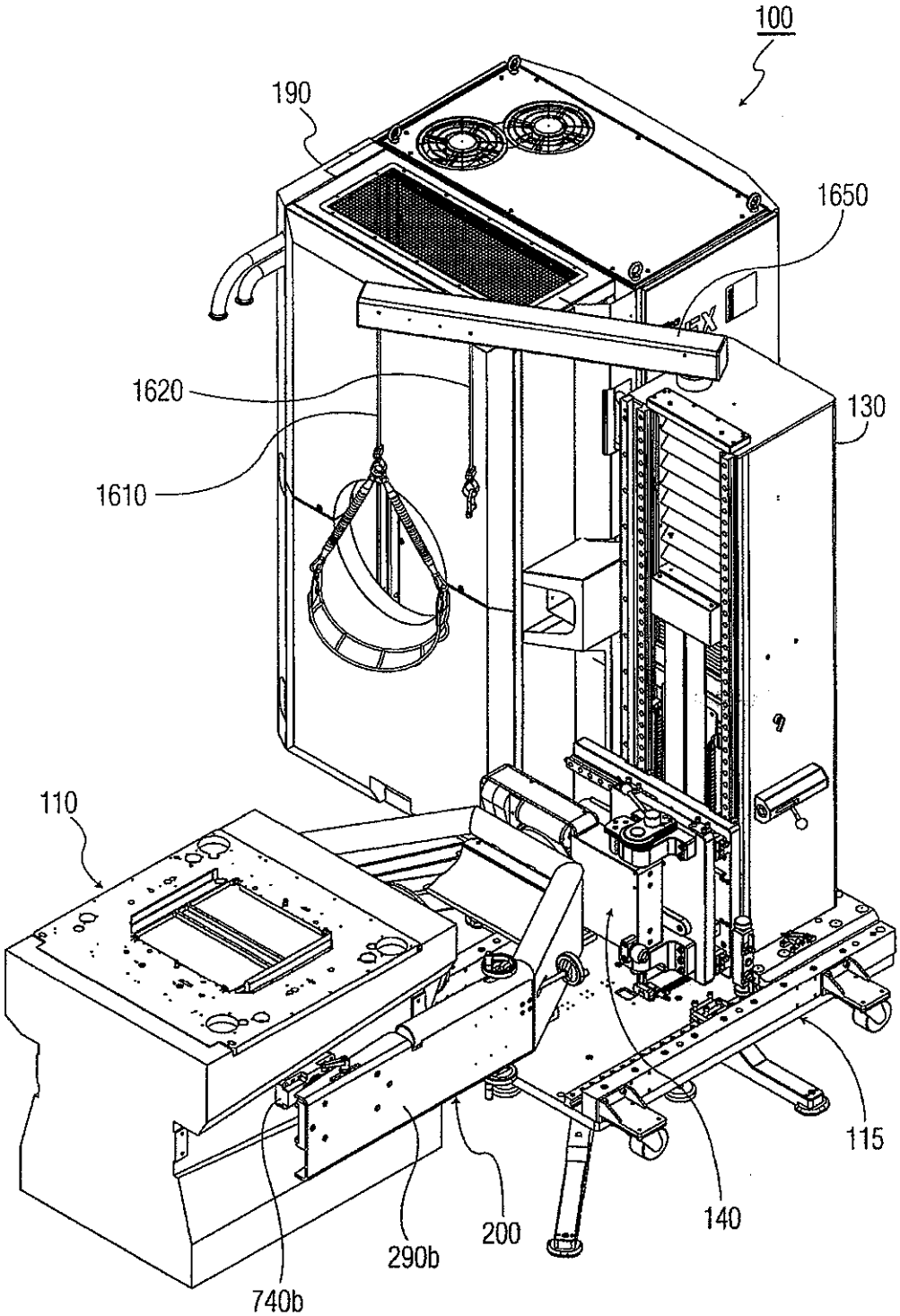

FIG. 1A

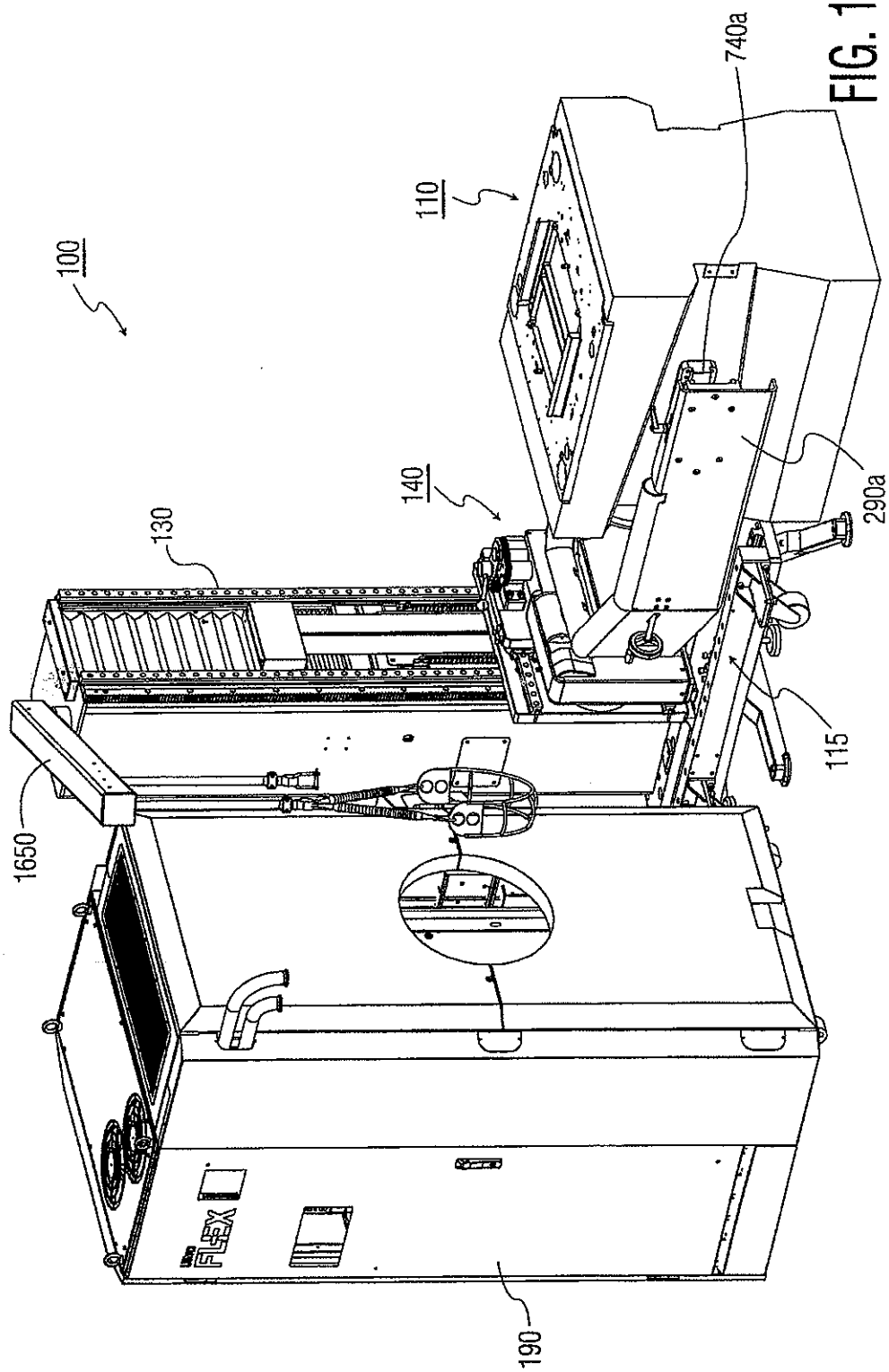

FIG. 1B

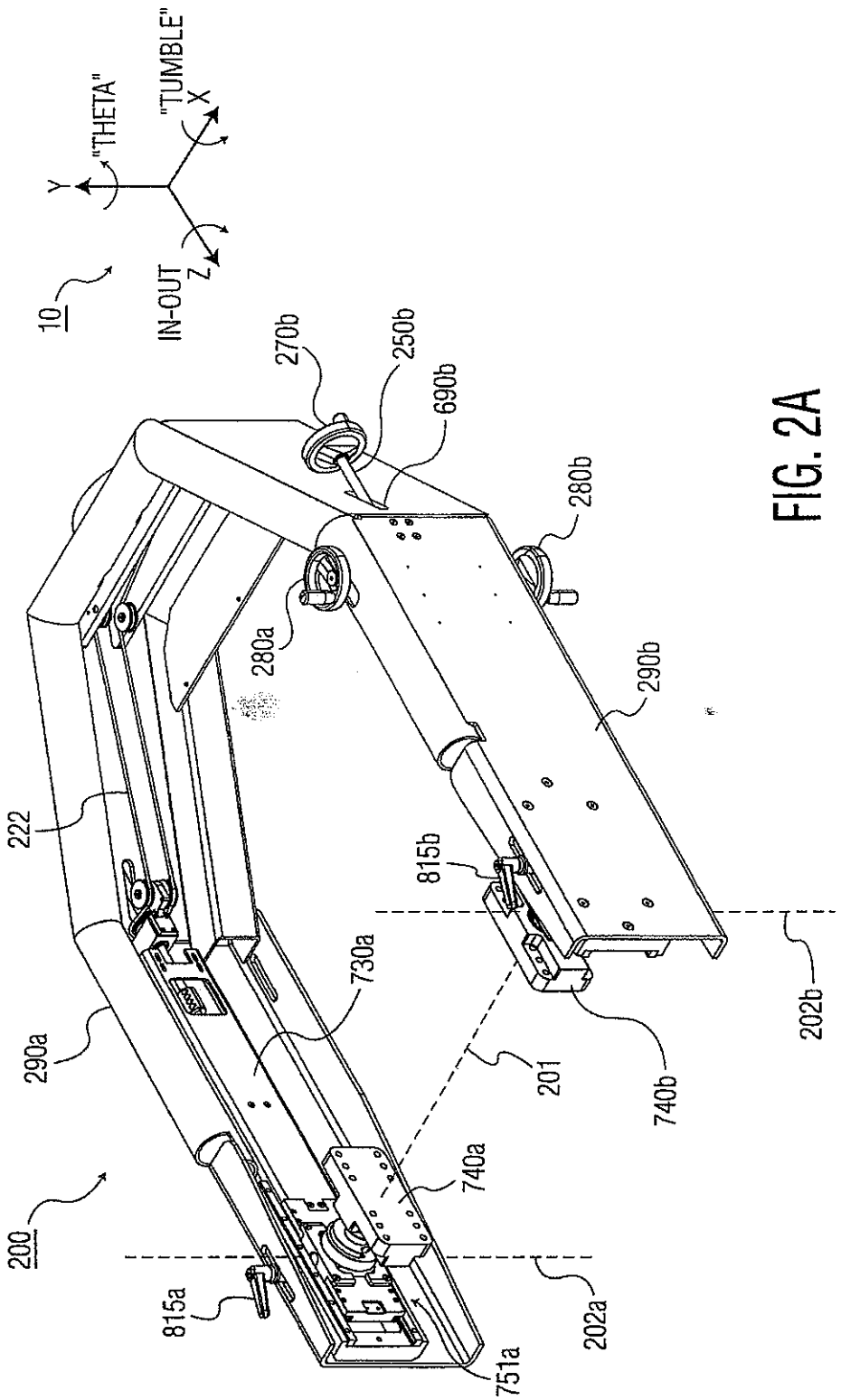
"TUMBLE"
X
"THETA"
Y
IN-OUT
Z
10
270b
250b
690b
280b
280a
290b
222
815b
730a
290a
201
