



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
17.03.2010 Bulletin 2010/11

(51) Int Cl.:
B27C 5/10 (2006.01) B23Q 16/02 (2006.01)

(21) Application number: **09252167.3**

(22) Date of filing: **11.09.2009**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR
Designated Extension States:
AL BA RS

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(30) Priority: **11.09.2008 US 96151 P**

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(54) **Router**

(57) A router (310) includes a base (314), a motor housing (318) supported by the base for movement along a first axis, and an adjustment mechanism (394) having a shaft (398), with a thread portion (402), connected to the motor housing for rotation about a second axis. The adjustment mechanism (394) also includes a lever (418) pivotably coupled to the base about a pivot axis oriented substantially parallel with the first and second axes. The lever includes a thread-engaging member that, when engaged with the thread portions (402), causes small changes to the position of the housing relative to the base in response to rotation of the shaft. The lever (418) is pivotable between an engaged position, in which the thread-engaging member engages the thread portion, and a disengaged position, in which the thread-engaging member disengages the thread portion and the housing is freely movable relative to the base to provide course adjustment of the housing relative to the base.

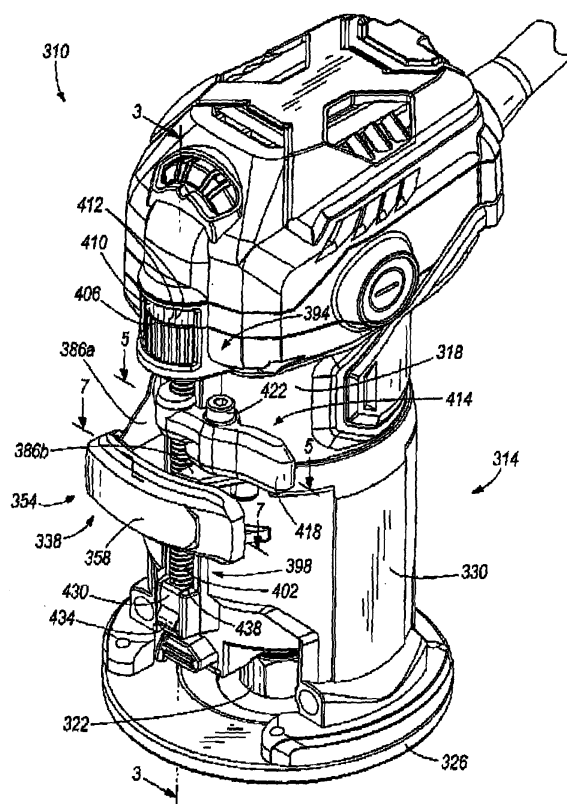


FIG. 1

Description

FIELD OF THE INVENTION

[0001] The present invention relates to hand-held power tools and, more particularly to routers.

BACKGROUND OF THE INVENTION

[0002] A router generally includes a base for supporting the router on a workpiece surface, a housing supported by the base and movable relative to the base, and a motor supported by the housing and operable to drive a tool element. In a fixed-base router, the housing is fixed or locked in a position relative to the base once the depth of cut of the tool element is set. In a plunge router, the housing is movable relative to the housing to the desired depth of cut so that the tool element "plunges" into the workpiece.

SUMMARY OF THE INVENTION

[0003] The invention provides, in one aspect, a router including a base for supporting the router on a work piece surface, a motor housing supported by the base for movement along a first axis to a position relative to the base, a motor supported by the housing and operable to drive a tool element, and an adjustment mechanism for adjusting the position of the housing relative to the base. The adjustment mechanism includes a shaft connected to the motor housing for rotation about a second axis and having a thread portion, and a lever pivotably coupled to the base about a pivot axis oriented substantially parallel with the first and second axes. The lever includes a thread-engaging member that is selectively engageable with the thread portion. When the thread-engaging member is engaged with the thread portion, rotation of the shaft causes small changes to the position of the housing relative to the base. The lever is pivotable between an engaged position, in which the thread-engaging member engages the thread portion, and a disengaged position, in which the thread-engaging member disengages the thread portion and the housing is freely movable relative to the base to provide course adjustment of the position of the housing relative to the base.

[0004] According to a first particular aspect of the invention there is provided a router comprising: a base for supporting the router on a work piece surface; a motor housing supported by the base for movement along a first axis to a position relative to the base; a motor supported by the housing and operable to drive a tool element; and an adjustment mechanism for adjusting the position of the housing relative to the base, the adjustment mechanism including a shaft connected to the motor housing for rotation about a second axis and having a thread portion, and a lever pivotably coupled to the base about a pivot axis oriented substantially parallel with the first and second axes, the lever including a thread-

engaging member being selectively engageable with the thread portion, wherein, upon the thread-engaging member engaging the thread portion, the shaft is rotated to cause small changes to the position of the housing relative to the base, the lever being pivotable between an engaged position, in which the thread-engaging member engages the thread portion, and a disengaged position, in which the thread-engaging member disengages the thread portion and the housing is freely movable relative to the base to provide course adjustment of the position of the housing relative to the base.

[0005] Preferably, the lever is cantilevered from the base.

[0006] Preferably, the adjustment mechanism includes a biasing member for biasing the lever toward the engaged position.

[0007] Preferably, the lever includes a groove, and wherein the thread-engaging member includes a plurality of threads extending outwardly from the groove.

[0008] Preferably, the groove extends in a direction substantially parallel with the pivot axis, and wherein the groove is spaced from the pivot axis.

[0009] Preferably, the adjustment mechanism further includes an adjustment dial coupled to an upper end of the shaft and rotatable with the shaft relative to the housing to allow an operator to manually rotate the shaft.

[0010] Preferably, the adjustment mechanism further includes a position indication ring disposed adjacent the dial, wherein the position indication ring includes a plurality of markings corresponding with depth adjustment positions.

[0011] Preferably, the router further comprises a clamping mechanism including a clamping member operable to apply a clamping force to the housing to fix the housing in a position relative to the base, and an actuator for moving the clamping member between a clamping position, in which the clamping member applies the clamping force to the housing, and a release position, in which the clamping force is at least reduced such that the housing is movable relative to the base.

[0012] Preferably, the base includes a seam oriented in a direction substantially parallel with the first and second axes, and wherein the clamping member is operable to apply the clamping force to the housing to at least partially close the seam.

[0013] Preferably, the clamping member is configured as a pin oriented in a direction substantially perpendicular to the seam, and wherein the actuator is pivotably coupled to the pin and pivotable relative to the pin between the clamping position and the release position.

[0014] Preferably, one end of the pin is secured to the housing on one side of the seam, and wherein the actuator is pivotably coupled to the pin at a location disposed on an opposite side of the seam.

[0015] Preferably, the actuator includes at least one cam member having a cam surface engageable with the housing, wherein the actuator is pivotable about a second pivot axis between the clamping position and the release

position, and wherein the spacing between the cam surface and the pivot axis, along a line intersecting the pivot axis and a point of tangency between the cam surface and the housing, is greater when the clamping member is in the clamping position than when the clamping member is in the release position.

[0016] Preferably, the actuator includes a handle portion oriented substantially transversely to the pivot axis.

[0017] Preferably, the adjustment mechanism further includes an adjustment dial coupled to an upper end of the shaft, and a catch disposed proximate a lower end of the shaft, wherein the catch is engageable with the pin to provide an upper limit to the adjustment of the position of the motor housing relative to the base.

[0018] Preferably, the catch is made from a resilient material, wherein the catch includes a raised portion engageable with the pin when the motor housing is positioned in the upper limit relative to the base, and wherein the raised portion is deflectable to allow the catch to move past the pin to facilitate removal of the motor housing from the base.

[0019] Other features and aspects of the invention will become apparent by consideration of the following detailed description and accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] FIG. 1 is a front perspective view according to another embodiment of the invention.

[0021] FIG. 2 is an exploded, front perspective view of the router of FIG. 1, illustrating a clamping mechanism and a depth adjustment mechanism.

