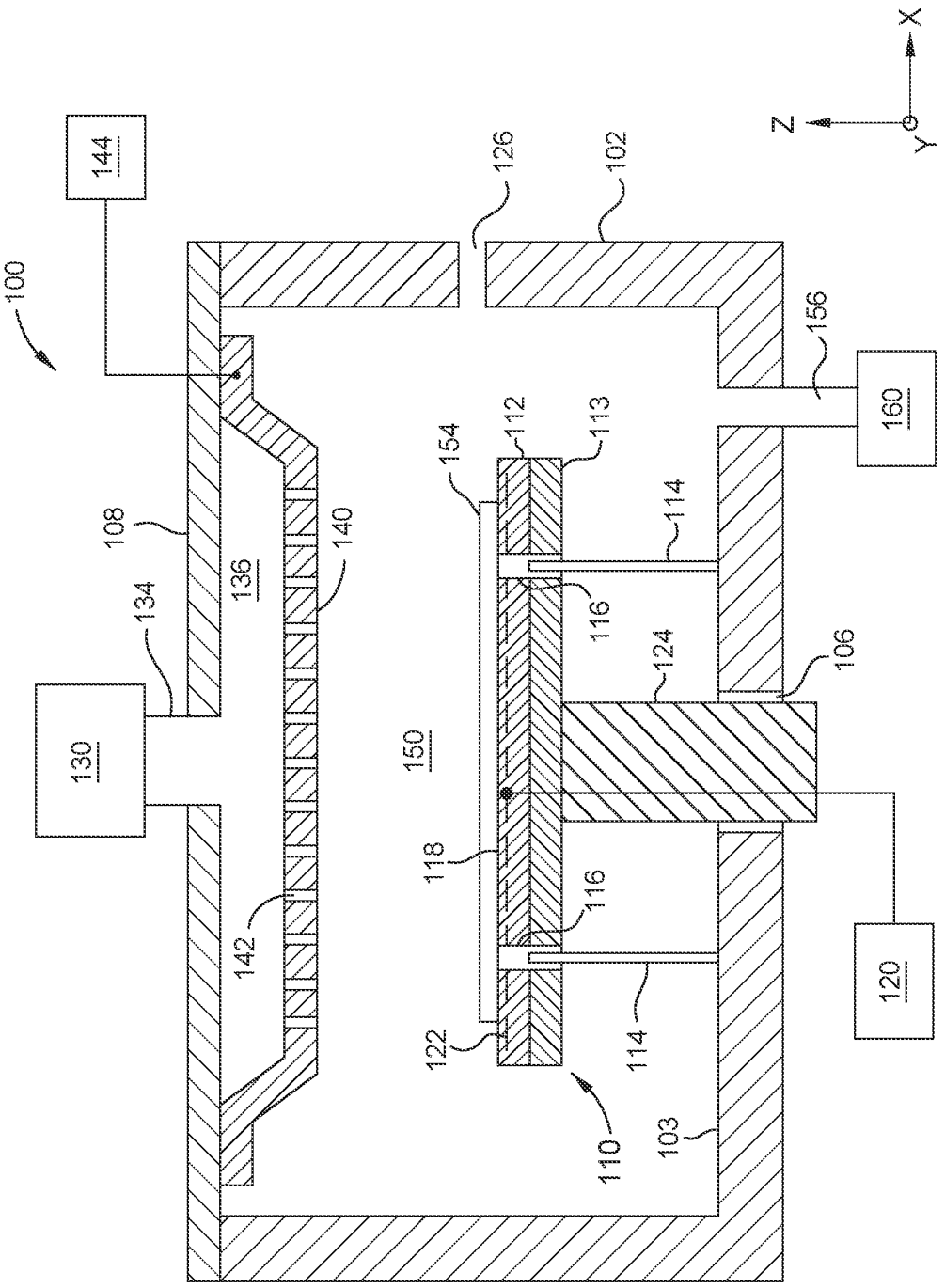

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Z
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FIG. 1

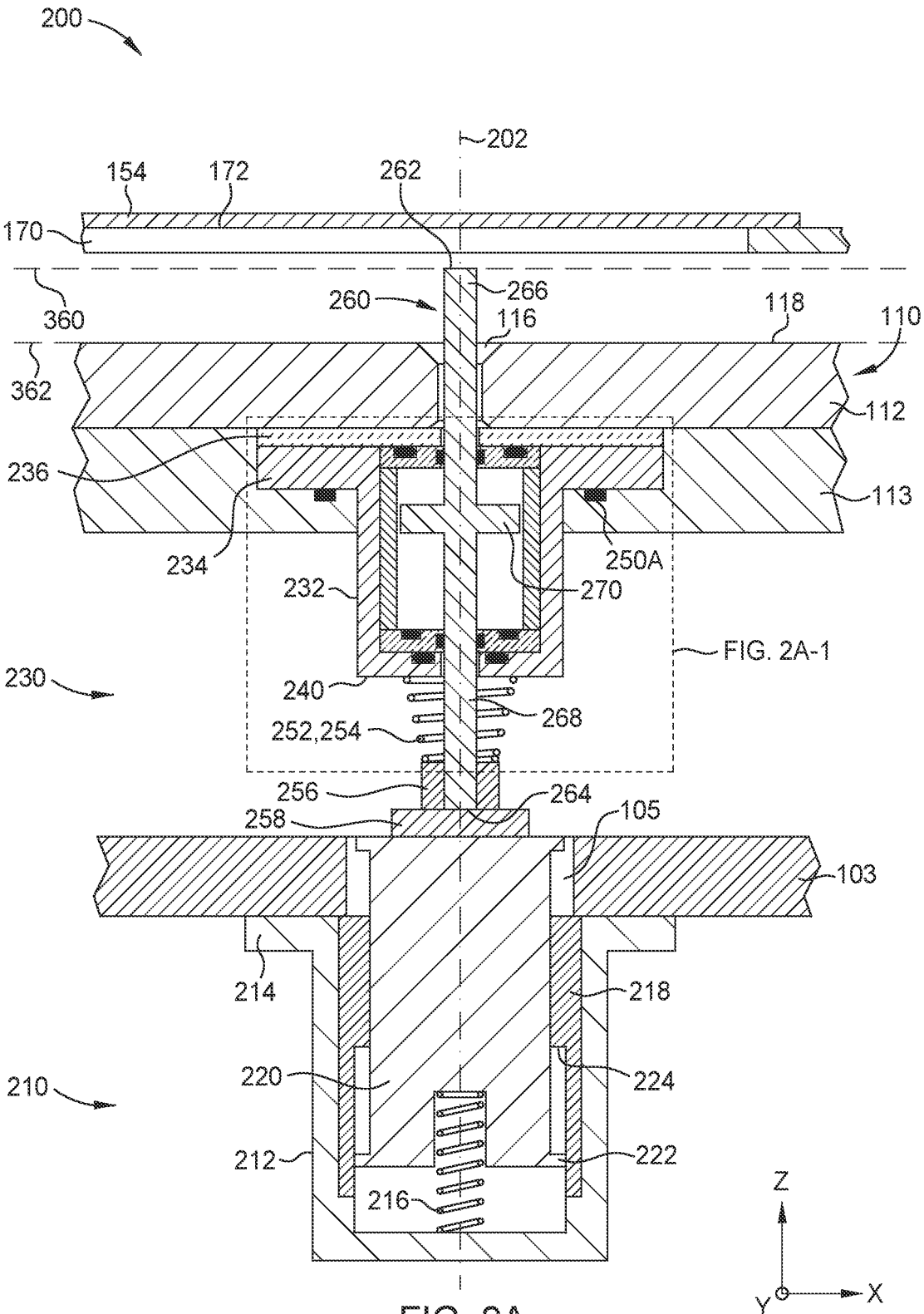

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FIG. 2A-1
230
240
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210
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222
216
Z
Y
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FIG. 2A

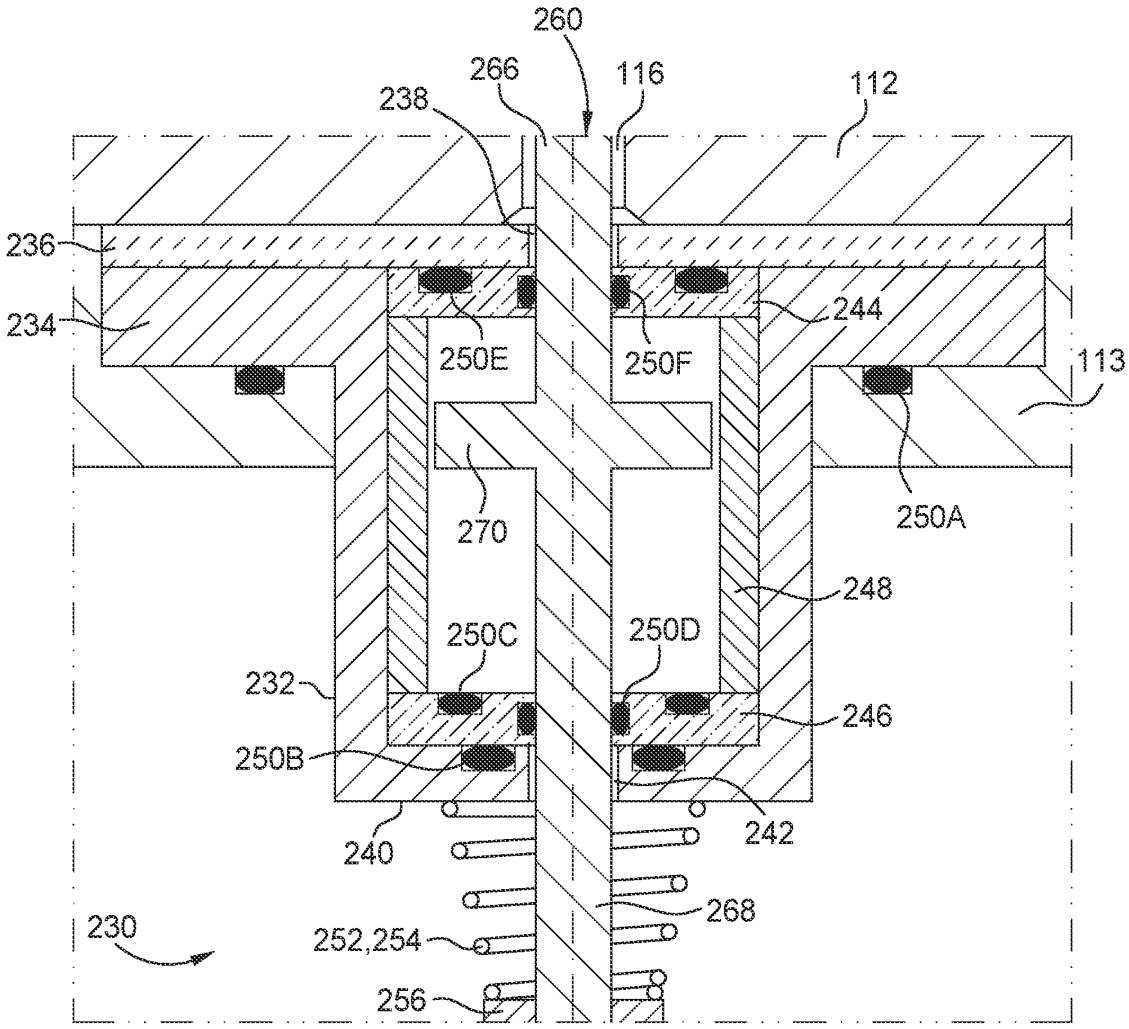
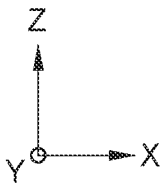