740b
202b
740a
200
815a
202a
751a

FIG. 2A

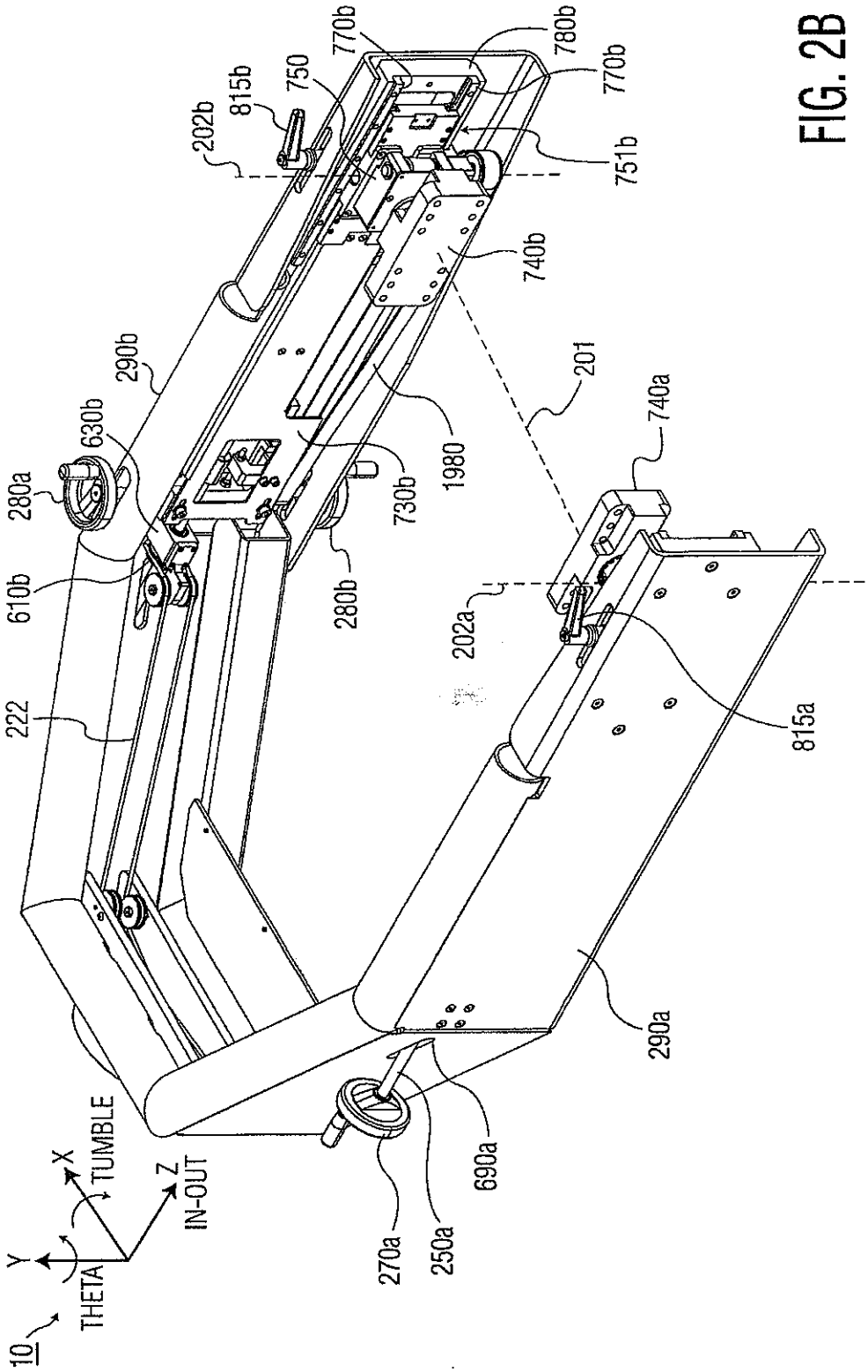
10
THETA
Y
TUMBLE
X
IN-OUT
Z
270a
250a
690a
290a
815a
202a
740a
201
1980
730b
280b
610b
222
280a
630b
290b
202b
815b
750
770b
780b
751b
740b