[0022] FIG. 3 is a cross-sectional view of the router of FIG. 1 taken along line 3-3 in FIG. 1, illustrating the router adjusted to a first cutting depth setting.

[0023] FIG. 4 is a cross-sectional view of the router of FIG. 3, illustrating the router adjusted to a second cutting depth setting.

[0024] FIG. 5 is a cross-sectional view of the router of FIG. 1 taken along line 5--5 in FIG. 1, illustrating the depth adjustment mechanism in an engaged position.

[0025] FIG. 6 is a cross-sectional view of the router of FIG. 5, illustrating the depth adjustment mechanism in a disengaged position.

[0026] FIG. 7 is a cross-sectional view of the router of FIG. 1 taken along line 7-7 in FIG. 1, illustrating the clamping mechanism in a clamping position.

[0027] FIG. 8 is a cross-sectional view of the router of FIG. 7, illustrating the clamping mechanism in a release position.

[0028] FIG. 9 is a front perspective view of the router of FIG. 1, illustrating the clamping mechanism in the release position and the depth adjustment mechanism in the disengaged position.

[0029] FIG. 10 is a front perspective view of the router of FIG. 1, illustrating a motor housing of the router being coarsely adjusted to the second cutting depth setting.

[0030] FIG. 11 is an enlarged, cross-sectional view of

the router of FIG. 1 illustrating removal of the motor housing from a base of the router.

[0031] 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. Also, it is to be understood that the phraseology and terminology used herein is for the purpose of description and should not be regarded as limiting.

DETAILED DESCRIPTION

[0032] FIG. 1 illustrates a hand-held router 310, for example, a laminate trimmer, according to one embodiment of the invention. The router 310 includes a base 314 and a motor housing 318 supported by the base 314. The housing 318 supports a motor 323 (FIG. 2) operable to drive a tool element (not shown) to cut a workpiece. The motor 323 includes a shaft 324 and a tool holder (e.g., a collet 322) connected to or formed with the shaft 324. The tool element is secured to the router 310 by the collet 322. In the illustrated construction, the router 310 is configured as a fixed-base router 310, however, the router 310 may alternatively be configured as a plunge router.

[0033] With reference to FIGS. 1 and 2, the base 314 includes a base plate 326 configured to interface with a surface of the workpiece. The base 314 also includes a generally cylindrical sleeve 330 extending upwardly from the base plate 326. The sleeve 330 is coupled to the base plate 326 using fasteners (e.g., screws, bolts, etc.). Alternatively, the sleeve 330 may be integrally formed with the base plate 326 as a single piece. The housing 318 is generally vertically oriented and has a generally cylindrical outer surface 331. The housing 318 is arranged to fit within the sleeve 330 and to be vertically movable relative to the sleeve 330 along a central axis 332.

[0034] With reference to FIG. 2, the sleeve 330 is resilient and is open on one side at a vertical seam 334. As a result, the inner diameter of the sleeve 330 may be increased or decreased by opening or closing the seam 334, respectively. As used herein, "opening" the seam 334 includes increasing the spacing between the respective vertical edges of the sleeve 330 that define the seam 334, while "closing" the seam 334 includes decreasing the spacing between the respective vertical edges of the sleeve 330 that define the seam 334. The resilience of the sleeve 330 results in the seam 334 being partially open when no external force is applied to close the seam 334. In the illustrated construction of the router 310, the sleeve 330 includes a plurality of radially inwardly-extending ribs 336 on an inner surface 337 of the sleeve 330 that facilitate gripping the outer surface 331 of the motor housing 318.

[0035] With reference to FIGS. 1 and 2, the router 310 includes a fixing assembly or clamping mechanism 338

to control the opening and closing of the seam 334. When the seam 334 is generally closed, or the respective vertical edges of the sleeve 330 that define the seam 334 are closely spaced, the base 314 is in a clamped position (FIG. 7), in which the position of the housing 318 relative to the base 314 is fixed. When the seam 334 is open, or the respective vertical edges of the sleeve 330 that define the seam 334 are spaced further apart, the base 314 is in a released position (FIG. 8), in which the housing 318 is movable relative to the base 314. With reference to FIG. 2, the clamping mechanism 338 includes a clamp member 342 configured as a pin 346 having a threaded end 350, and an actuator 354 pivotably coupled to the pin 346 at the end opposite the threaded end 350. The actuator 354 includes a handle portion 358 and two spaced, substantially identical cam members 362 extending substantially perpendicularly from the handle portion 358. An axle 366 pivotably interconnects the cam members 362 and the pin 346, such that the actuator 354 is pivotable about a pivot axis 368 oriented perpendicularly to a longitudinal axis 369 of the pin 346.

[0036] The clamping mechanism 338 also includes a generally flat washer 370 slidably positioned on the pin 346. As shown in FIGS. 7 and 8, respective cam surfaces 374 of the cam members 362 slidably engage the washer 370. The "lift" of the cam members 362, defined by a varying distance between the axle 366 (i.e., intersecting the pivot axis 368) and the washer 370, along a line of contact 378 passing through the center of the axle 366 and the point of tangency between each of the cam surfaces 374 and the washer 370, imparts movement to the washer 370 when the actuator 354 is pivoted about the pivot axis 368. As shown in FIG. 2, a fastener 382 (e.g., a lock nut) is threaded to the threaded end 350 of the pin 346, such that a clamping load can be developed between the washer 370 and the fastener 382 when the washer 370 is moved away from the axle 366 by the sliding contact with the cam surfaces 374, due to pivoting of the actuator 354. Alternatively, the washer 370 may be omitted, and the cam members 374 may directly engage the housing 318 to close the seam 334.

[0037] With continued reference to FIG. 2, the sleeve 330 includes a generally radially-extending tab 386a, 386b on opposite sides of the seam 334. The tabs 386a, 386b include respective coaxial apertures 390 through which the pin 346 is received. Specifically, the pin 346 is inserted through the respective apertures 390 in the tabs 386a, 386b, such that the tabs 386a, 386b are sandwiched between the washer 370 and the fastener 382. Alternatively, the threaded end 350 of the pin 346 may be anchored in a blind bore in one of the tabs 386a, 386b.

[0038] With reference to FIG. 8, when the seam 334 is open, the handle portion 358 is generally oriented at an angle non-parallel with the longitudinal axis of the pin 346 to yield a first distance D1 between the pivot axis 368 and the cam surfaces 374, along the line of contact 378, to allow the washer 370 to move closer to the axle 366. When the seam 334 is open, the clamping force

applied by the base 314 to the housing 318 is reduced so that the housing 318 is movable relative to the base 314 along the central axis 332.

[0039] To close the seam 334, the handle portion 358 is pivoted with respect to the pin 346 in a counterclockwise direction about the pivot axis 368, from the point of view of FIG. 8, to move or displace the washer 370 away from the pivot axis 368. As shown in FIG. 7, the spacing between the pivot axis 368 and the cam surfaces 374, along the line of contact 378, is increased to a second distance D2 that is greater than the first distance D1. Because the threaded end 350 of the pin 346 is anchored to the tab 386b by the fastener 382, this increase in distance from D1 to D2 is taken up by the seam 334, forcing the tab 386a closer to the tab 386b and closing the seam 334. When the seam 334 is closed, the increased clamping force on the housing 318 fixes the housing 318 in a position relative to the base 314.