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252,254
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FIG. 2A-1


Z
Y
X

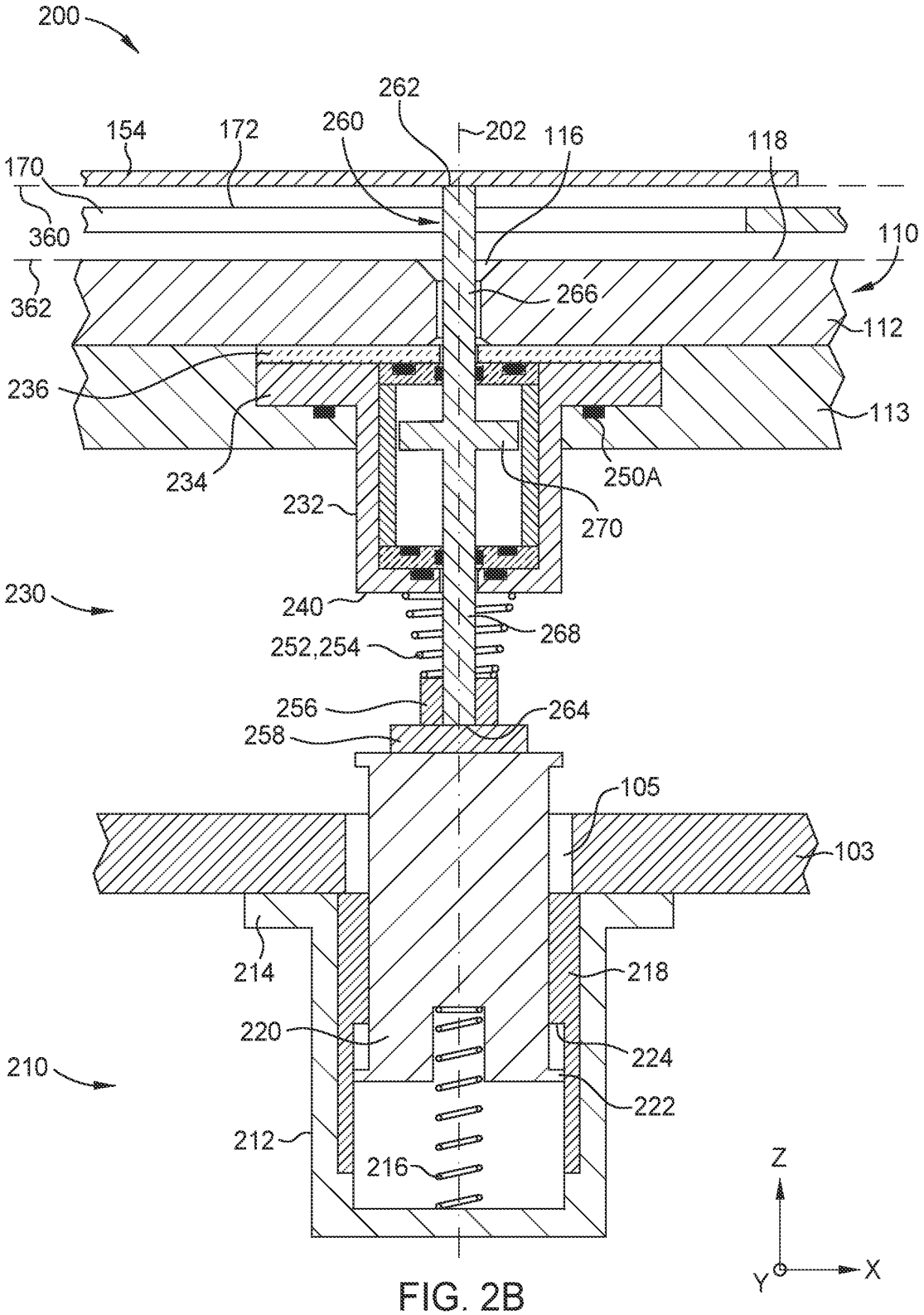

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222
212
216
Z
Y
X

FIG. 2B

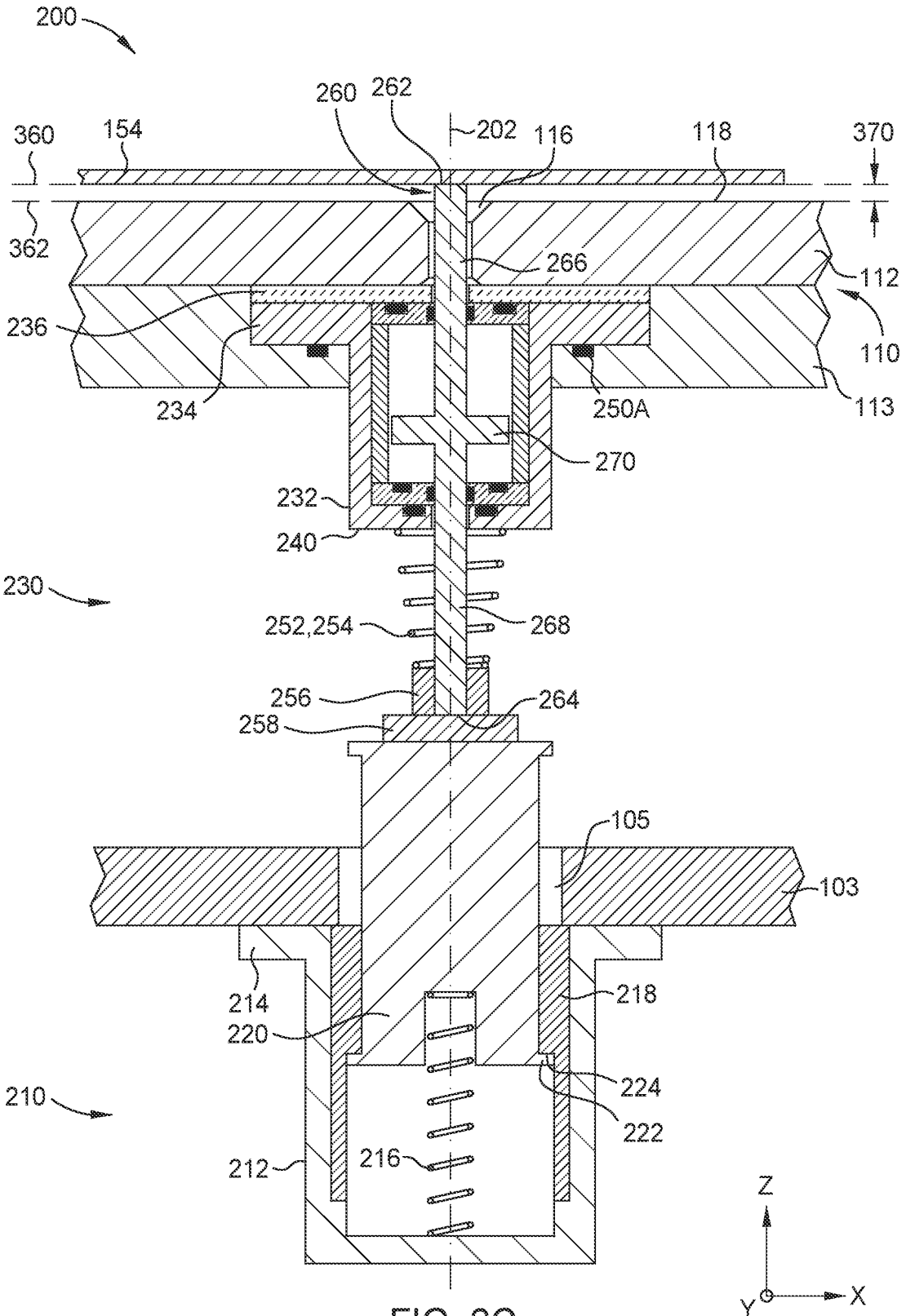

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222
210
216
212
Z
Y
X

FIG. 2C

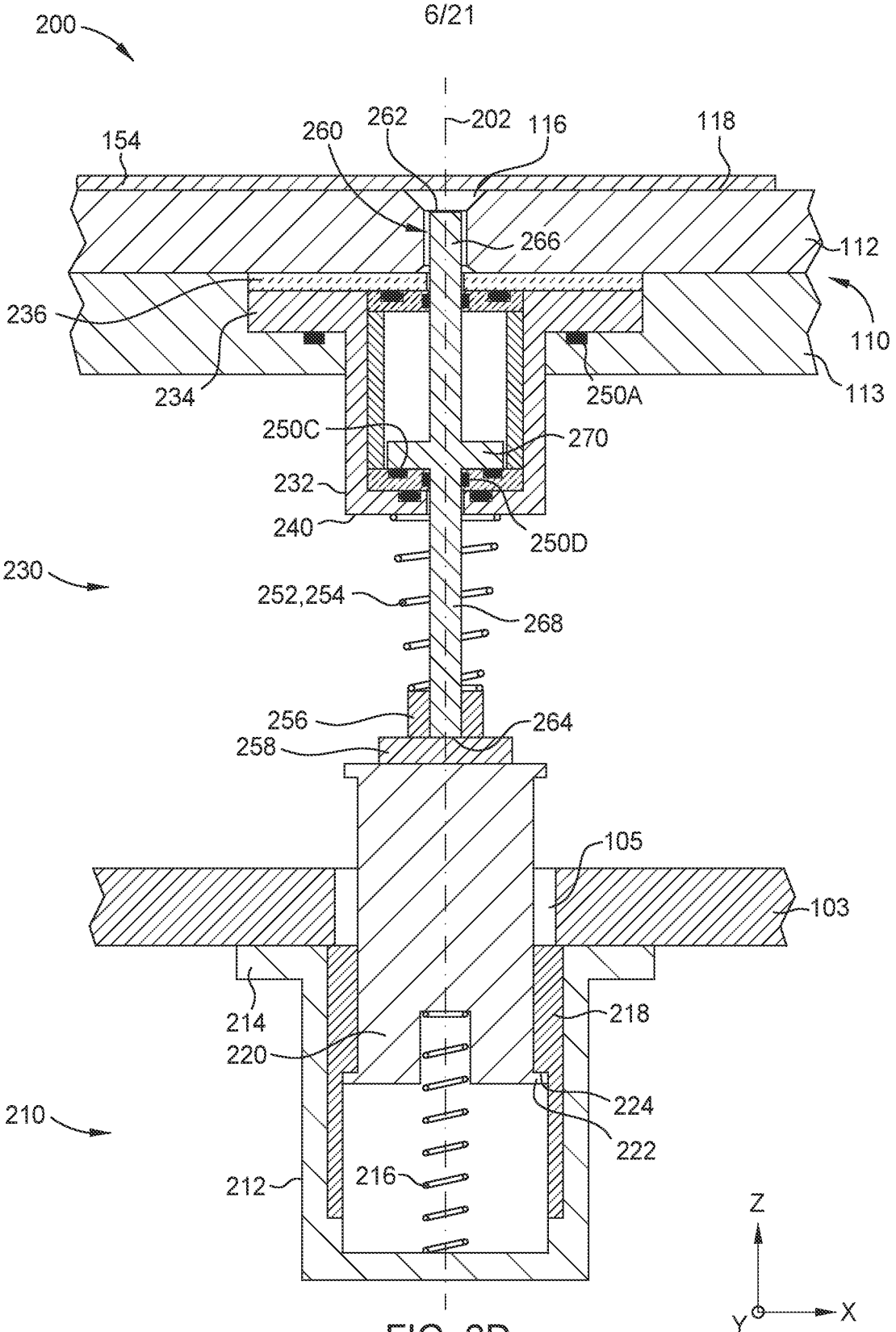

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103
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220
224
222
210
216
212
Z
Y
X

FIG. 2D

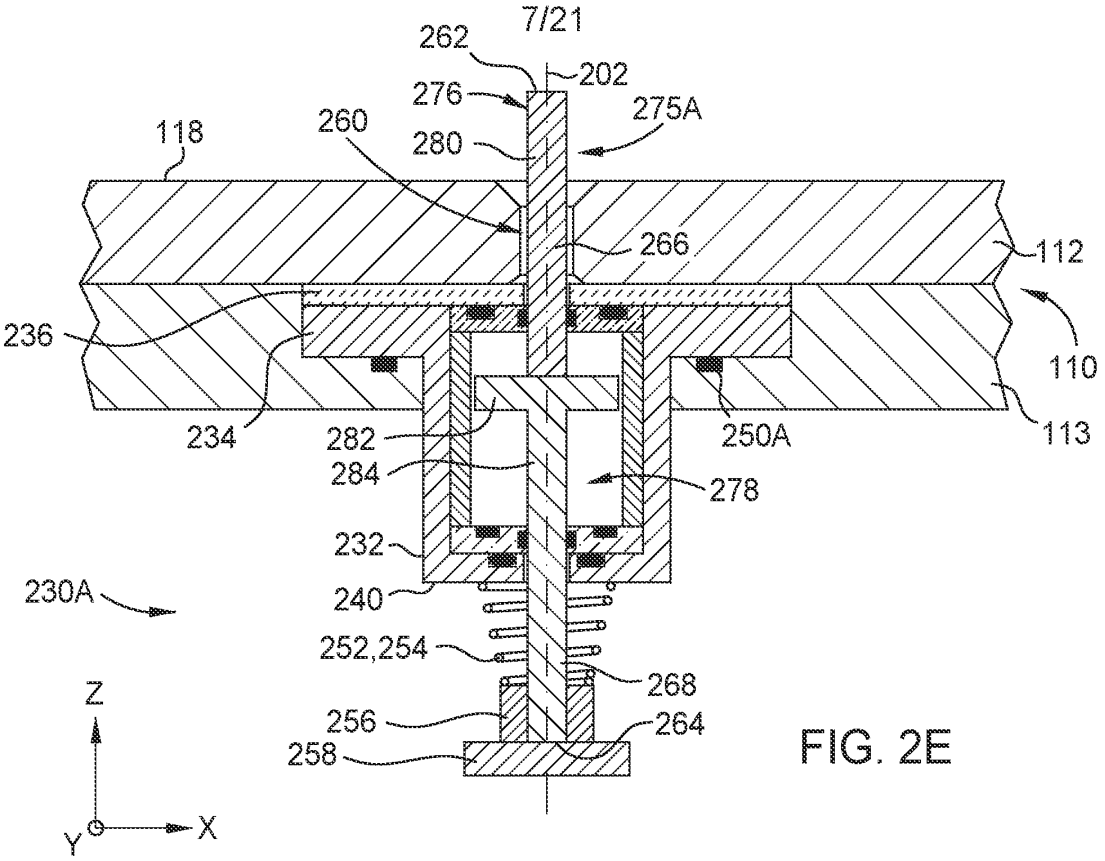

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275A
260
280