FIG. 2B

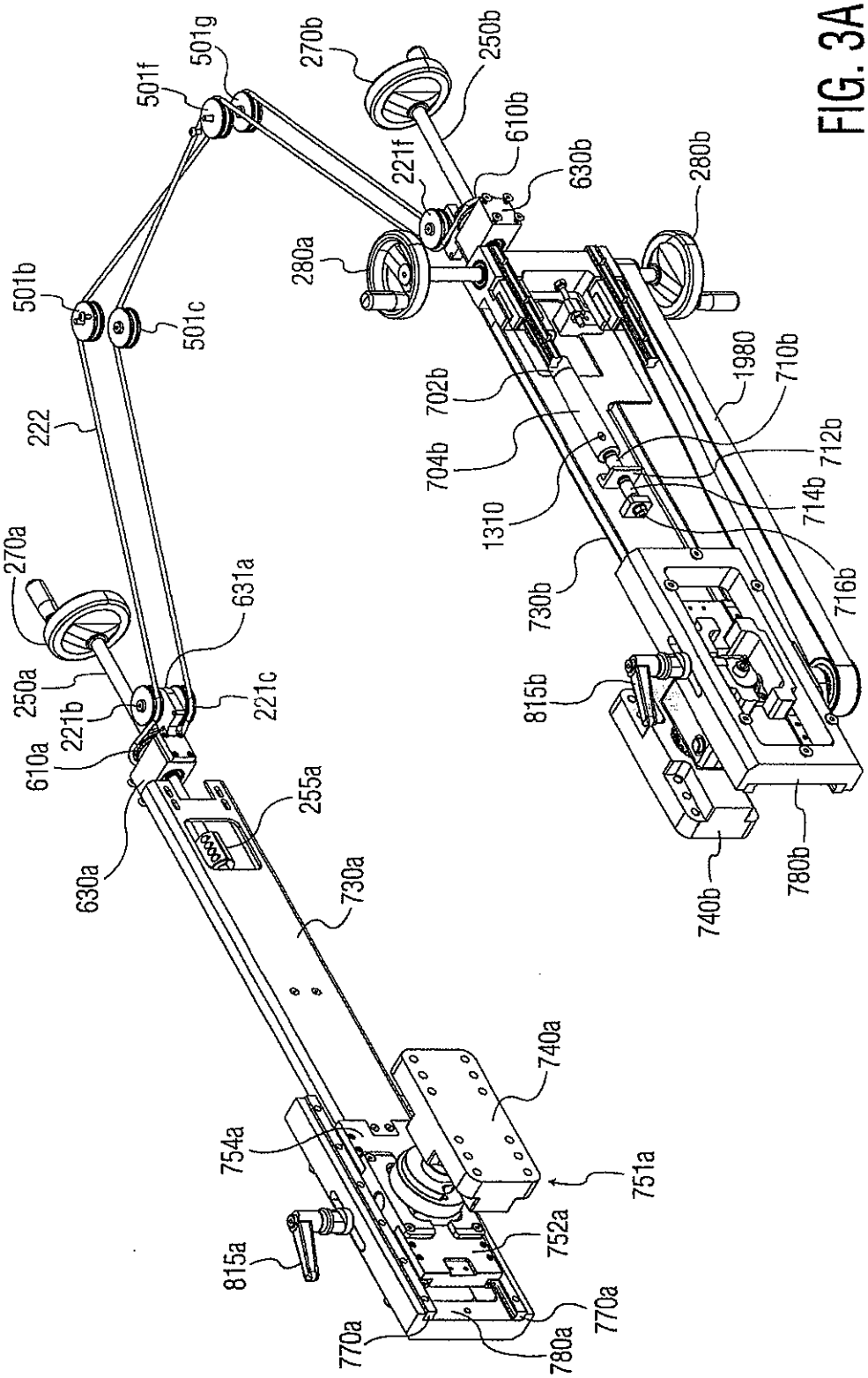
501f
501g
270b
250b
610b
221f
630b
280b
280a
501b
501c
222
702b
1980
710b
704b
712b
1310
714b
716b
730b
270a
631a
250a
221b
221c
610a
815b
255a
630a
730a
740b
780b
740a
754a
751a
752a
815a
770a
770a
780a