[0040] With reference to FIGS. 1 and 2, the router 310 also includes a depth adjustment mechanism 394 that cooperates with the housing 318 and the base 314 to control the vertical position of the housing 318 relative to the base 314, thereby controlling the depth of cut of the tool element. The depth adjustment mechanism 394 includes a depth adjustment shaft 398 supported for rotation about and translation along an axis 400 (FIG. 2) oriented substantially parallel with the central axis 332 of the motor housing 318. The shaft 398 also includes a threaded portion 402 and is supported for rotation by at least one of the motor housing 318 and the base 314. In the illustrated construction of the router 310, opposite ends of the shaft 398 are supported by the motor housing 318, such that the shaft 398 translates relative to the base 314 with the motor housing 318 during adjustment of the tool element cutting depth (FIGS. 9 and 10). Specifically, an upper end 403 of the shaft 398 is received within a blind bore 404 in the motor housing 318, and a lower end 405 of the shaft 398 is received within an aperture 408 formed in the motor housing 318 coaxial with the blind bore 404 (FIGS. 3 and 4). A C-clip 409 is attached to the lower end 405 of the shaft 398 to limit the upward movement of the shaft 398 (i.e., from the point of view of FIG. 3). Alternatively, the shaft 398 may be supported for rotation by the base 314 and received within a threaded aperture (e.g., an internally-threaded sleeve Insert) extending through the sleeve 330.

[0041] With reference to FIGS. 1-4, the depth adjustment mechanism 394 also includes an adjustment dial 406 attached to the upper end 403 of the depth adjustment shaft 398. In the illustrated construction of the router 310, the shaft 398 is press-fit or interference-fit to the dial 406, such that the shaft 398 and the dial 406 co-rotate when the dial 406 is rotated. Alternatively, the dial 406 and the shaft 398 may be integrally formed as a single piece.

[0042] The depth adjustment mechanism 394 also includes a zero reset dial or zero position indication ring 410 coaxially mounted to the adjustment dial 406. The

zero position indication ring 410 is rotatable relative to the housing 318, and is selectively rotatable relative to the adjustment dial 406 about the adjustment shaft axis 400. The ring 410 is imprinted or otherwise marked with position-indicating markings 412 (e.g., decimal or metric increments) to facilitate cutting depth adjustment measurement when the dial 406 is rotated with respect to the ring 410. The zero position indication ring 410 has substantially the same outer diameter of the dial 406 and is positioned above the adjustment dial 406. Alternatively, the zero position indication ring 410 may have a different outer diameter than the dial 406, or the ring 410 may be positioned below the adjustment dial 406.

[0043] With reference to FIGS. 1 and 2, the depth adjustment mechanism 394 also includes a unitarily formed lock mechanism 414 pivotably coupled to the sleeve 330 about an axis 416 oriented substantially parallel with the axis 400 of rotation of the shaft 398 and the central axis 332 of the motor housing 318. The lock mechanism 414 is configured as a lever 418 pivotably coupled to the sleeve 330 by a fastener 422 (e.g., a cap screw or shoulder screw, see FIG. 2). Specifically, the lever 418 includes an aperture 424 sized to provide a radial clearance for the shank of the fastener 422 to allow the lever 418 to be freely pivoted about the fastener 422 (and the axis 416). The sleeve 330 includes a threaded, blind bore 425 within which the fastener 422 is secured to cantilever the lever 418 from the sleeve 330. Alternatively, the lever 418 may be pivotably coupled to the sleeve 330 in any of a number of different ways.

[0044] The lever 418 also includes a groove 426 in which the threaded portion 402 of the shaft 398 is received. Thread-engaging members configured as mating threads 428 (FIG. 11) are formed in the groove 426 and selectively engage the threaded portion 402 at least about 90 degrees around the shaft 398. In the illustrated construction of the router 310, the threads 428 selectively engage the threaded portion 402 at least about 180 degrees around the shaft 398.

With reference to FIG. 2, the depth adjustment mechanism 394 also includes a torsion spring 429 coupled between the sleeve 330 and the lever 418 to bias the lever 418 to a position in which the threads 428 in the groove 426 engage the threaded portion 402 of the shaft 398.

[0045] Specifically, the lever 418 is movable between a thread-engaging position (FIG. 5), in which the threads 428 in the groove 426 engage the threaded portion 402 of the shaft 398, and a disengaged position (FIG. 6), in which the threads 428 in the groove 426 do not engage the threaded portion 402 of the shaft 398. The lever 418 is biased to the orientation shown in FIG. 5 by the torsion spring 429. To move the lever 418 to its disengaged position, an operator of the router 310 need only depress the end of the lever 418 opposite the end with the groove 426, as shown in FIG. 9. To move the lever 418 to its thread-engaging position, the operator need only to release the lever 418 to allow the torsion spring 429 to pivot the lever 418 back to the thread-engaging position shown

in FIG. 5.

[0046] With reference to FIGS. 1-4, the depth adjustment mechanism 394 also includes a catch 430 configured to prevent unintentional removal of the motor housing 318 from the base 314 during adjustment of the position of the motor housing 318 relative to the base 314. The catch 430 is configured as a thin, C-shaped, resilient member having a raised portion 434 on a long side of the catch 430 (FIGS. 3 and 4). The catch 430 also includes upper and lower tabs 438, 442 having respective apertures through which the lower end 405 of the shaft 398 is received. The C-clip 409 on the lower end 405 of the shaft 398 is positioned beneath the lower tab 442 of the catch 430.

[0047] As shown in FIG. 4, the raised portion 434 is engageable with the pin 346 to prevent unintentional removal of the motor housing 318 from the base 314. However, intentional removal of the motor housing 318 from the base 314 may be accomplished by the operator of the router 310 providing an outward force on the motor housing 318, from its position shown in FIG. 4, sufficient to cause the raised portion 434 to be depressed and pass beneath the pin 346 (FIG. 11). After the raised portion 434 has passed beneath the pin 346, the catch 430 resumes its undeflected shape and the motor housing 318 may be completely removed from the base 314.

[0048] The depth adjustment mechanism 394 may be used to adjust the vertical position of the housing 318 relative to the base 314 in two modes, after the clamping mechanism 338 is released. For coarse adjustment, the lever 418 is pivoted away from the threaded portion 402 of the shaft 398, against the bias of the torsion spring 429, thereby releasing the threaded portion 402 of the shaft 398 from engagement with the lever 418 (FIGS. 9 and 10). The housing 318 is then free to move or translate along its central axis 332 relative to the base 314. After the desired vertical position of the housing 318 is achieved, the lever 418 is released and the torsion spring 429 again biases the lever 418 to its thread-engaging position to engage the threads 428 in the groove 426 with the threaded portion 402 of the shaft 398. After the lever 418 is re-engaged with the depth adjustment shaft 398, the housing 318 is restricted from free translational movement or coarse adjustment relative to the base 314 because the lever 418 is axially fixed to the base 314 by the fastener 422.

[0049] For fine adjustment, the lever 418 remains engaged with the depth adjustment shaft 398. The adjustment dial 406 is rotated, thereby rotating the depth adjustment shaft 398 and the threaded portion 402. The threaded portion 402 rotates relative to the threads 428 in the groove 426 of the stationary lever 418, causing the housing 318 to move in relatively small increments in a vertical direction relative to the base 314. For example, the threaded portion 402 of the shaft 398 may include a pitch of 1/16th of an inch, such that one complete revolution of the dial 406 provides vertical adjustment of the housing 318 relative to the base 314, and subsequently

cutting depth adjustment of the tool element, of about 1/16th of an inch. Alternatively, the threaded portion 402 of the shaft 398 may be configured with a different pitch to provide more or less vertical adjustment for each revolution of the dial 406.

[0050] The zero position indication ring 410 may also be used to measure the amount of vertical adjustment of the motor housing 318 relative to the base 314 during fine adjustment using the depth adjustment mechanism 394. For example, the tip of the tool element may be positioned flush with the lower surface of the base plate 326, or the upper surface of a workpiece, to first determine a "zero" position. Then, the zero position indication ring 410 is rotated while the dial 406 is held stationary to align the "zero" marking on the indication ring 410 with a corresponding alignment marking on the motor housing 318. The dial 406 and indication ring 410 may then be co-rotated in a clockwise direction (looking down at the top of the router 310) the desired amount of adjustment according to the markings on the indication ring 410. Friction between the dial 406 and the indication ring 410 allows the operator to grasp only the dial 406 when performing fine adjustment of the cutting depth of the tool element. Further, for an operator to decrease the cutting depth of the tool element, the indication ring 410 may be rotated while the dial 406 is held stationary to align the marking on the indication ring 410 corresponding with the desired amount of adjustment with the corresponding alignment marking on the motor housing 318. Then, the dial 406 and indication ring 410 may be co-rotated in a counter-clockwise direction (looking down at the top of the router 310) until the "zero" marking on the indication ring 410 is in alignment with the corresponding alignment marking on the motor housing 318.