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266
112
236
110
234
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250A
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230A
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252,254
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Z
256
264
258
Y
X

FIG. 2E

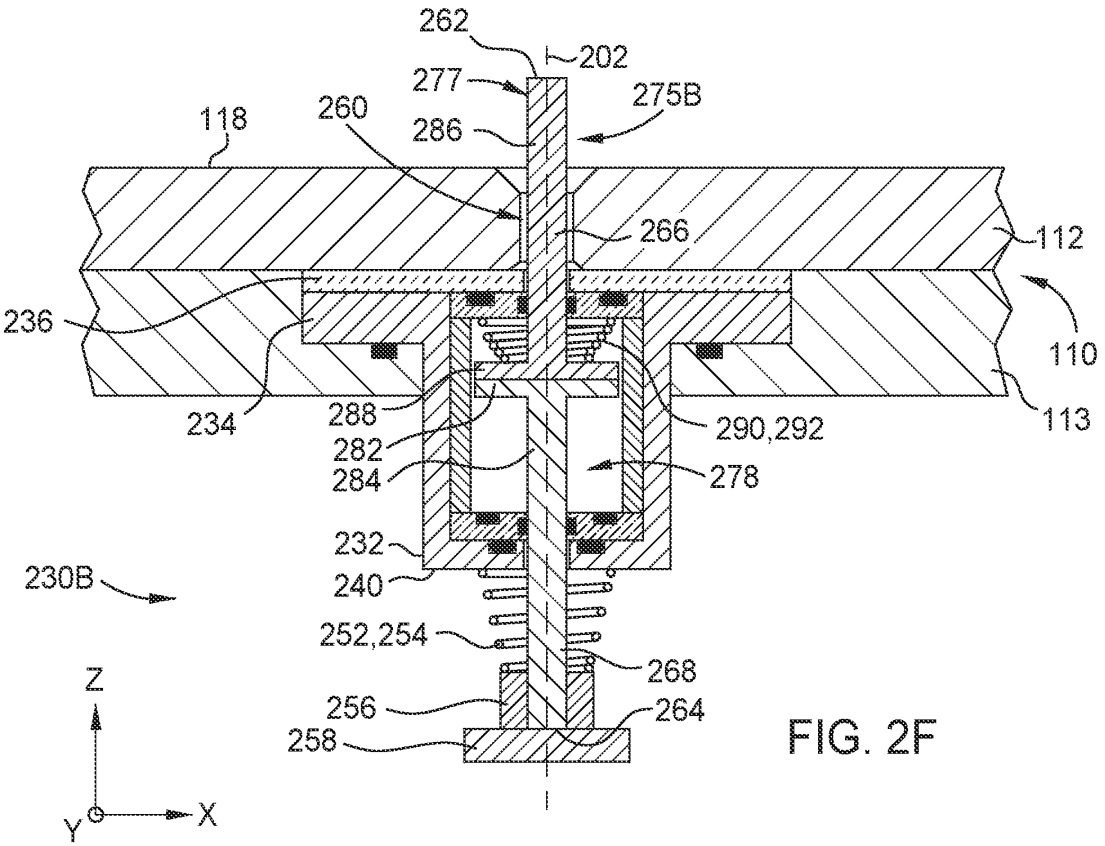

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275B
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234
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230B
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252,254
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Z
256
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258
Y
X