FIG. 3A

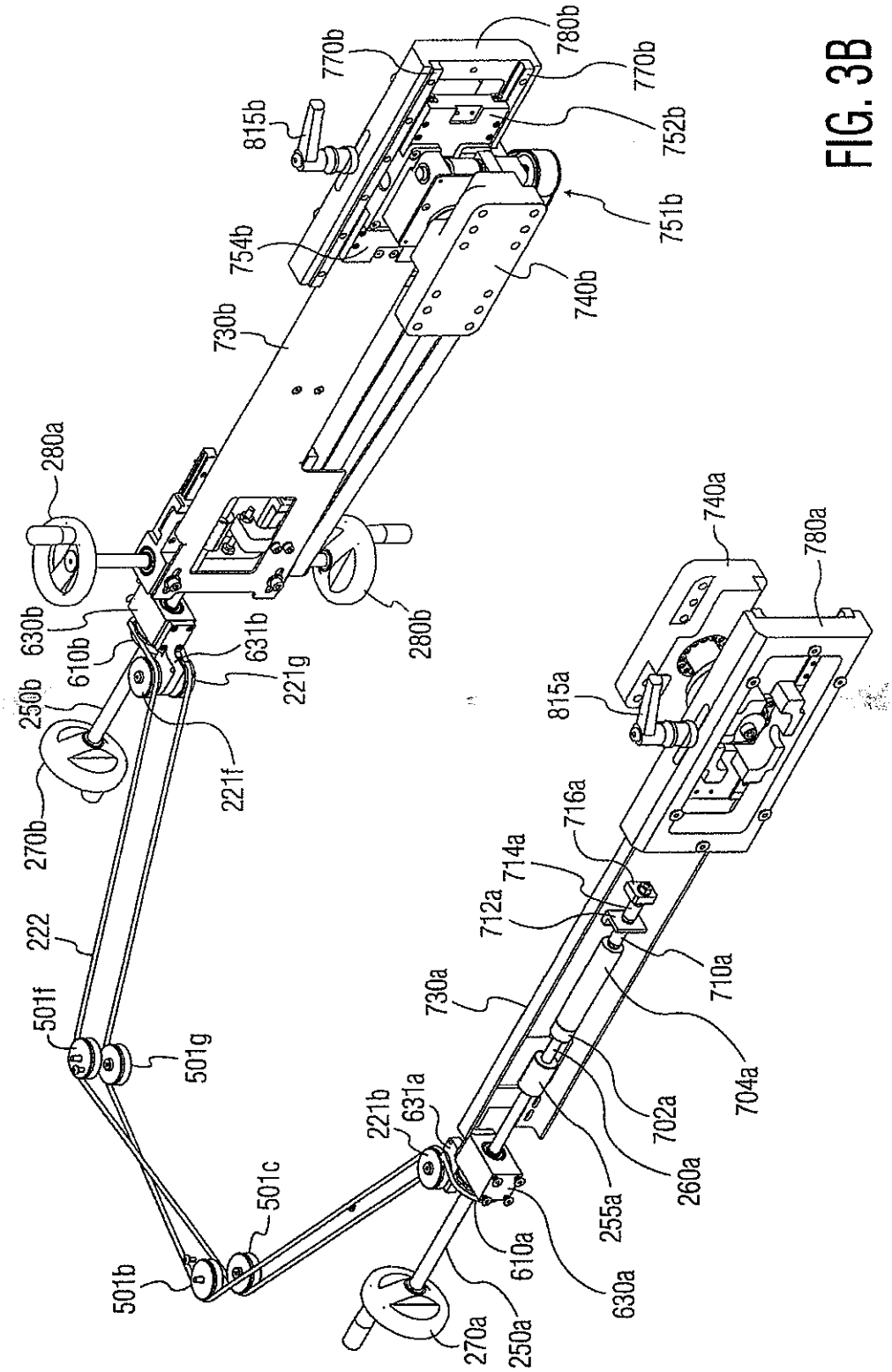
770b
780b
770b
815b
752b
754b
751b
730b
740b
280a
280b
630b
610b
631b
221g
250b
221f
270b
222
501f
501g
501c
501b
740a
780a
815a
716a
714a
712a
710a
730a
704a
221b
631a
702a
260a
255a
610a
630a
270a
250a

FIG. 3B

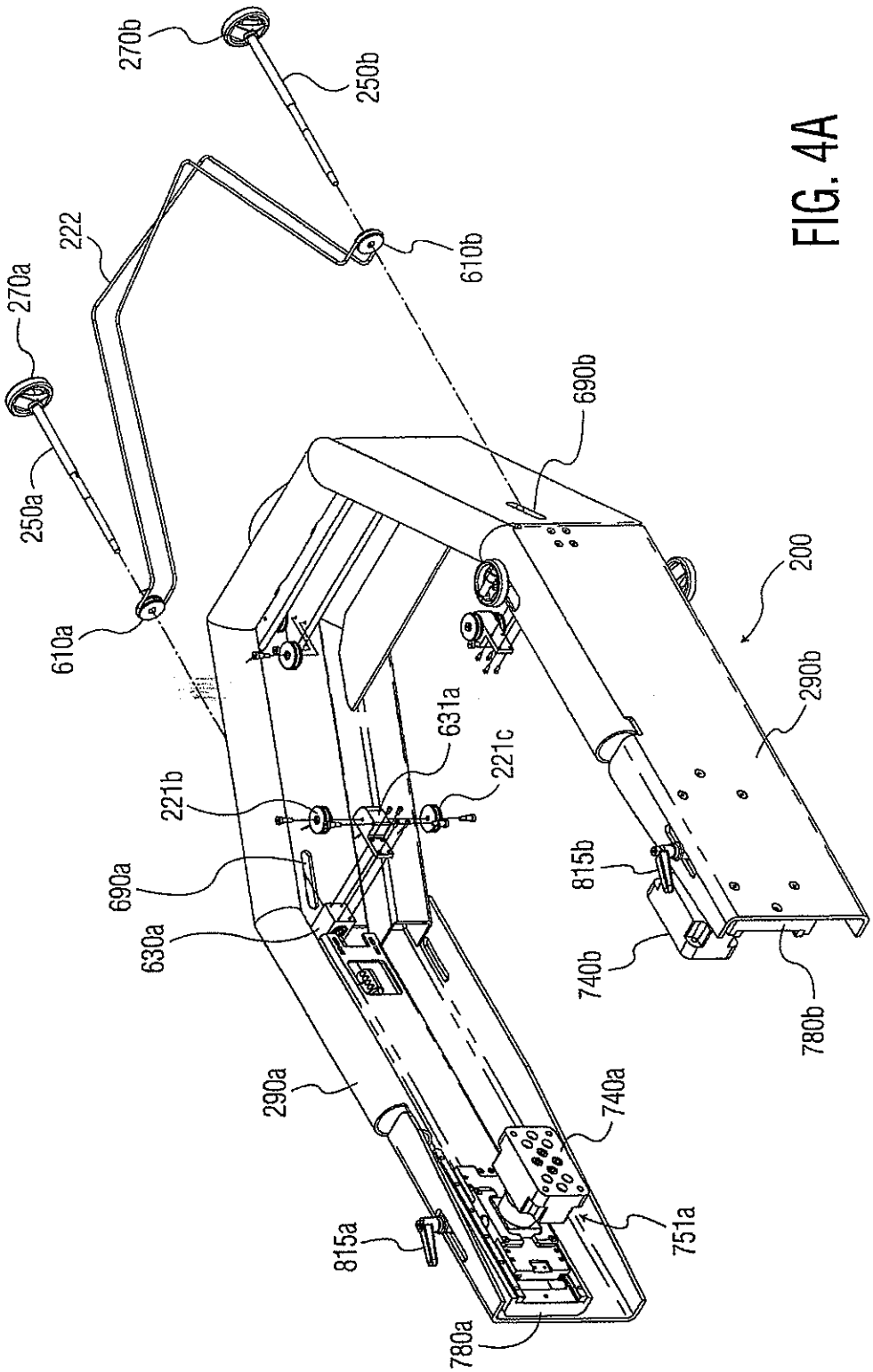
270b
250b
222
610b
270a
690b
250a
610a
200
631a
221c
221b
290b
690a
815b
630a
740b
780b
290a
740a
751a
815a
780a