[0051] In operation, an operator often needs to adjust the cutting depth of the router 310. To adjust the router 310 from a first cutting depth to a second cutting depth, the operator first releases the clamping mechanism 338, as described above. This action releases the sleeve 330 from clamping engagement with the housing 318. Coarse adjustment of the position of the housing 318 relative to the base 314 is preferably performed first as described above. Fine adjustment of the position of the housing 318 relative to the base 314 is then performed. Once the desired vertical position is achieved, the operator clamps the clamping mechanism 338 to re-engage the sleeve 330 and the housing 318, thereby substantially restricting the housing 318 from further movement relative to the base 314. The operator may then operate the router 310 in a conventional manner. Additional depth adjustments may be made by repeating this process.

[0052] Various features of the invention are set forth in the following claims.

Claims

1. A router comprising:

a base for supporting the router on a work piece surface;

a motor housing supported by the base for movement along a first axis to a position relative to the base;

a motor supported by the housing and operable to drive a tool element; and

an adjustment mechanism for adjusting the position of the housing relative to the base, the adjustment mechanism including

a shaft connected to the motor housing for rotation about a second axis and having a thread portion, and

a lever pivotably coupled to the base about a pivot axis oriented substantially parallel with the first and second axes, the lever including a thread-engaging member being selectively engageable with the thread portion, wherein, upon the thread-engaging member engaging the thread portion, the shaft is rotated to cause small changes to the position of the housing relative to the base, the lever being pivotable between an engaged position, in which the thread-engaging member engages the thread portion, and a disengaged position, in which the thread-engaging member disengages the thread portion and the housing is freely movable relative to the base to provide course adjustment of the position of the housing relative to the base.

2. The router of claim 1, wherein the lever is cantilevered from the base.
3. The router of claim 1, wherein the adjustment mechanism includes a biasing member for biasing the lever toward the engaged position.
4. The router of claim 1, wherein the lever includes a groove, and wherein the thread-engaging member includes a plurality of threads extending outwardly from the groove.
5. The router of claim 4, wherein the groove extends in a direction substantially parallel with the pivot axis, and wherein the groove is spaced from the pivot axis.
6. The router of claim 1, wherein the adjustment mechanism further includes an adjustment dial coupled to an upper end of the shaft and rotatable with the shaft relative to the housing to allow an operator to manually rotate the shaft.
7. The router of claim 6, wherein the adjustment mechanism further includes a position indication ring disposed adjacent the dial, wherein the position indica-

tion ring includes a plurality of markings corresponding with depth adjustment positions.

8. The router of claim 1, further comprising a clamping mechanism including
a clamping member operable to apply a clamping force to the housing to fix the housing in a position relative to the base, and
an actuator for moving the clamping member between a clamping position, in which the clamping member applies the clamping force to the housing, and a release position, in which the clamping force is at least reduced such that the housing is movable relative to the base.
9. The router of claim 8, wherein the base includes a seam oriented in a direction substantially parallel with the first and second axes, and wherein the clamping member is operable to apply the clamping force to the housing to at least partially close the seam.
10. The router of claim 9, wherein the clamping member is configured as a pin oriented in a direction substantially perpendicular to the seam, and wherein the actuator is pivotably coupled to the pin and pivotable relative to the pin between the clamping position and the release position.
11. The router of claim 10, wherein one end of the pin is secured to the housing on one side of the seam, and wherein the actuator is pivotably coupled to the pin at a location disposed on an opposite side of the seam.
12. The router of claim 10, wherein the actuator includes at least one cam member having a cam surface engageable with the housing, wherein the actuator is pivotable about a second pivot axis between the clamping position and the release position, and wherein the spacing between the cam surface and the pivot axis, along a line intersecting the pivot axis and a point of tangency between the cam surface and the housing, is greater when the clamping member is in the clamping position than when the clamping member is in the release position.
13. The router of claim 12, wherein the actuator includes a handle portion oriented substantially transversely to the pivot axis.
14. The router of claim 10, wherein the adjustment mechanism further includes
an adjustment dial coupled to an upper end of the shaft, and
a catch disposed proximate a lower end of the shaft, wherein the catch is engageable with the pin to provide an upper limit to the adjustment of the position

of the motor housing relative to the base.

15. The router of claim 14, wherein the catch is made from a resilient material, wherein the catch includes a raised portion engageable with the pin when the motor housing is positioned in the upper limit relative to the base, and wherein the raised portion is deflectable to allow the catch to move past the pin to facilitate removal of the motor housing from the base.