FIG. 2F

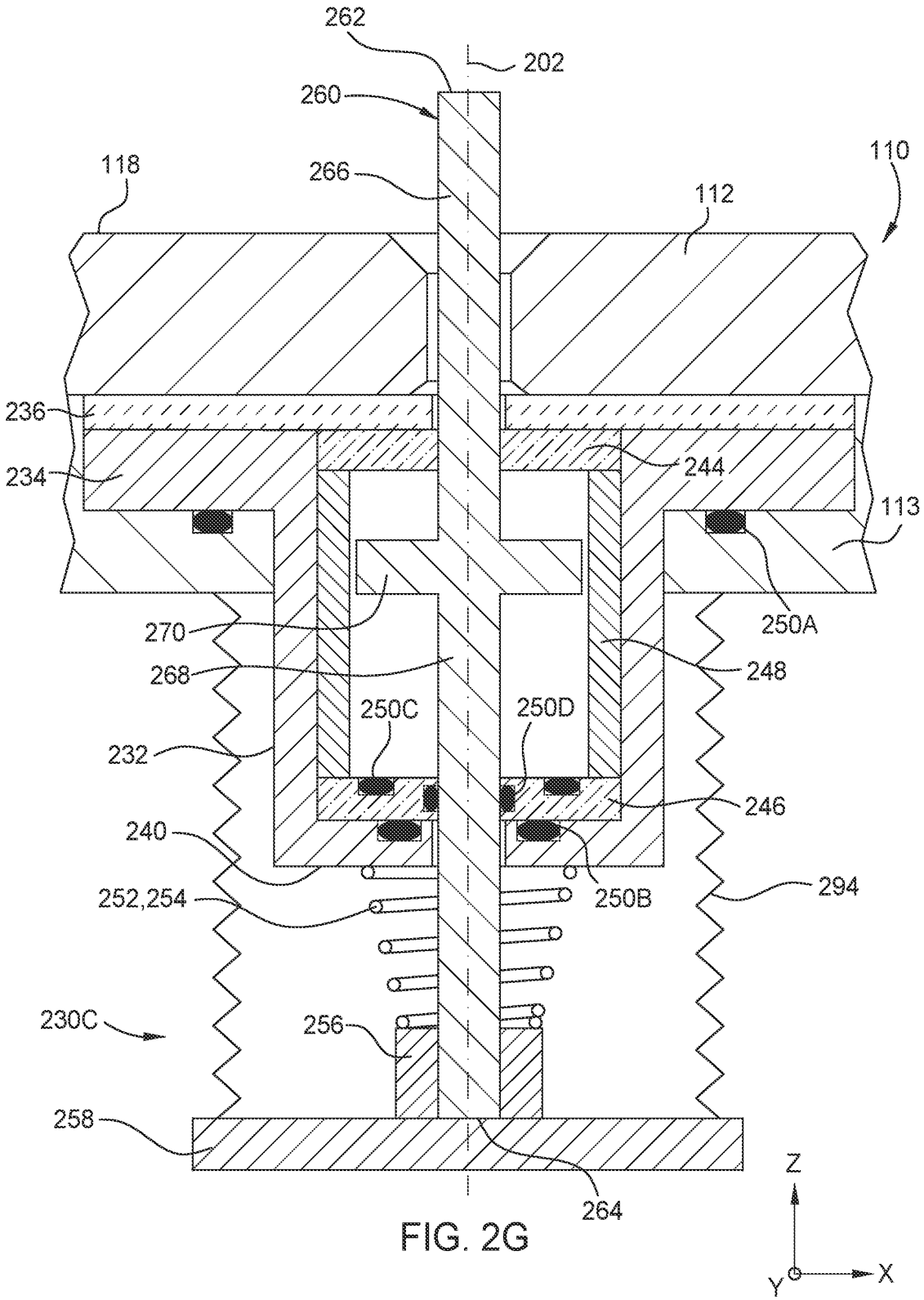

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250A
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250C
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240
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294
252,254
230C
256
258
264
Z
Y
X

FIG. 2G

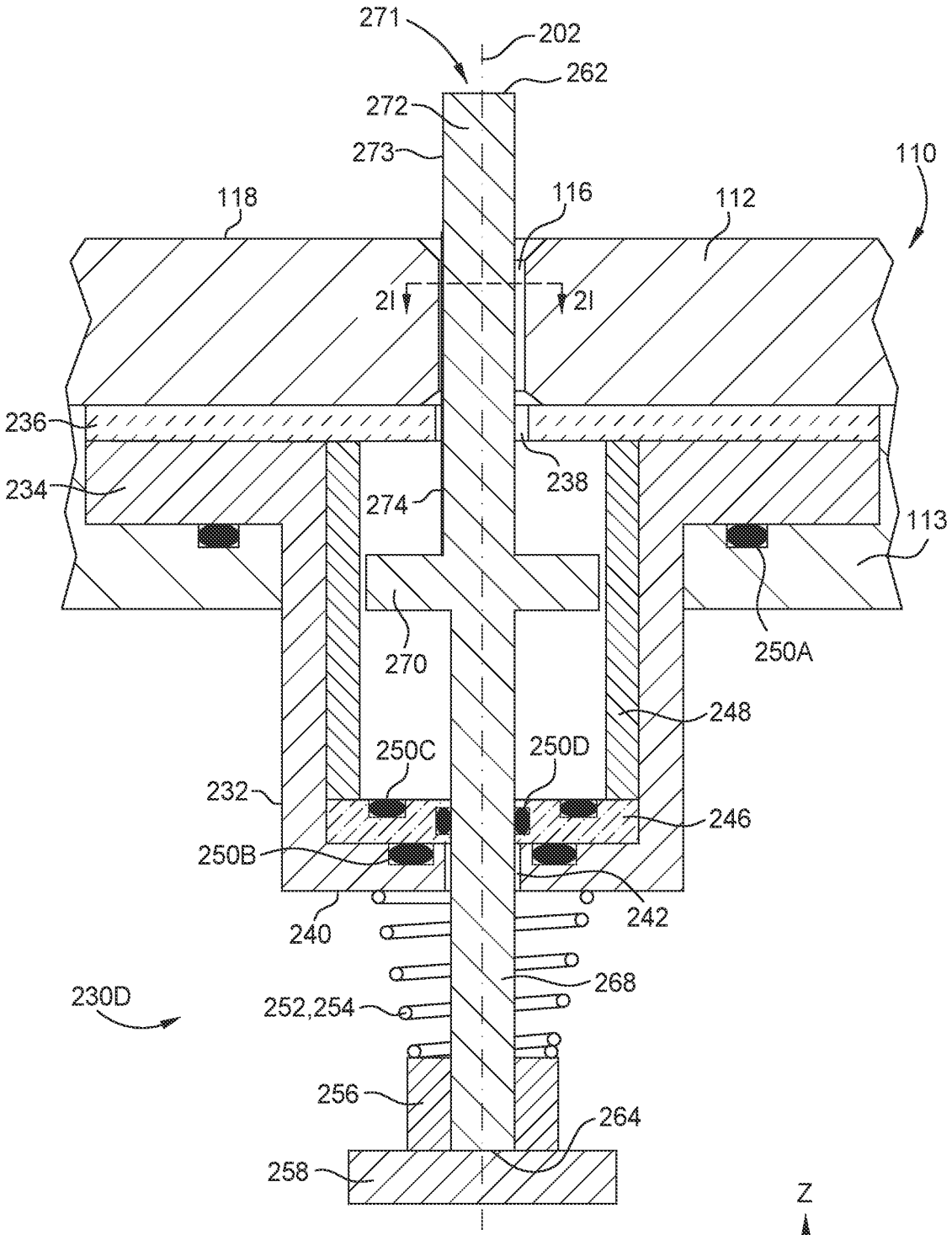

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273
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118
116
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2I
2I
236
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274
113
270
250A
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250C
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232
246
250B
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242
230D
268
252,254
256
264
258
Z
Y
X