FIG. 4A

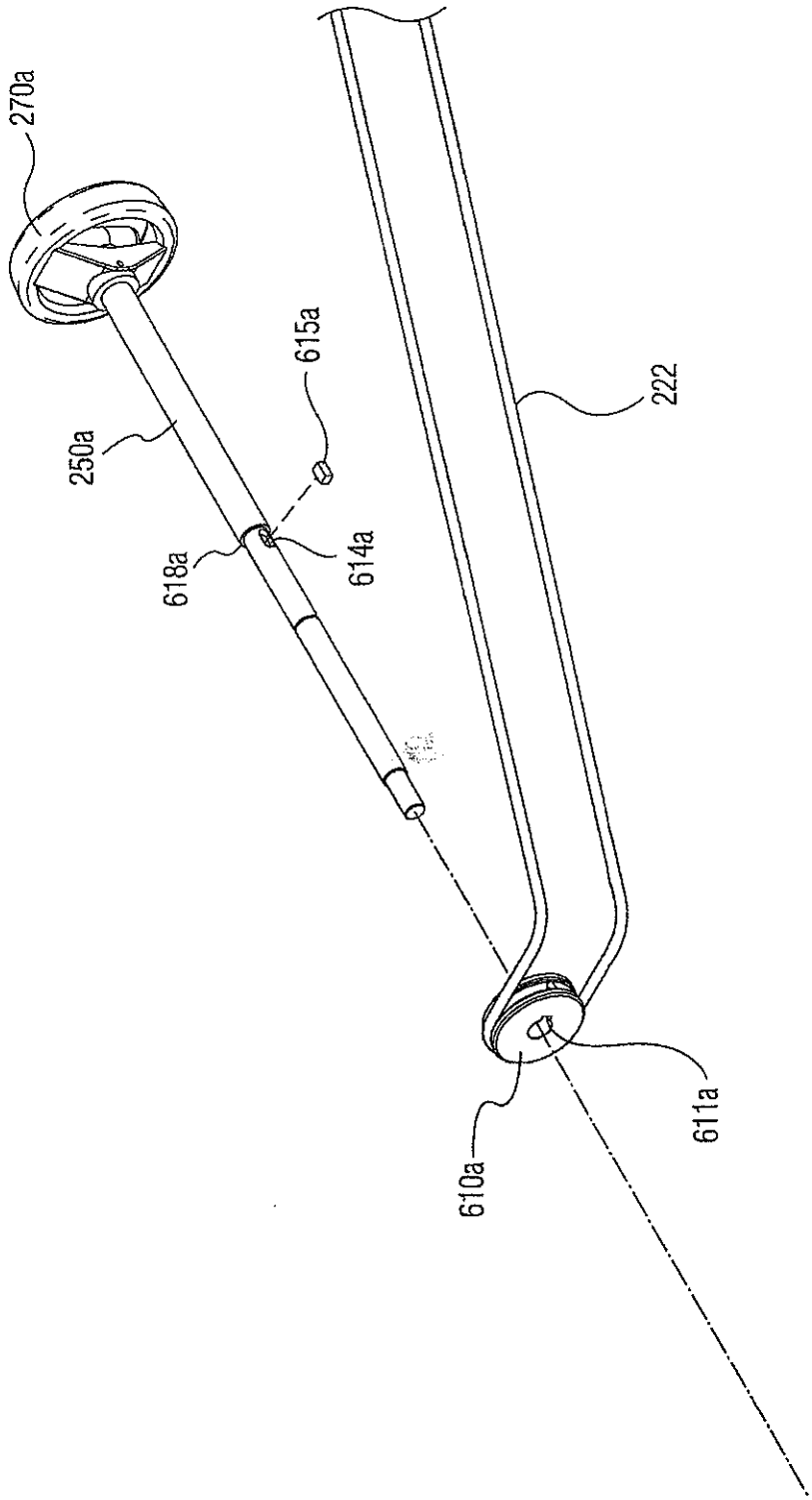

FIG. 4B

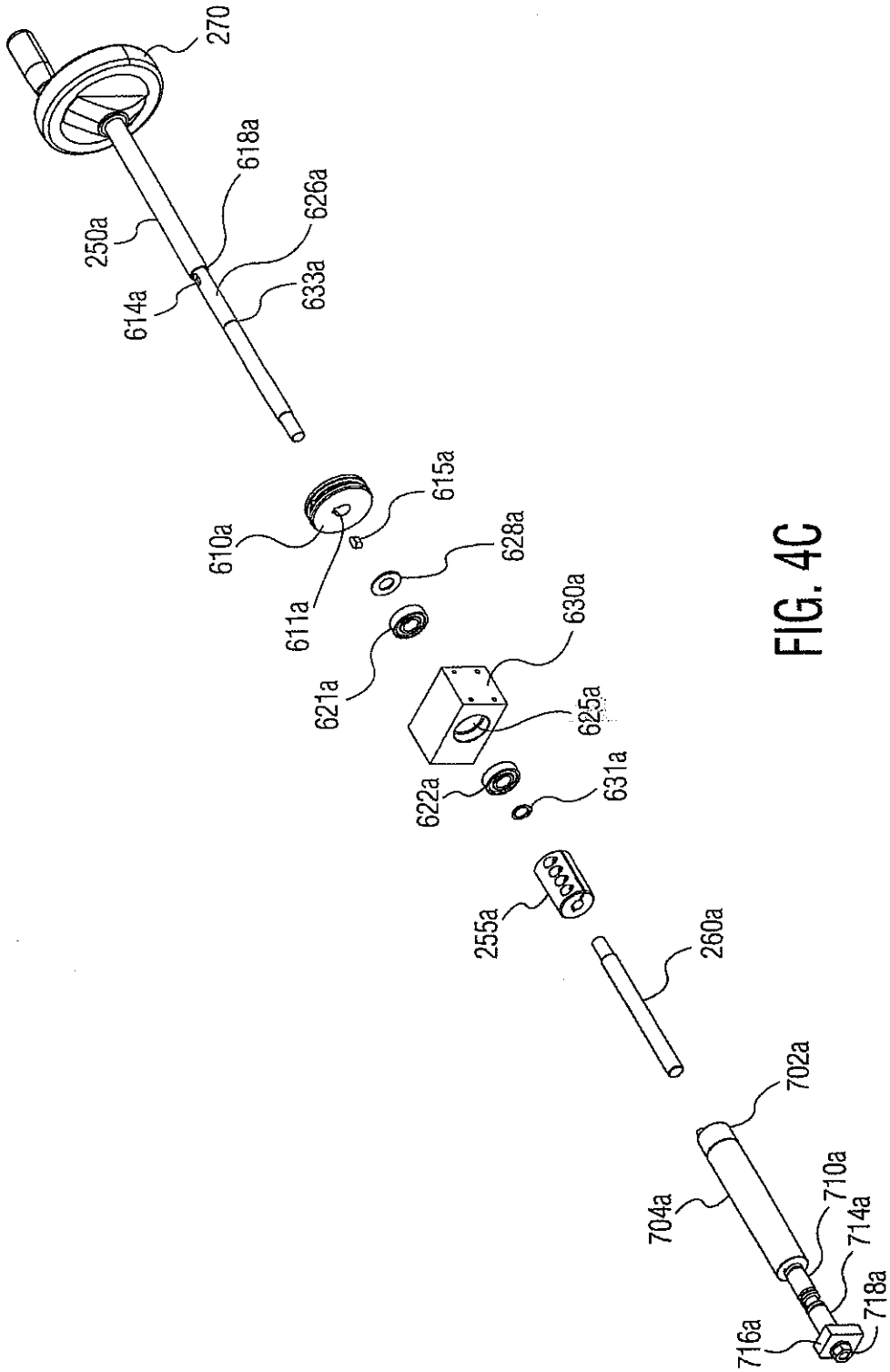
270
618a
626a
250a
614a
633a
610a
615a
611a
628a
621a
630a
625a
622a
631a
255a
260a
702a
704a
710a
714a
718a
716a