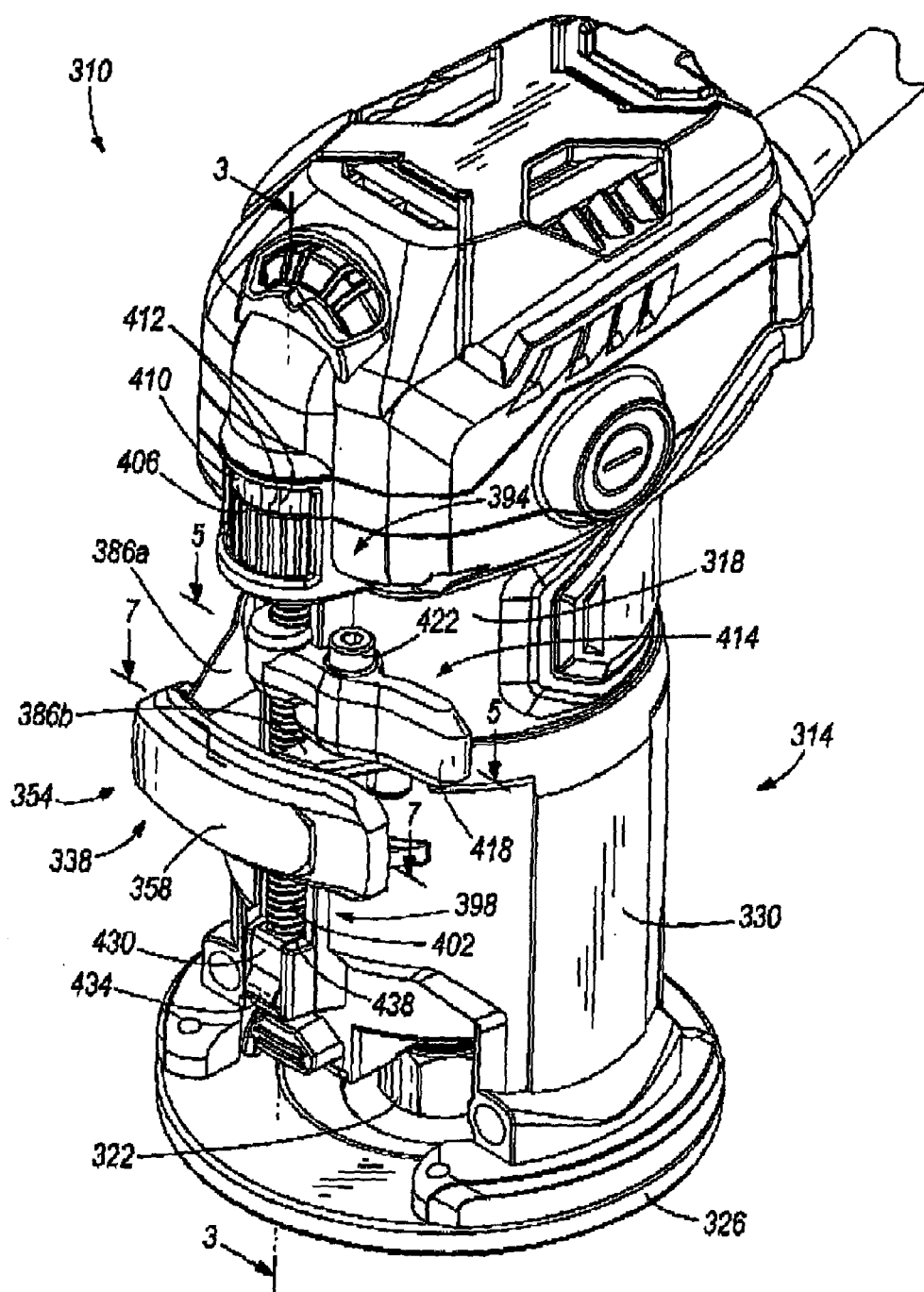


FIG. 1

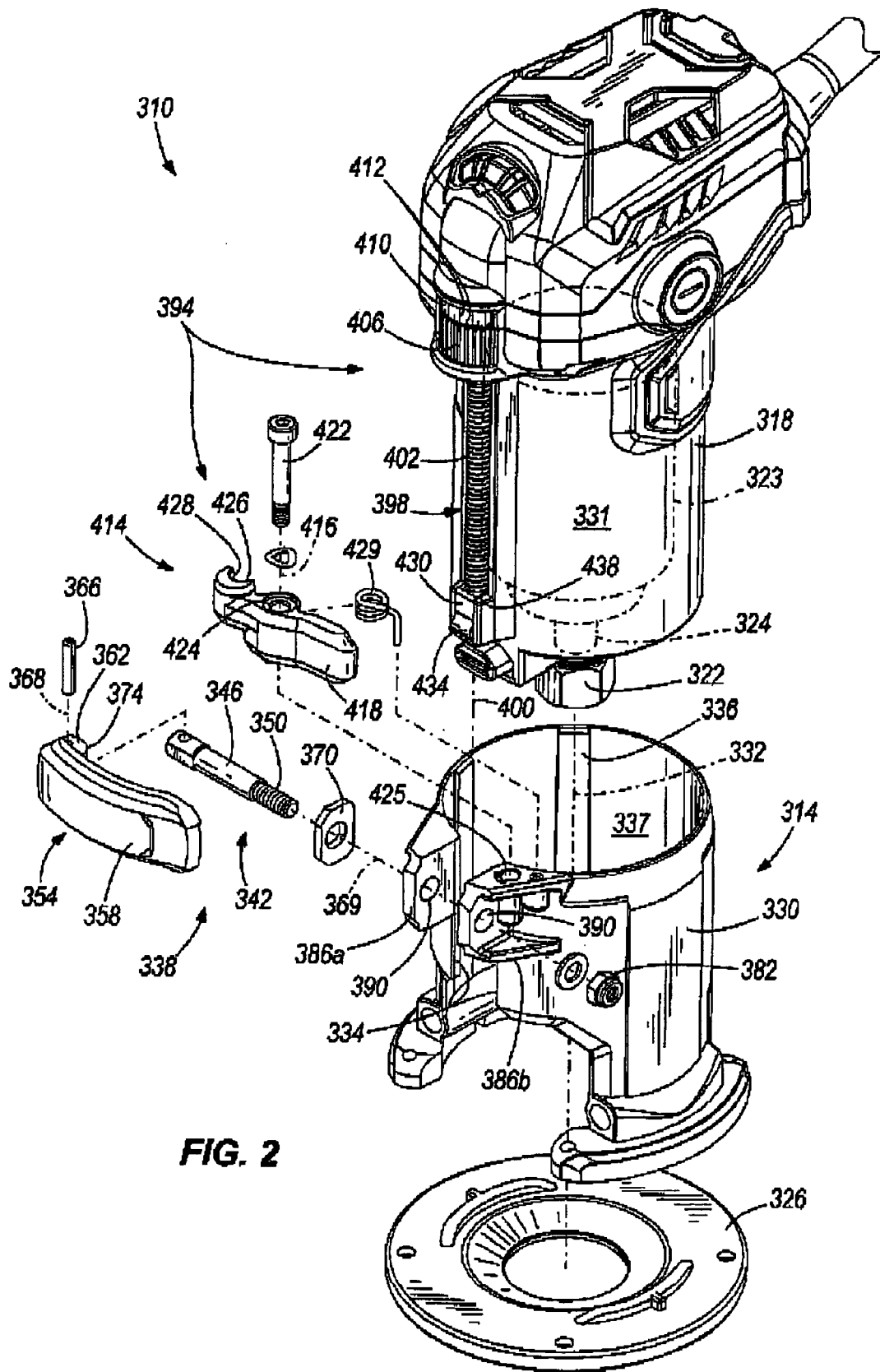