FIG. 2H

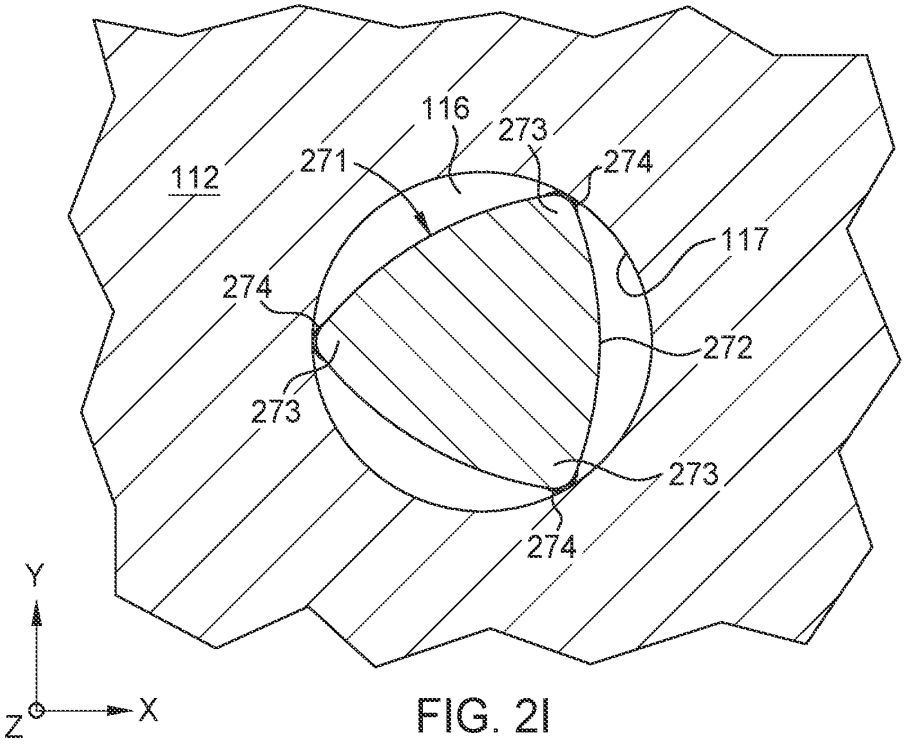


FIG. 2I

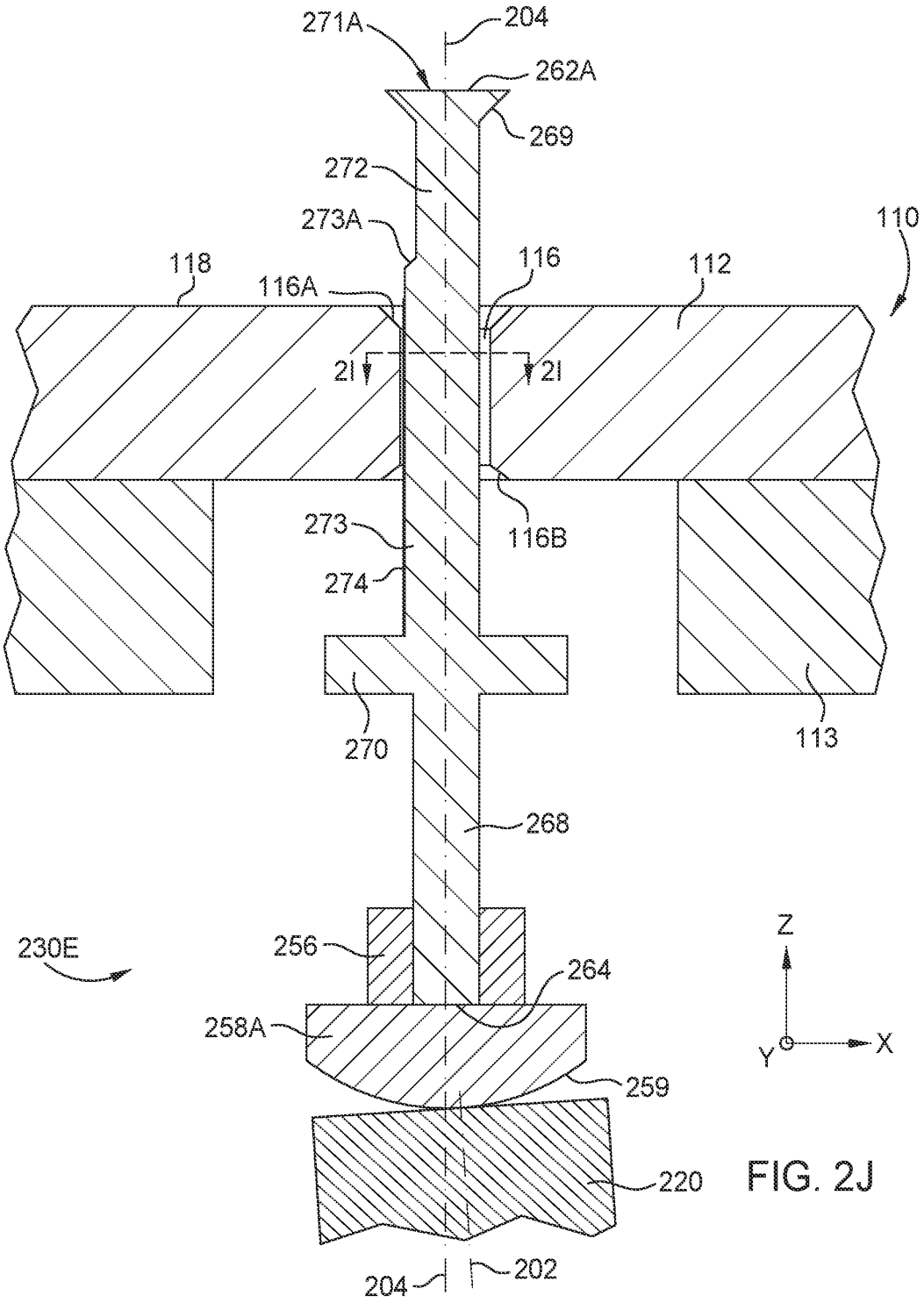

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273A
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118
116
112
116A
2I
2I
116B
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230E
256
264
258A
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220
204
202
Z
Y
X

FIG. 2J

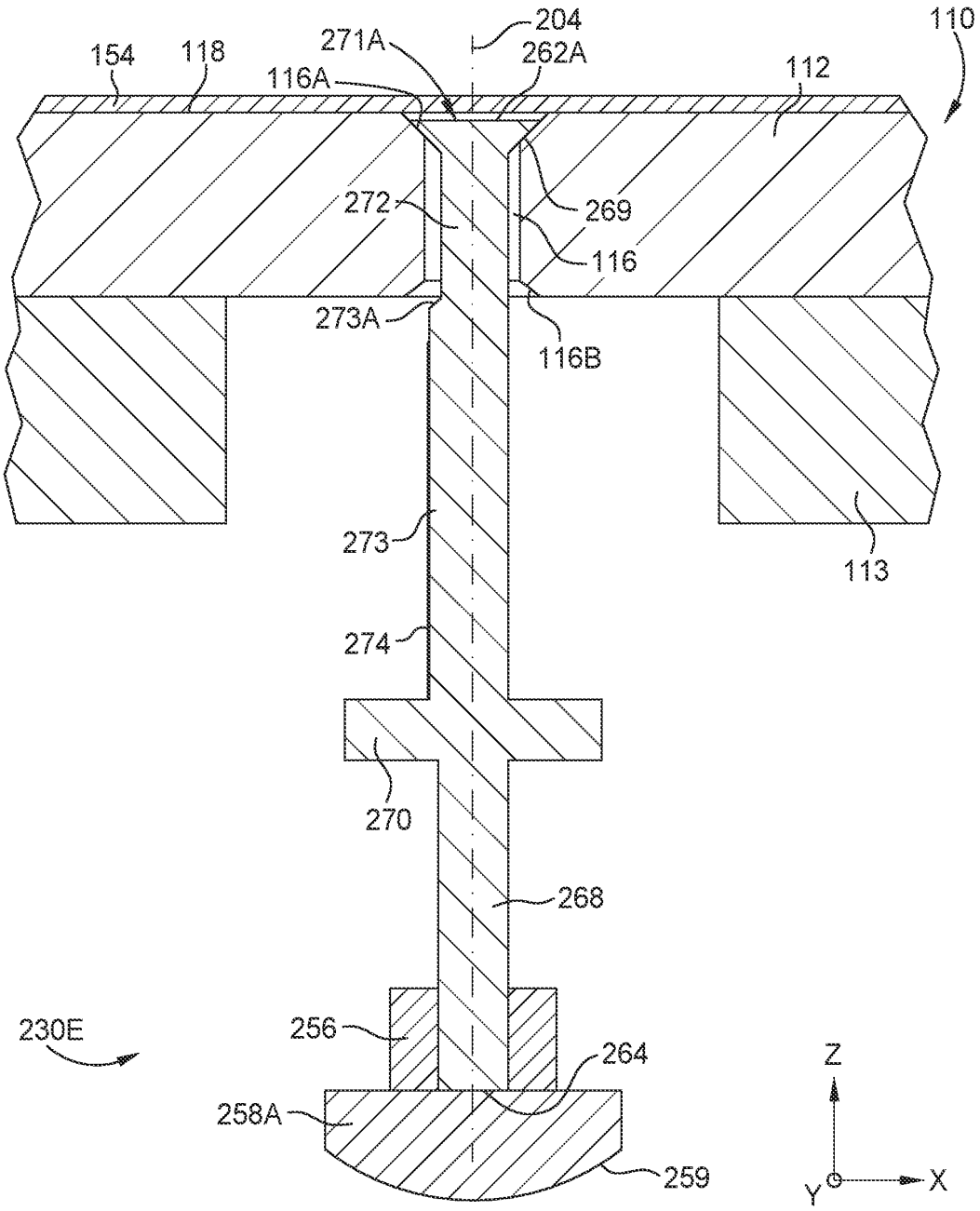

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Y
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FIG. 2K

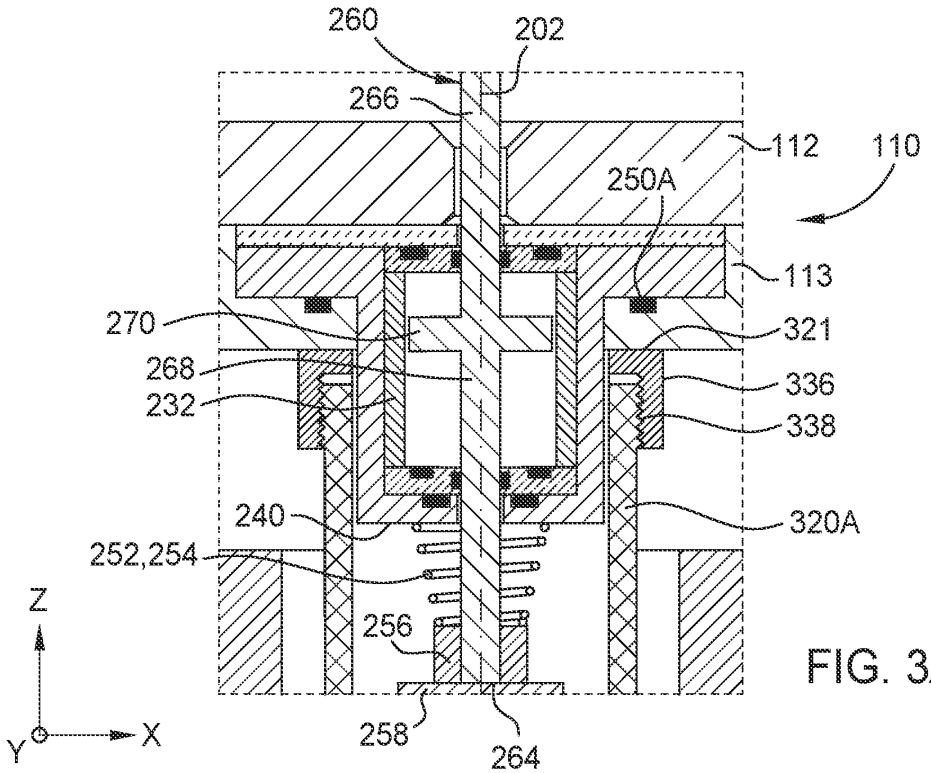

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Y
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264