FIG. 4C

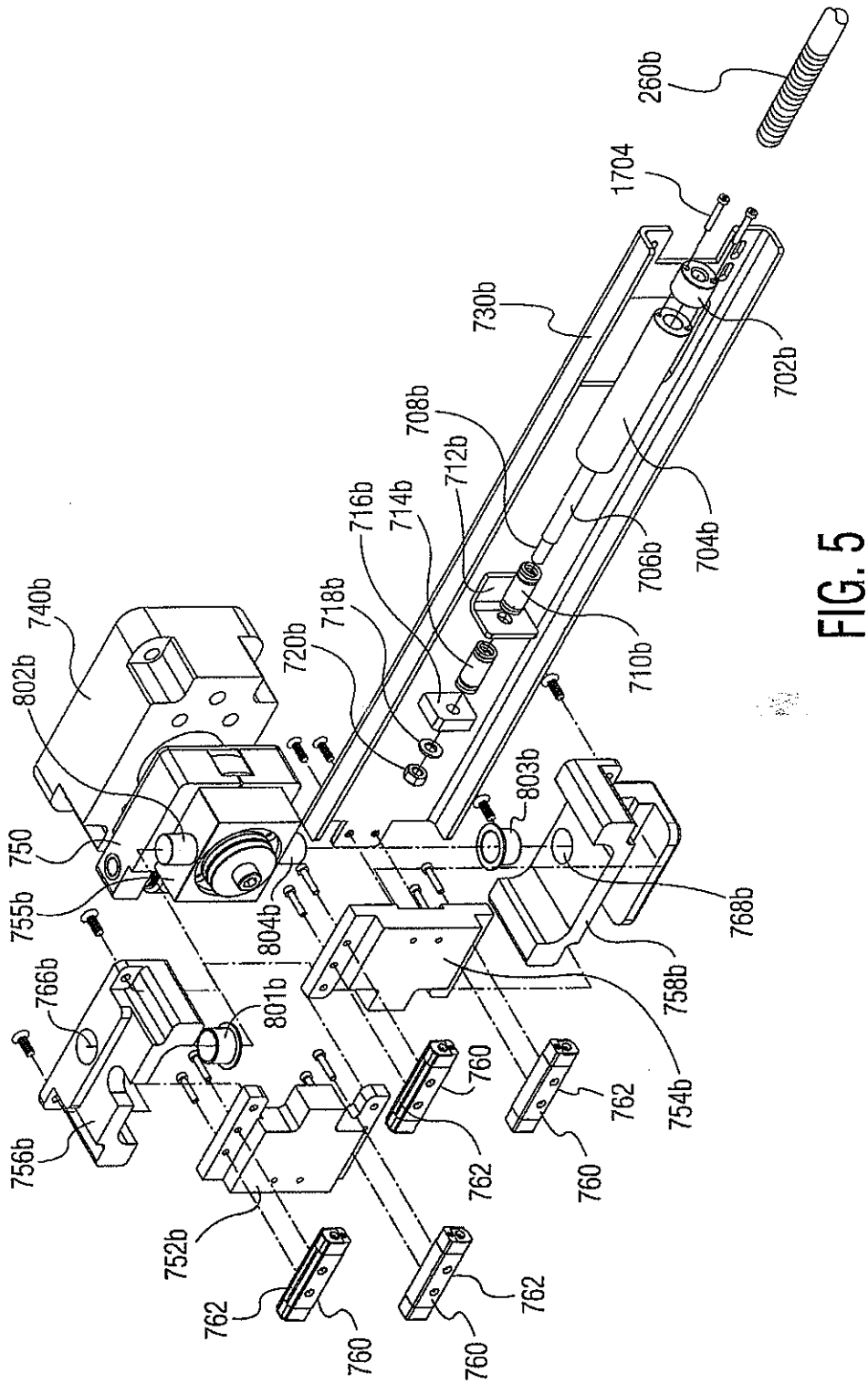
260b
1704
730b
702b
708b
712b
716b
714b
704b
706b
740b
718b
720b
710b
802b
803b
750
755b
804b
768b
766b
801b
758b
760
762
754b
756b
752b
762
760
762
760
762

FIG. 5

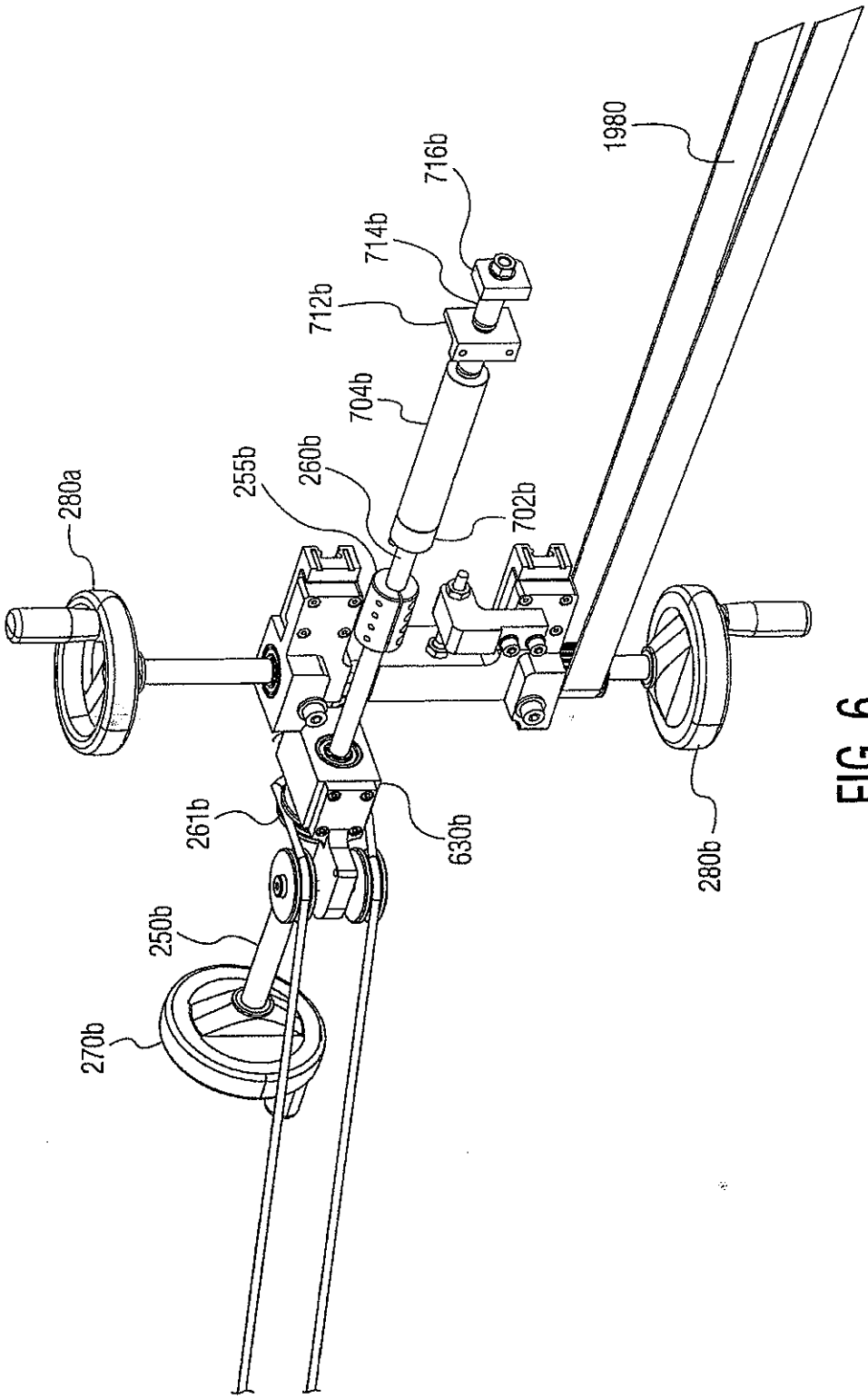
1980
716b
714b
712b
704b
702b
255b
260b
280a
261b
630b
250b
270b
280b