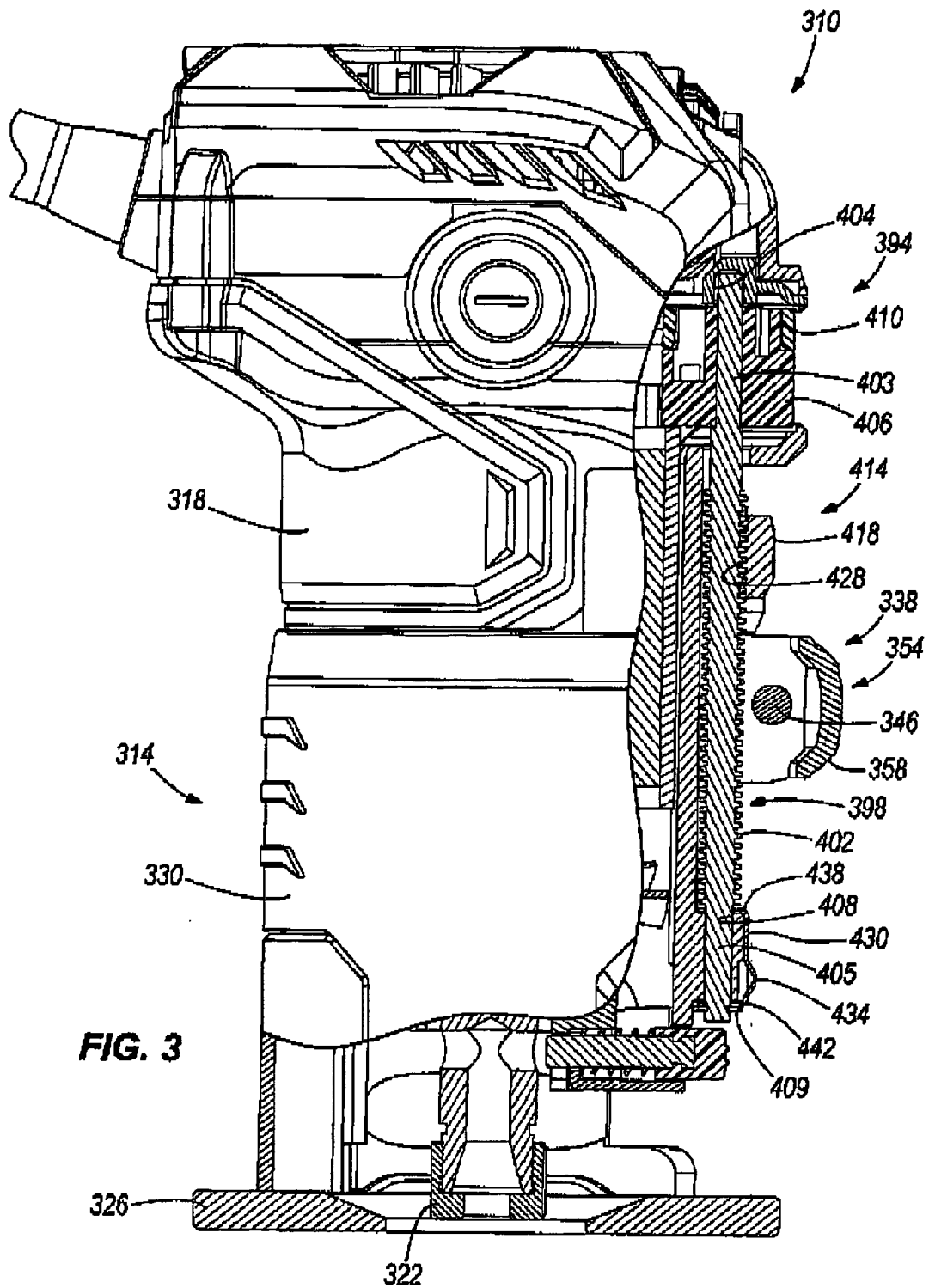
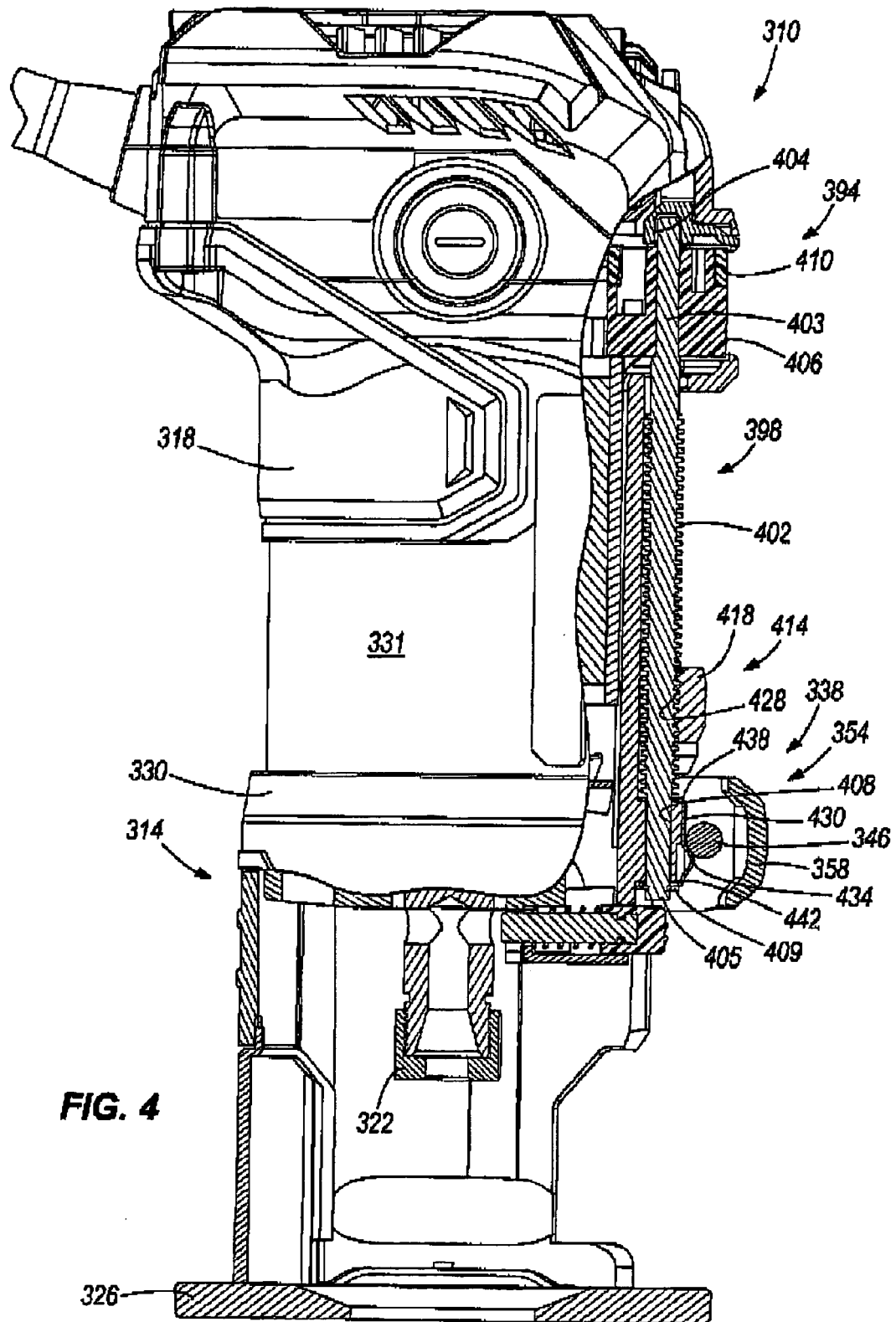