FIG. 3A-1

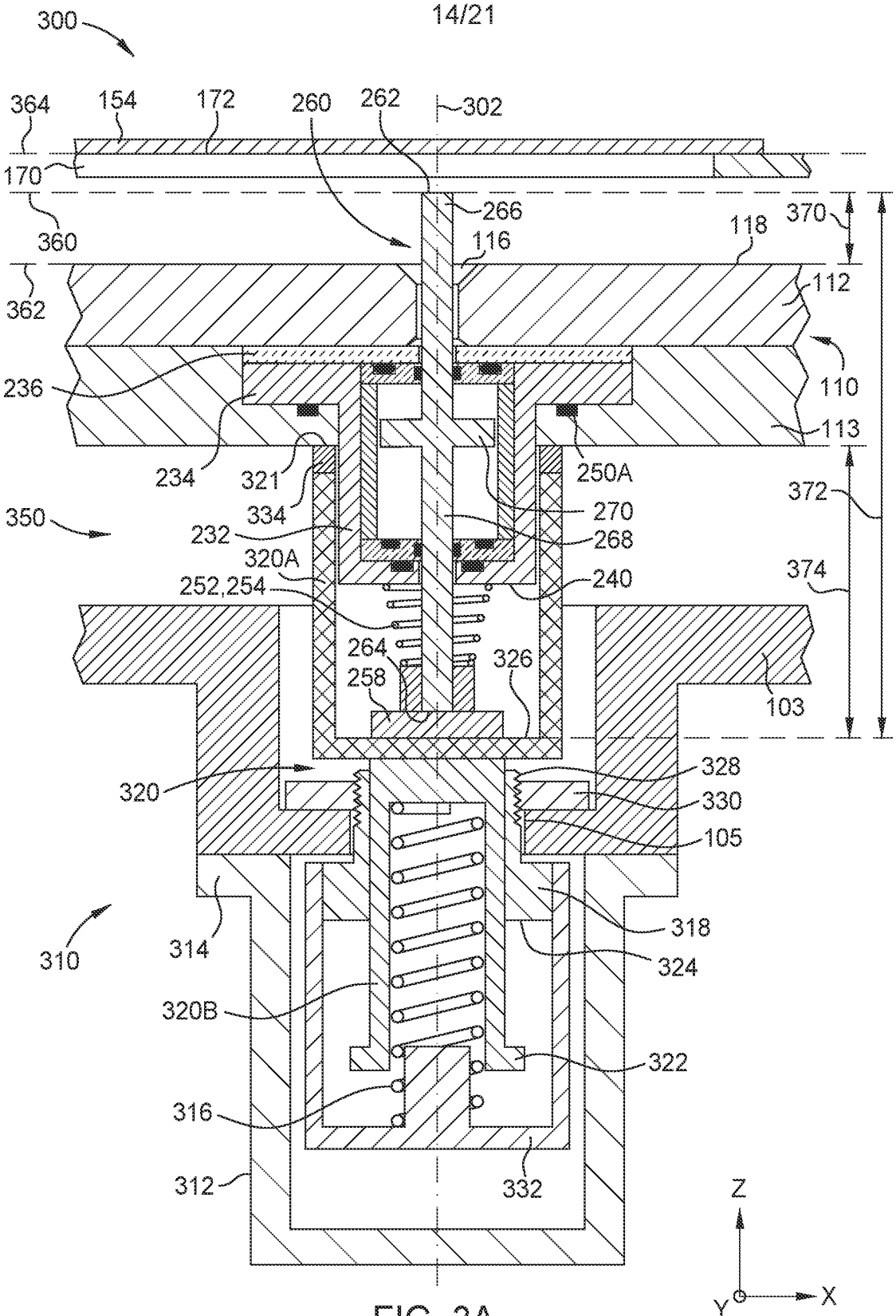

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FIG. 3A

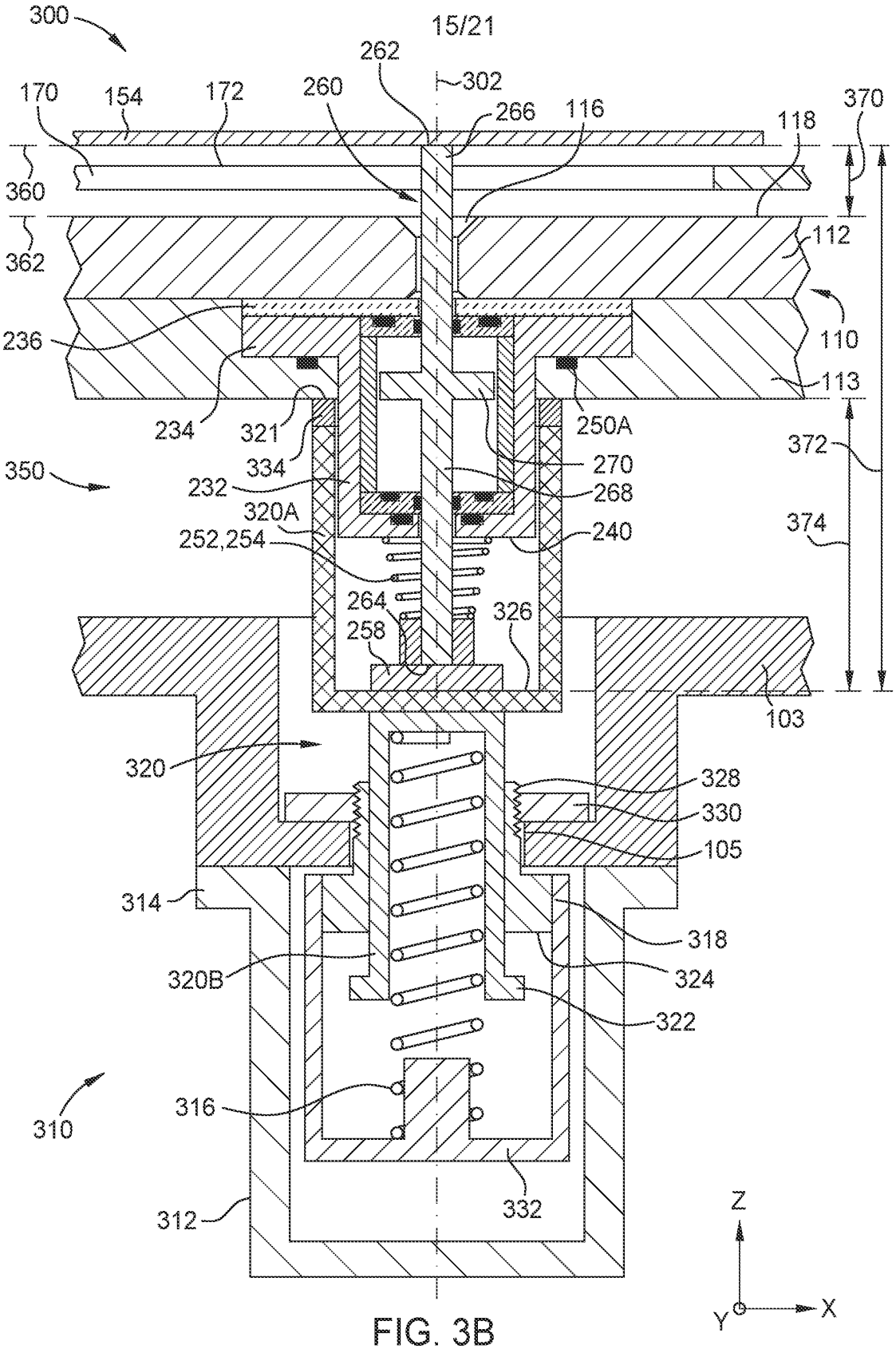

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FIG. 3B

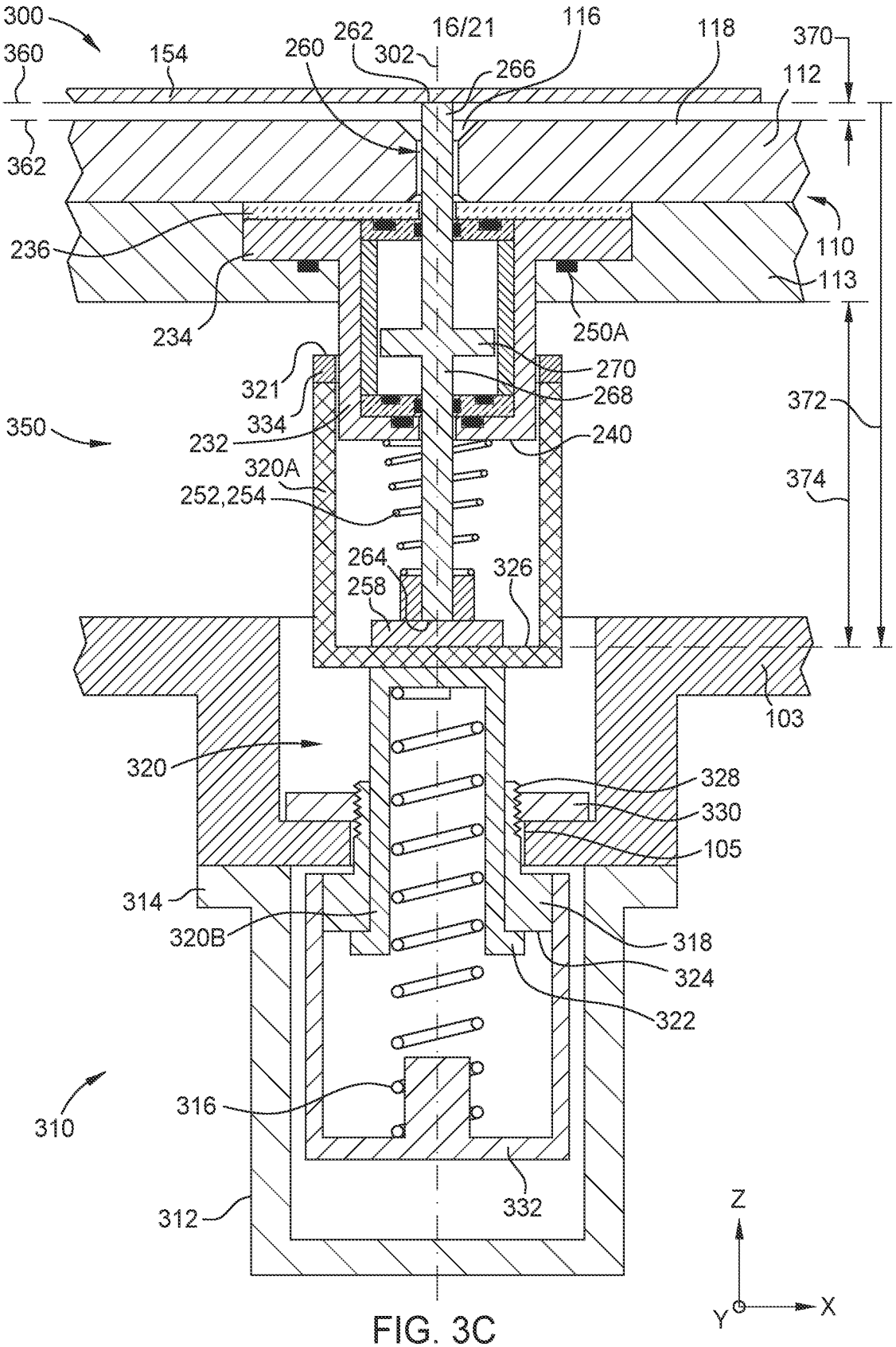

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Y
X

FIG. 3C

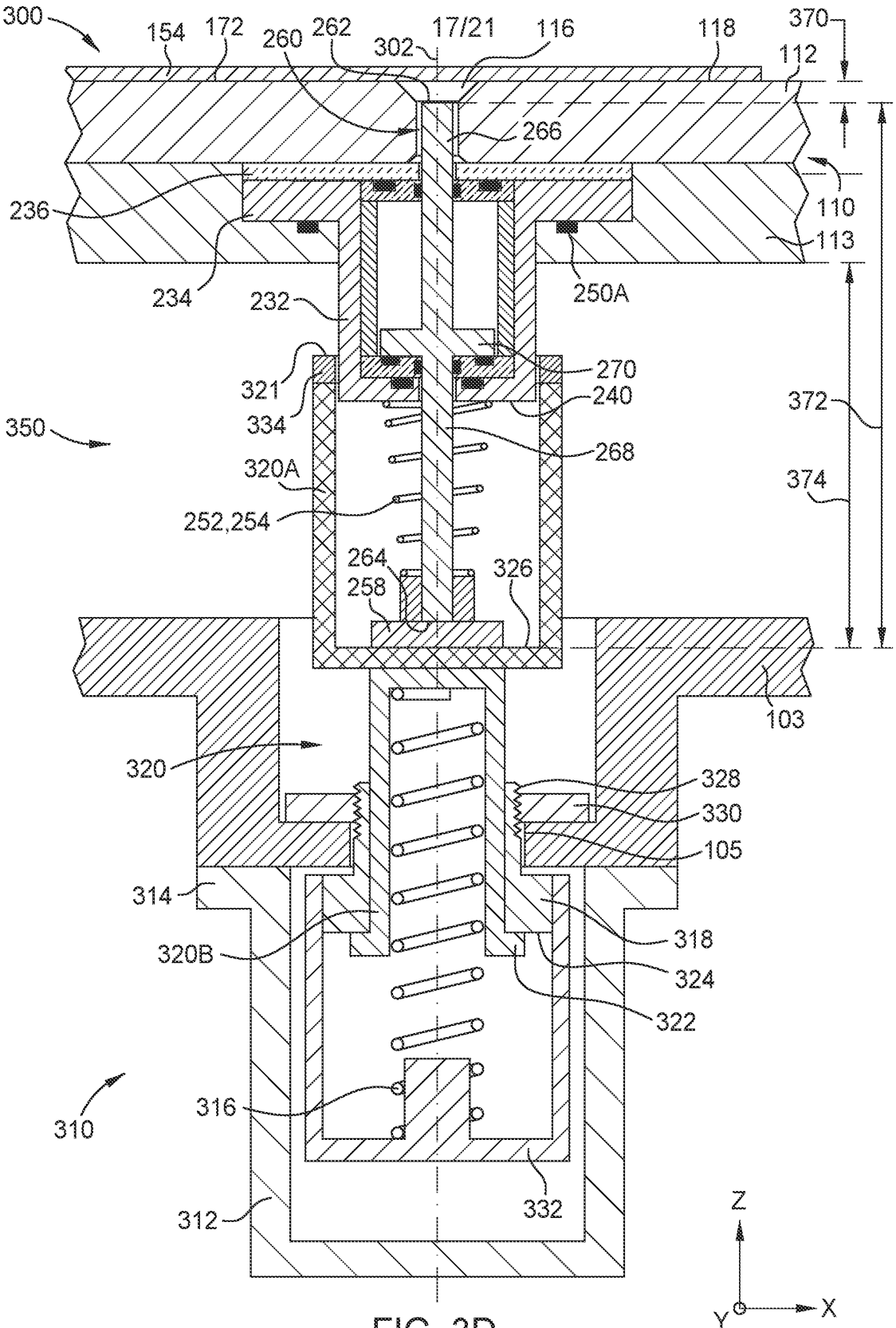

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FIG. 3D

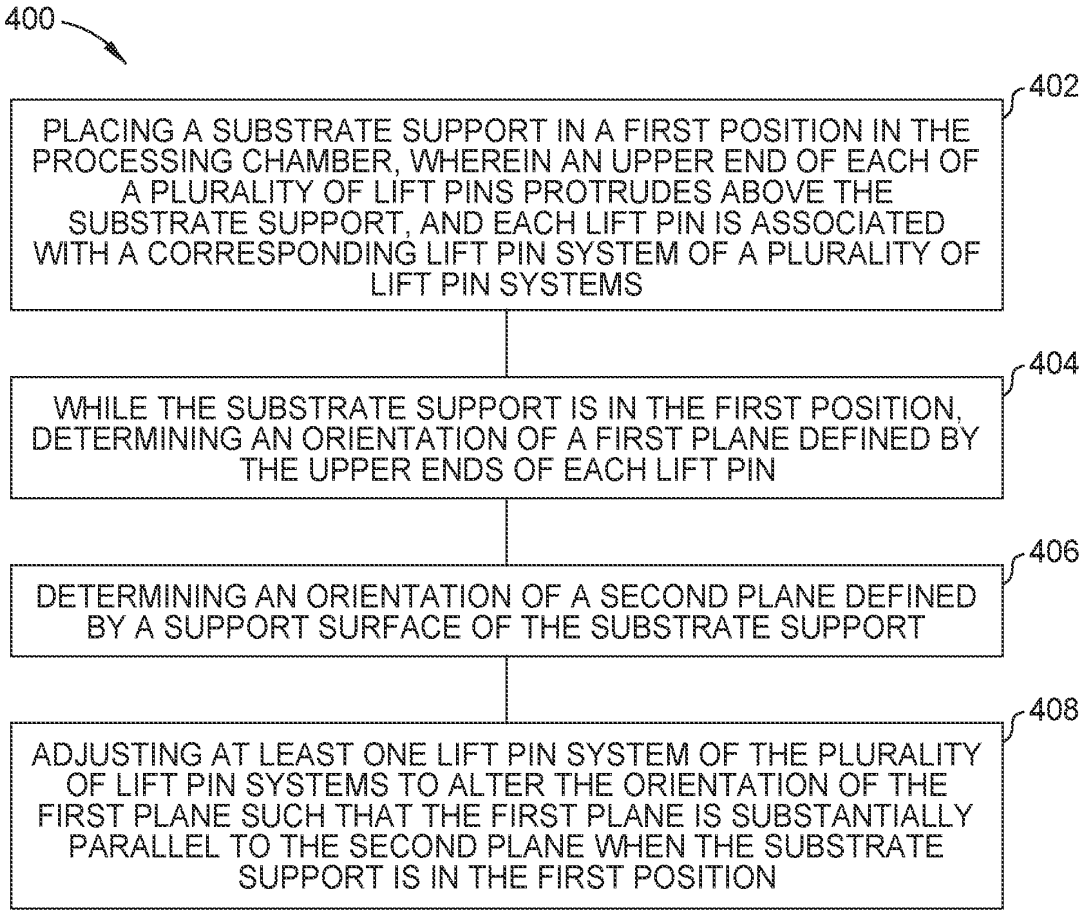

400
402
PLACING A SUBSTRATE SUPPORT IN A FIRST POSITION IN THE PROCESSING CHAMBER, WHEREIN AN UPPER END OF EACH OF A PLURALITY OF LIFT PINS PROTRUDES ABOVE THE SUBSTRATE SUPPORT, AND EACH LIFT PIN IS ASSOCIATED WITH A CORRESPONDING LIFT PIN SYSTEM OF A PLURALITY OF LIFT PIN SYSTEMS
404
WHILE THE SUBSTRATE SUPPORT IS IN THE FIRST POSITION, DETERMINING AN ORIENTATION OF A FIRST PLANE DEFINED BY THE UPPER ENDS OF EACH LIFT PIN