FIG. 6

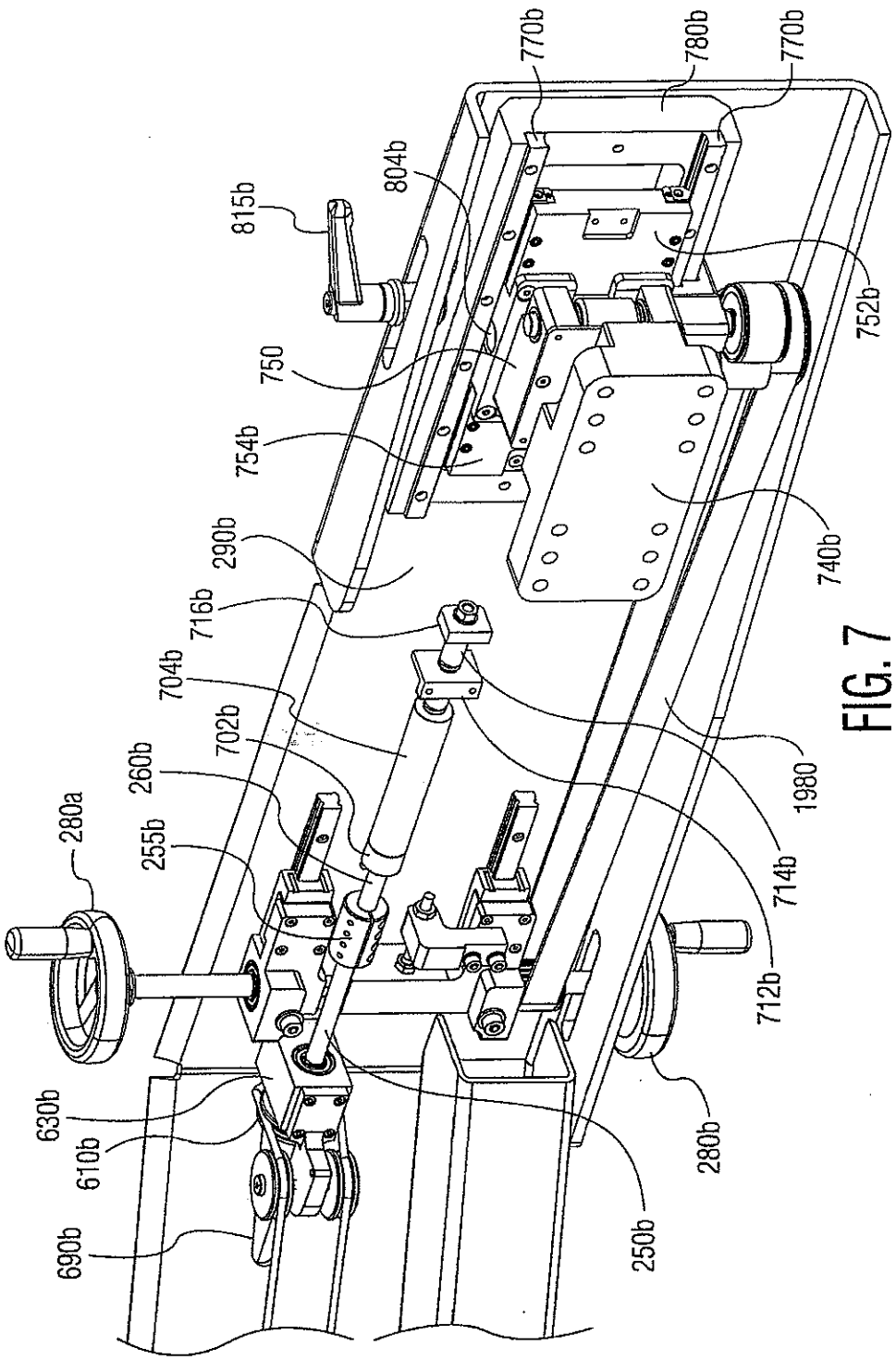
770b
780b
770b
804b
815b
752b
750
754b
740b
290b
716b
704b
702b
260b
255b
280a
1980
714b
712b
630b
610b
690b
250b
280b