FIG. 2





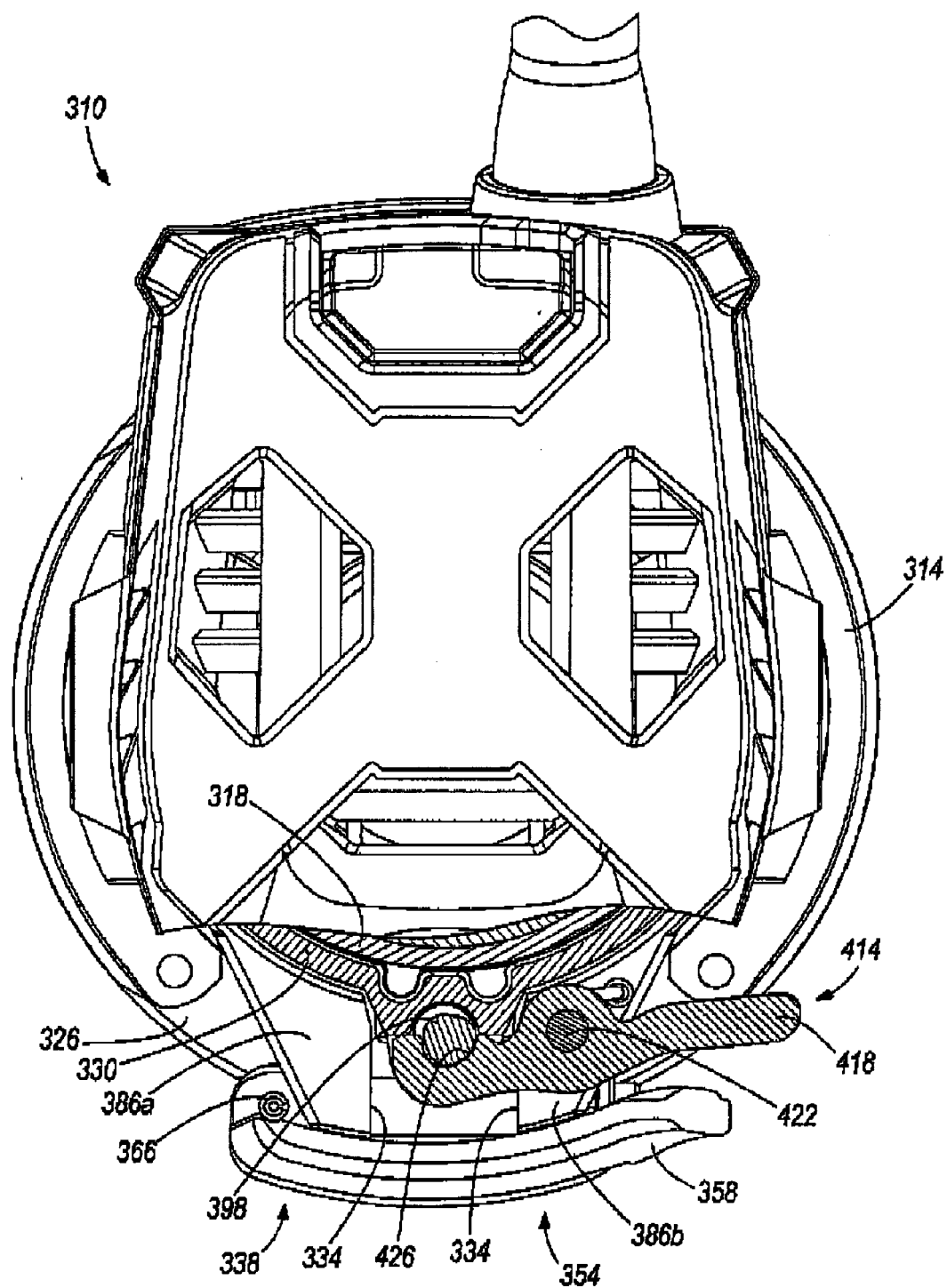


FIG. 5

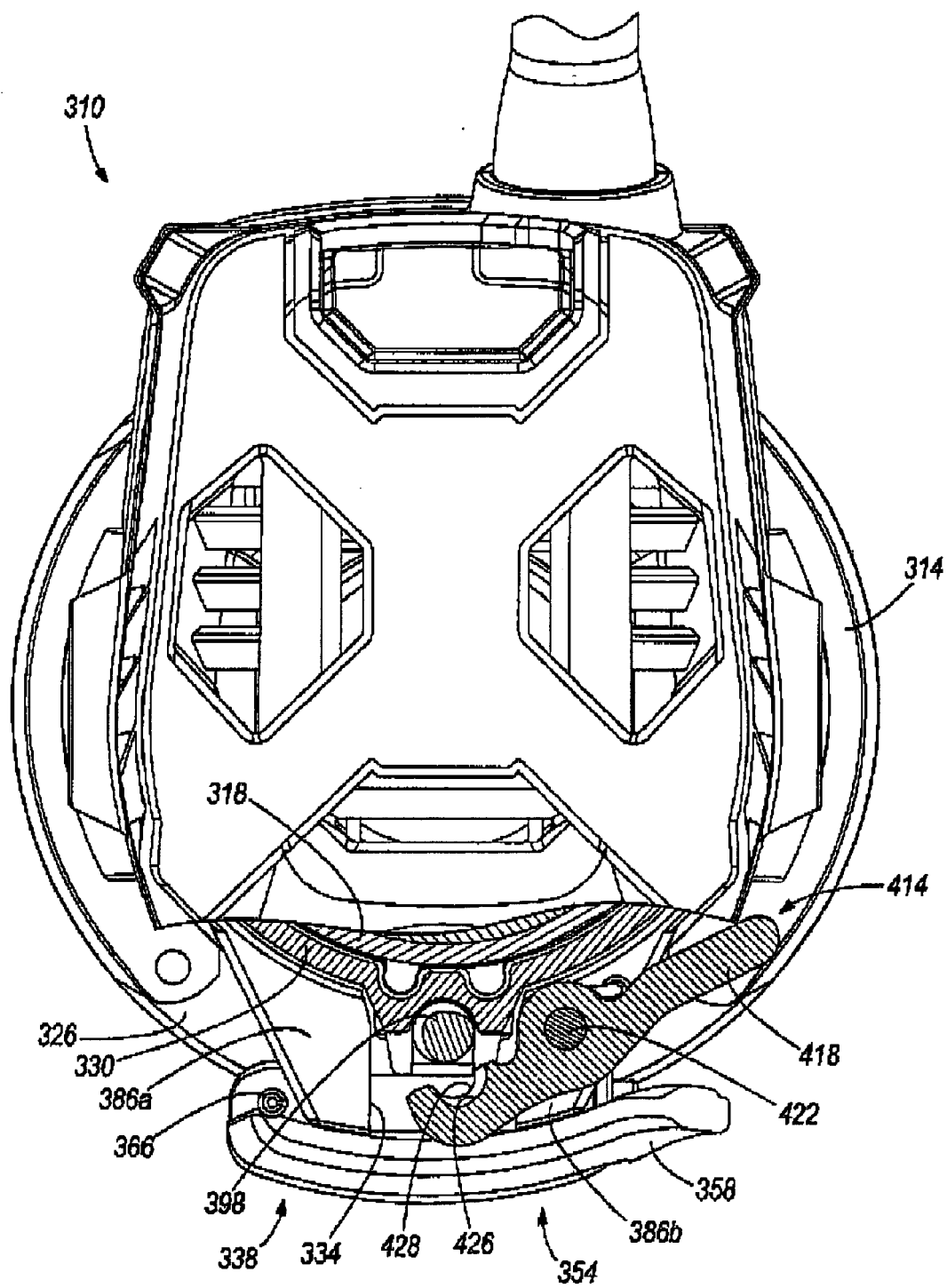


FIG. 6

