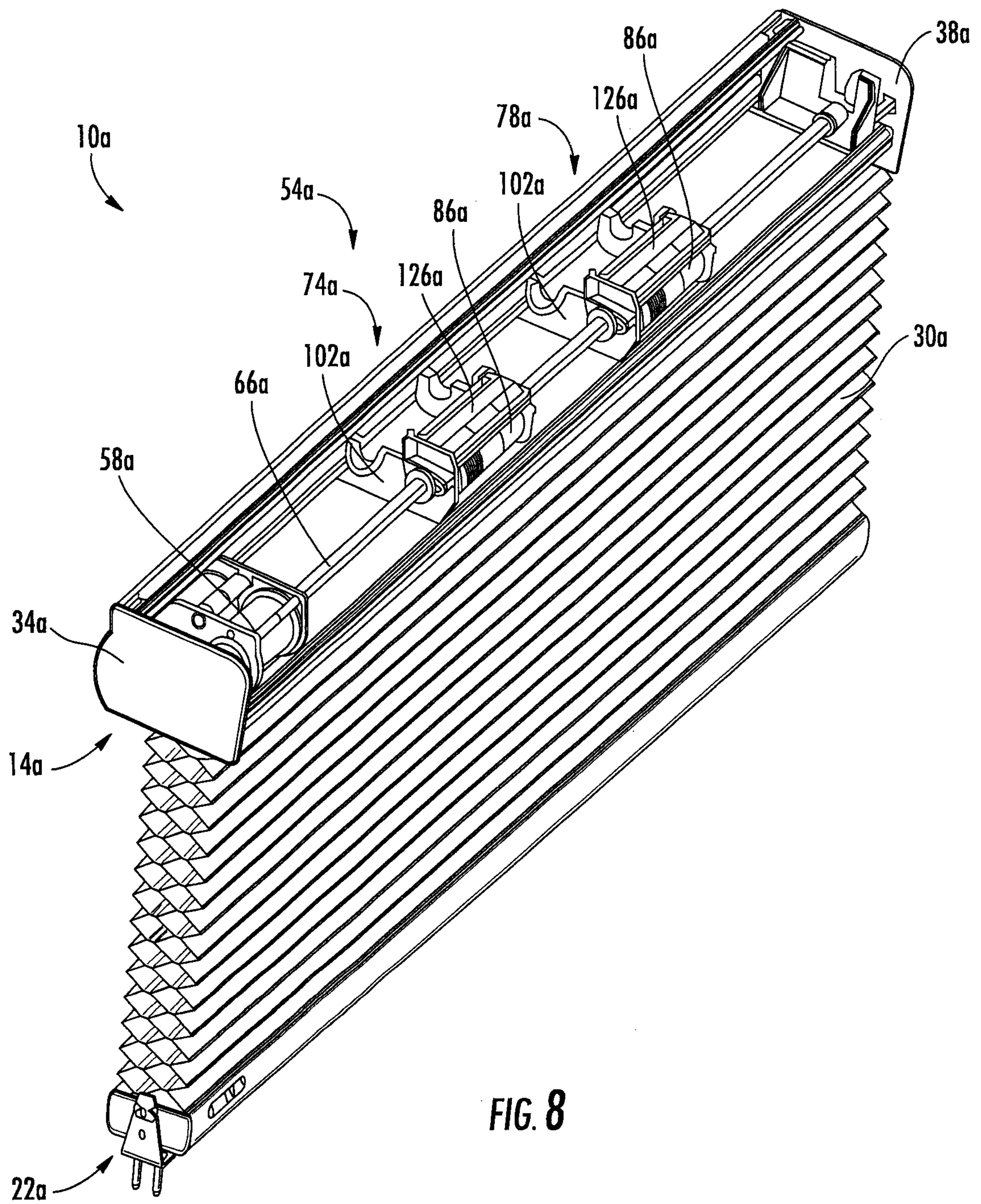


FIG. 8