406
DETERMINING AN ORIENTATION OF A SECOND PLANE DEFINED BY A SUPPORT SURFACE OF THE SUBSTRATE SUPPORT
408
ADJUSTING AT LEAST ONE LIFT PIN SYSTEM OF THE PLURALITY OF LIFT PIN SYSTEMS TO ALTER THE ORIENTATION OF THE FIRST PLANE SUCH THAT THE FIRST PLANE IS SUBSTANTIALLY PARALLEL TO THE SECOND PLANE WHEN THE SUBSTRATE SUPPORT IS IN THE FIRST POSITION

FIG. 4A

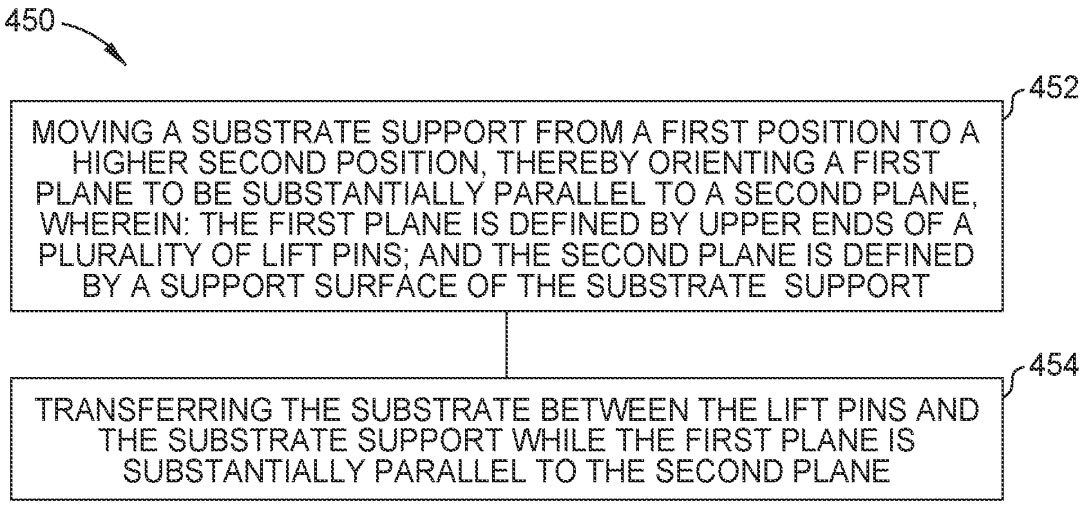

450
452
MOVING A SUBSTRATE SUPPORT FROM A FIRST POSITION TO A HIGHER SECOND POSITION, THEREBY ORIENTING A FIRST PLANE TO BE SUBSTANTIALLY PARALLEL TO A SECOND PLANE, WHEREIN: THE FIRST PLANE IS DEFINED BY UPPER ENDS OF A PLURALITY OF LIFT PINS; AND THE SECOND PLANE IS DEFINED BY A SUPPORT SURFACE OF THE SUBSTRATE SUPPORT
454
TRANSFERRING THE SUBSTRATE BETWEEN THE LIFT PINS AND THE SUBSTRATE SUPPORT WHILE THE FIRST PLANE IS SUBSTANTIALLY PARALLEL TO THE SECOND PLANE