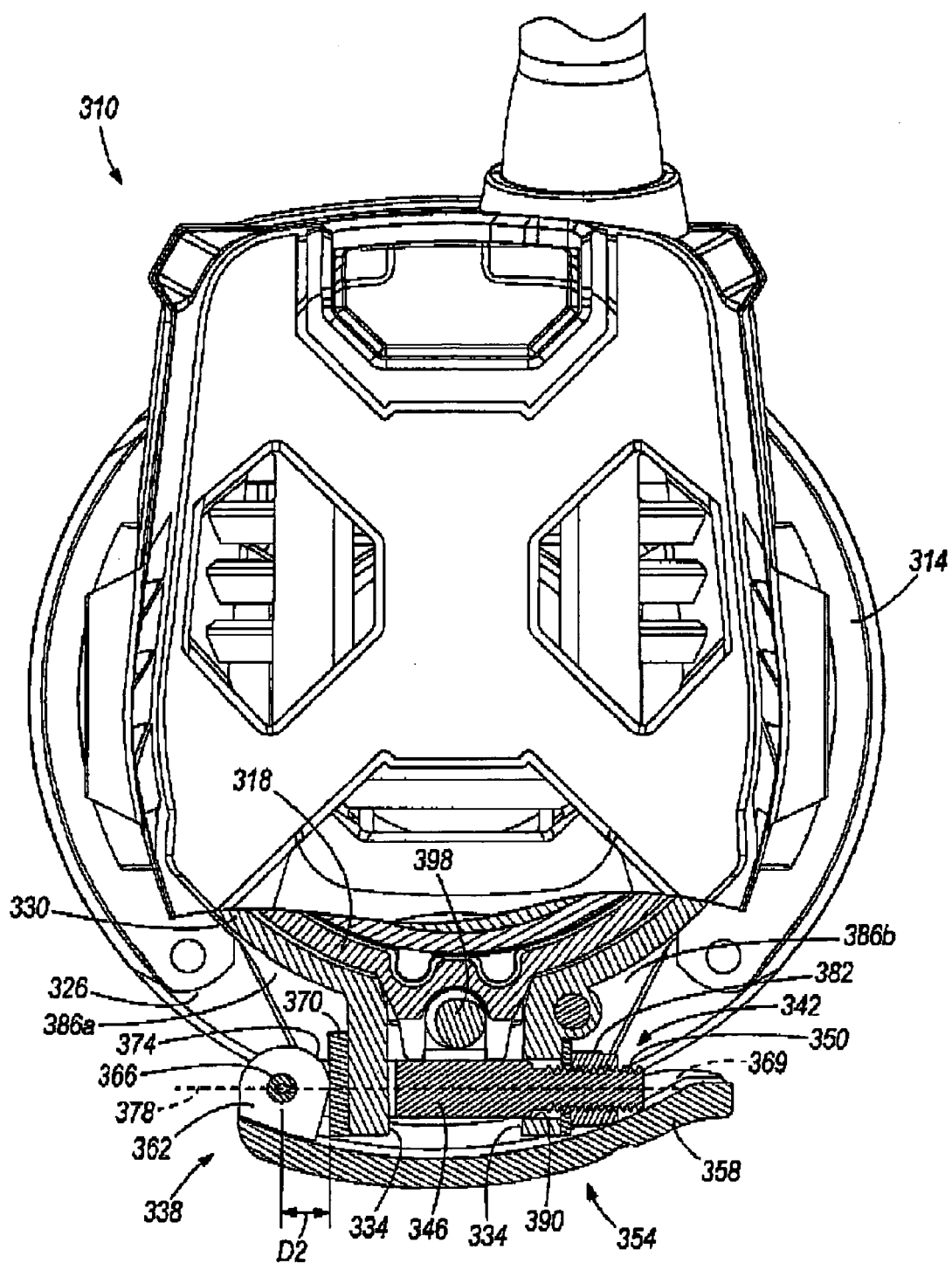


FIG. 7

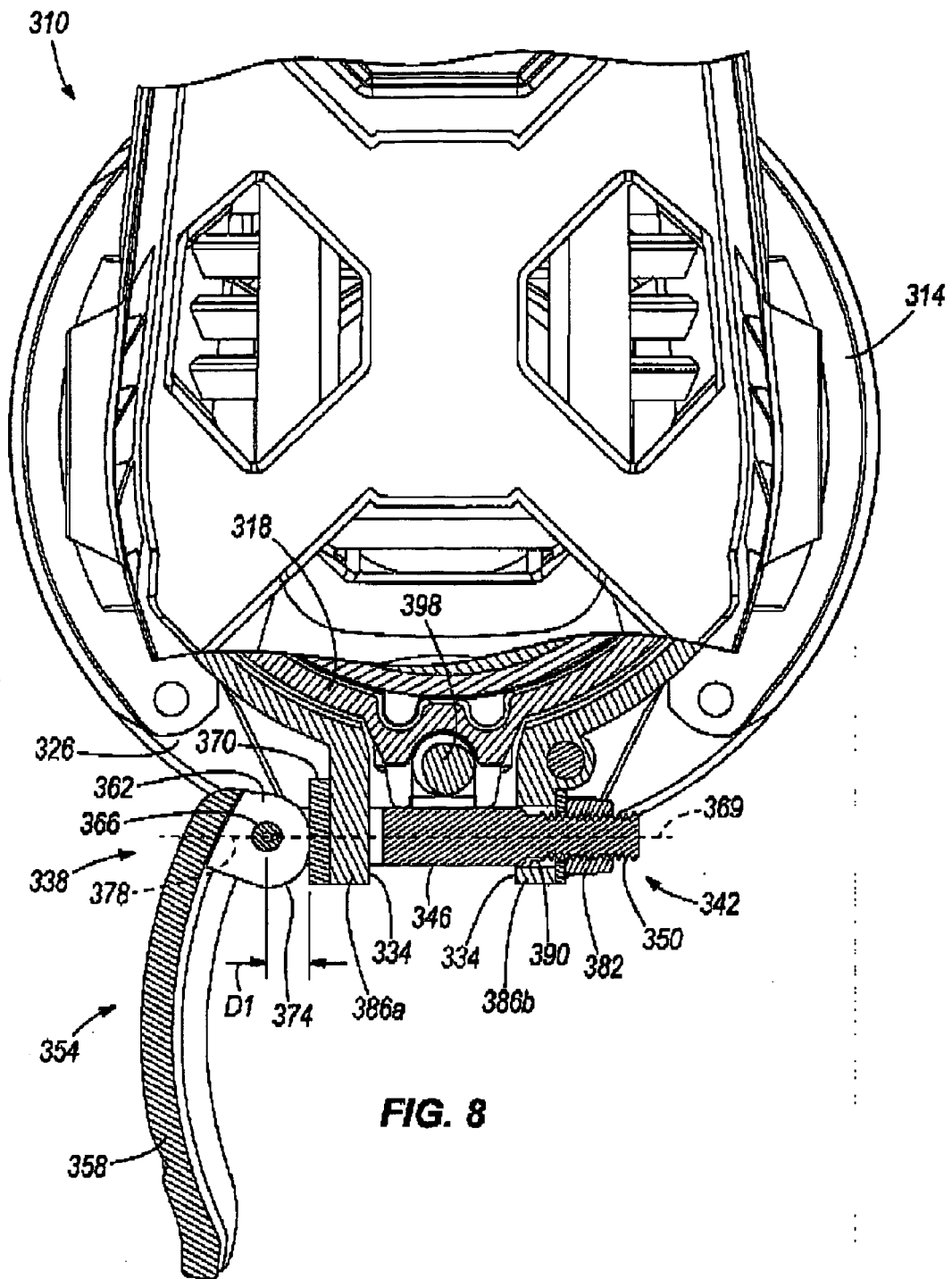


FIG. 8

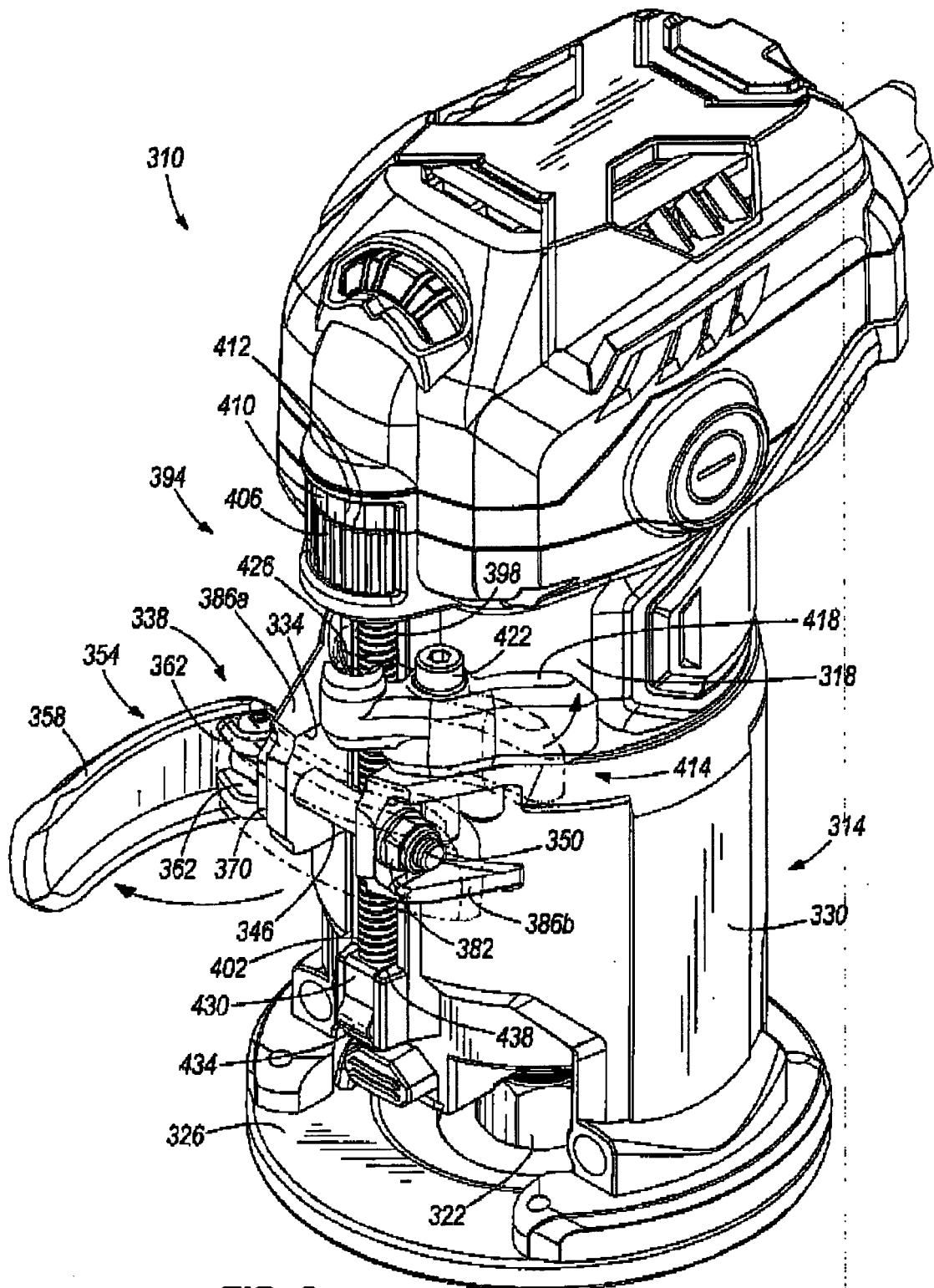


FIG. 9