FIG. 4B

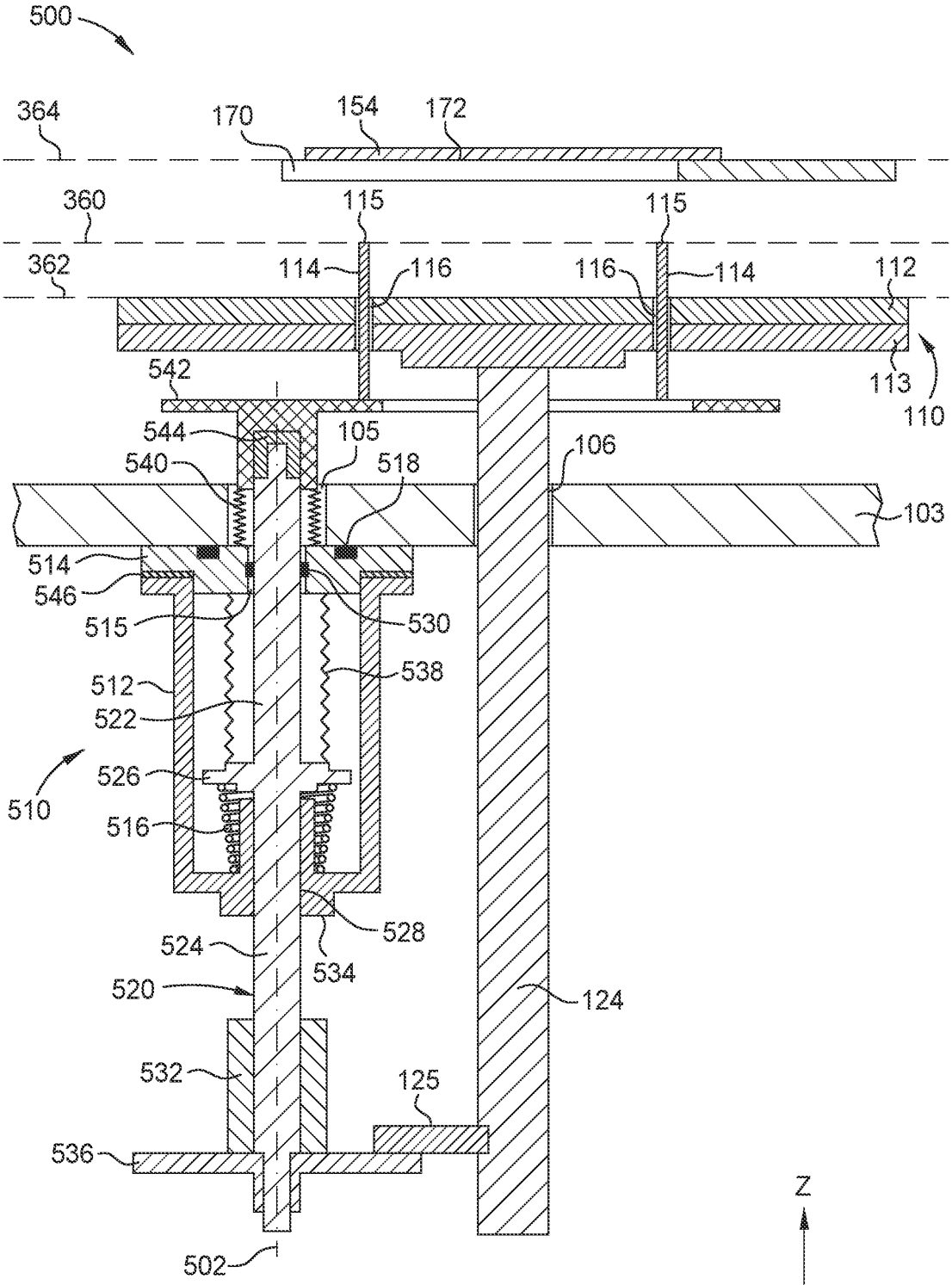

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124
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125
536
502
Z
Y
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FIG. 5A

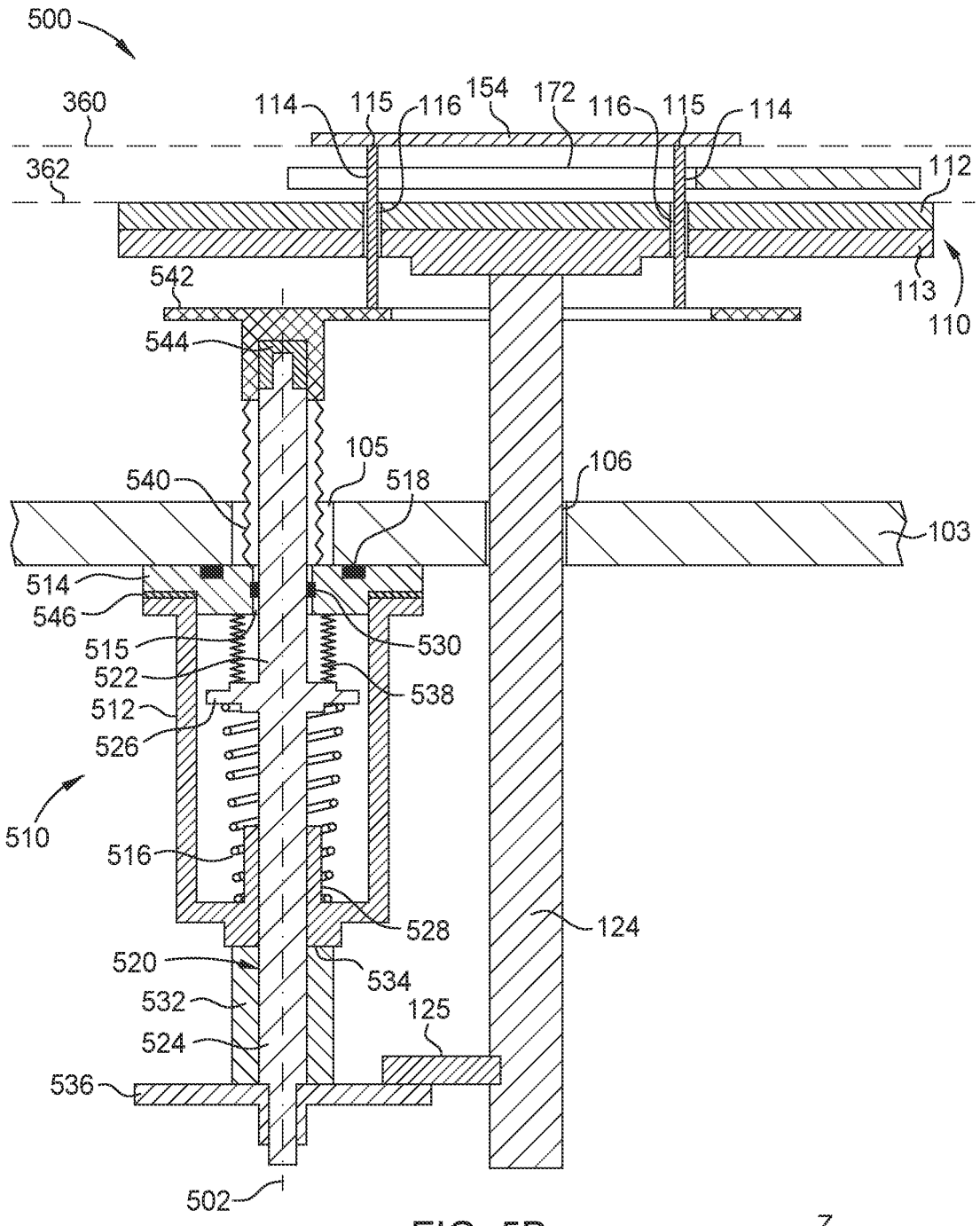

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FIG. 5B

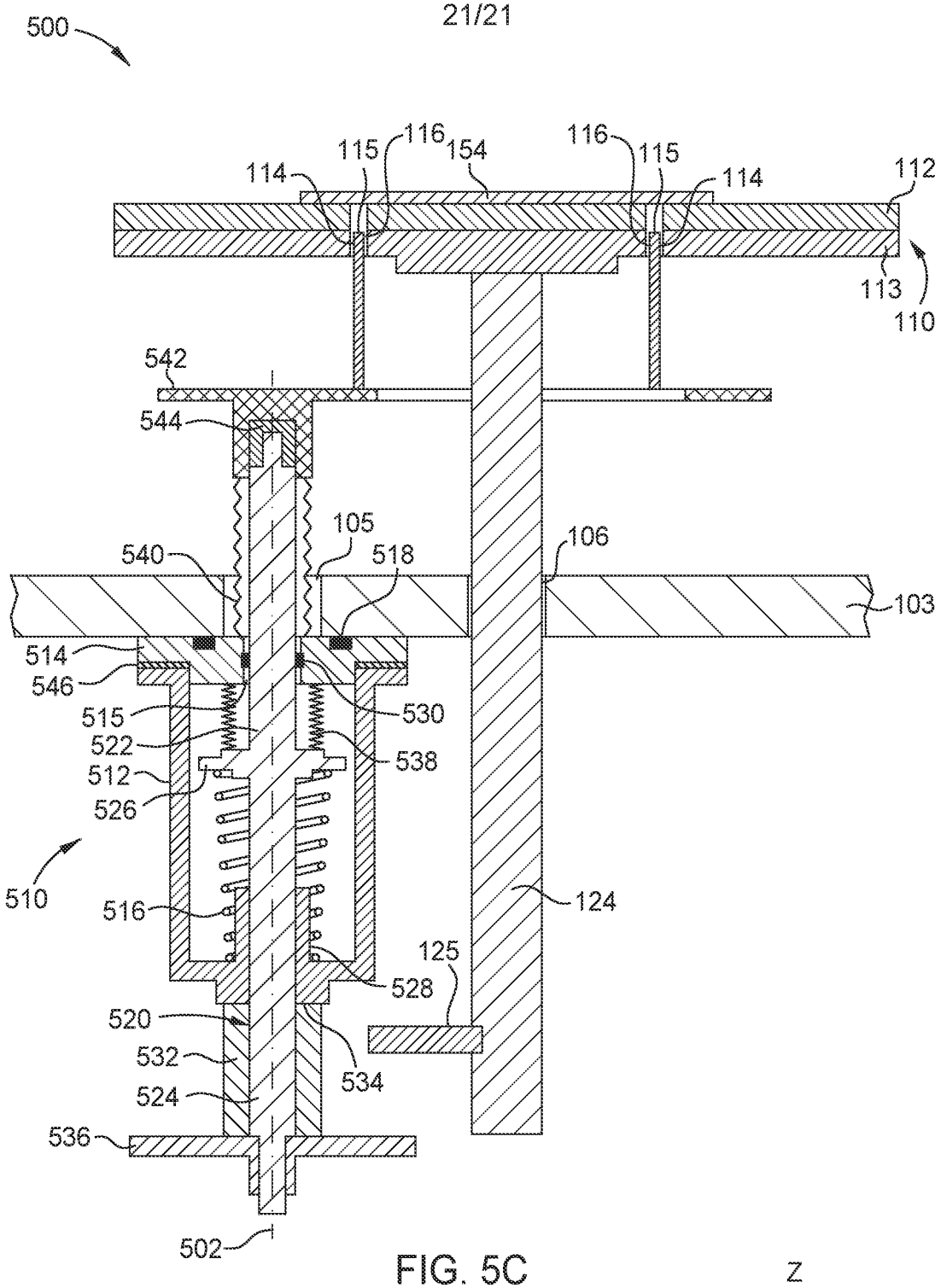

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Y
X

FIG. 5C