FIG. 7

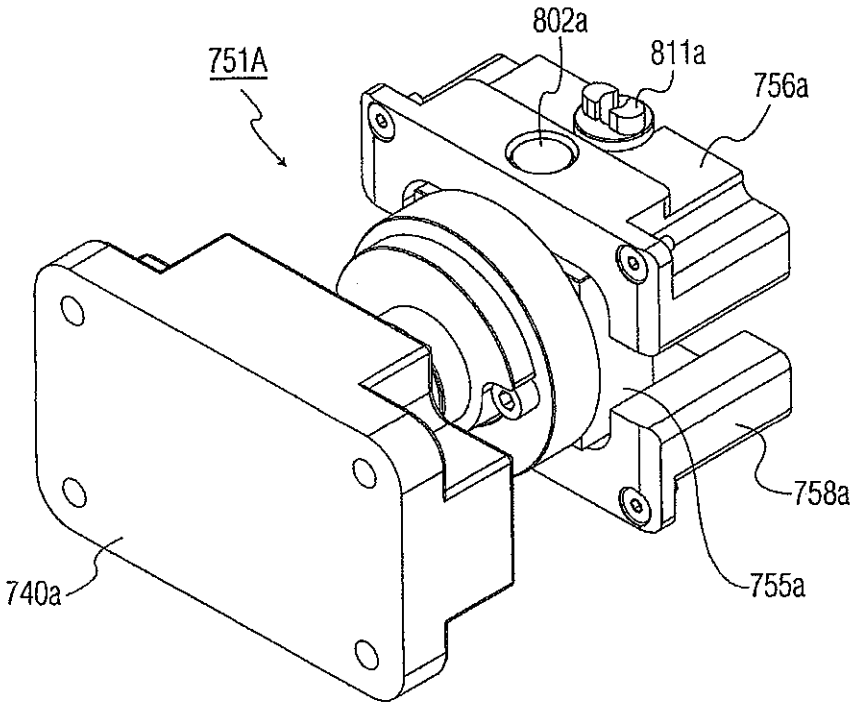
751A
802a
811a
756a
758a
755a
740a

FIG.8A

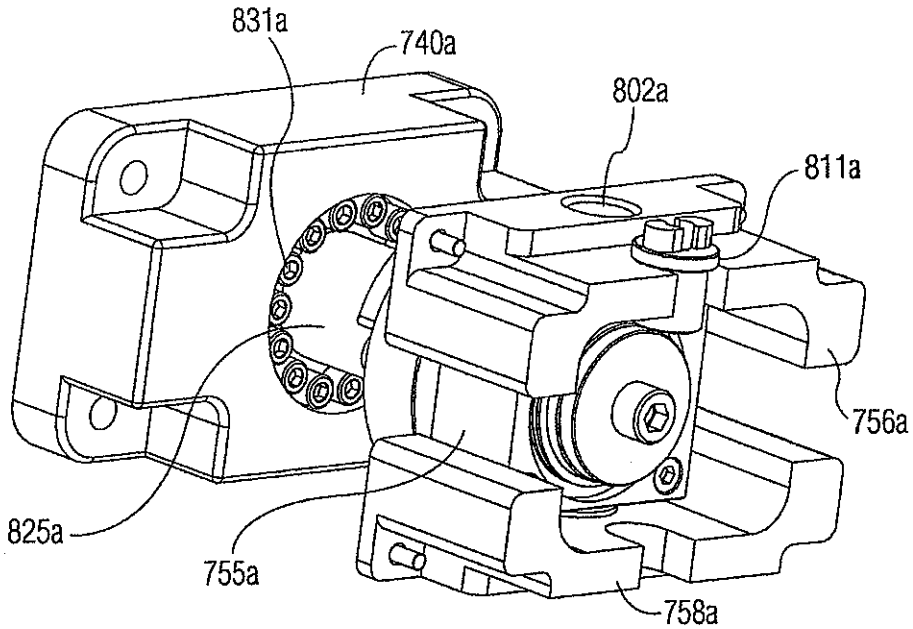
831a
740a
802a
811a
756a
825a
755a
758a

FIG.8B

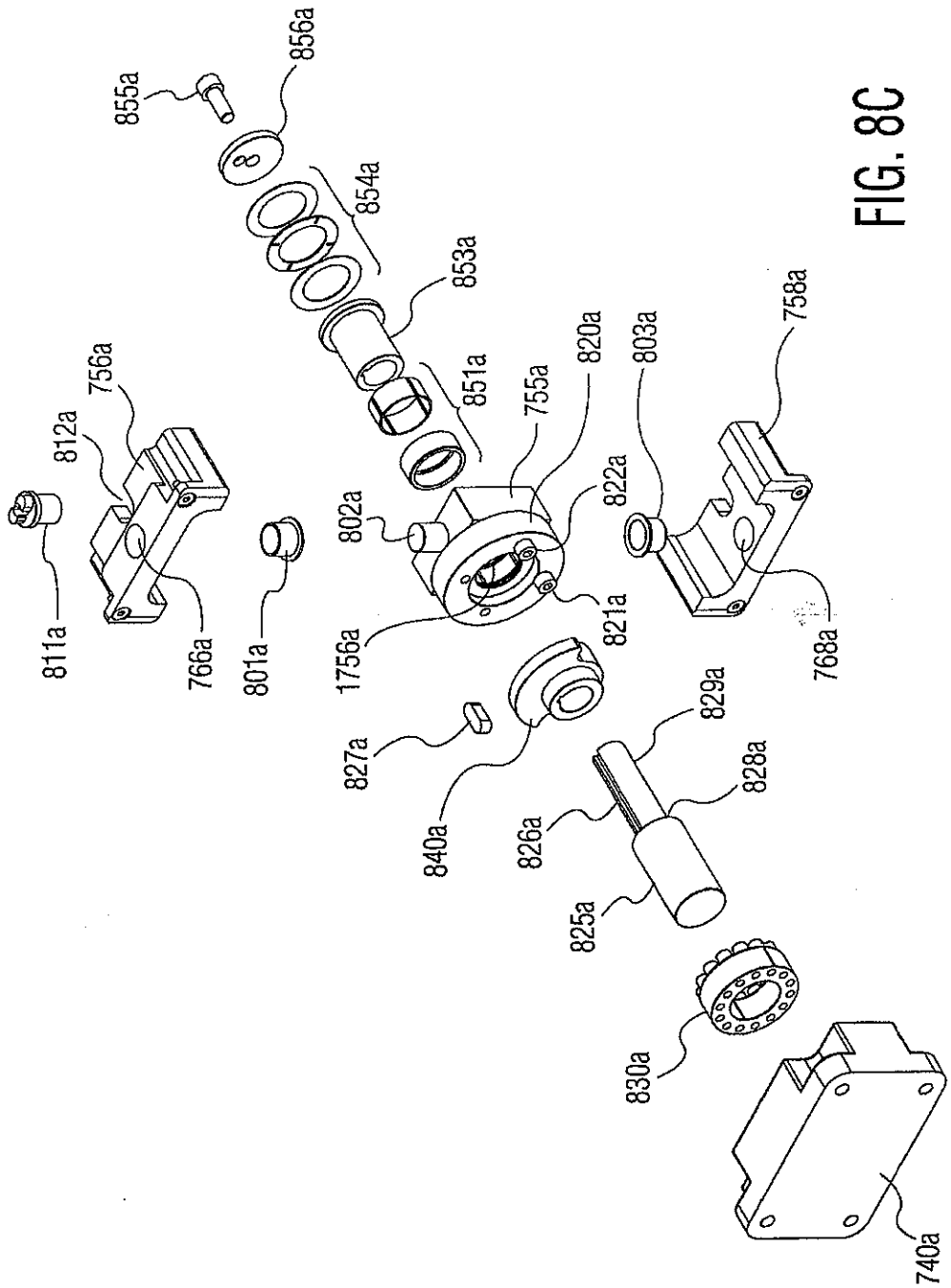
855a
856a
854a
853a
851a
820a
803a
758a
812a
756a
755a
822a
802a
811a
766a
801a
1756a
821a
768a
827a
829a
840a
828a
826a
825a
830a
740a

FIG. 8C

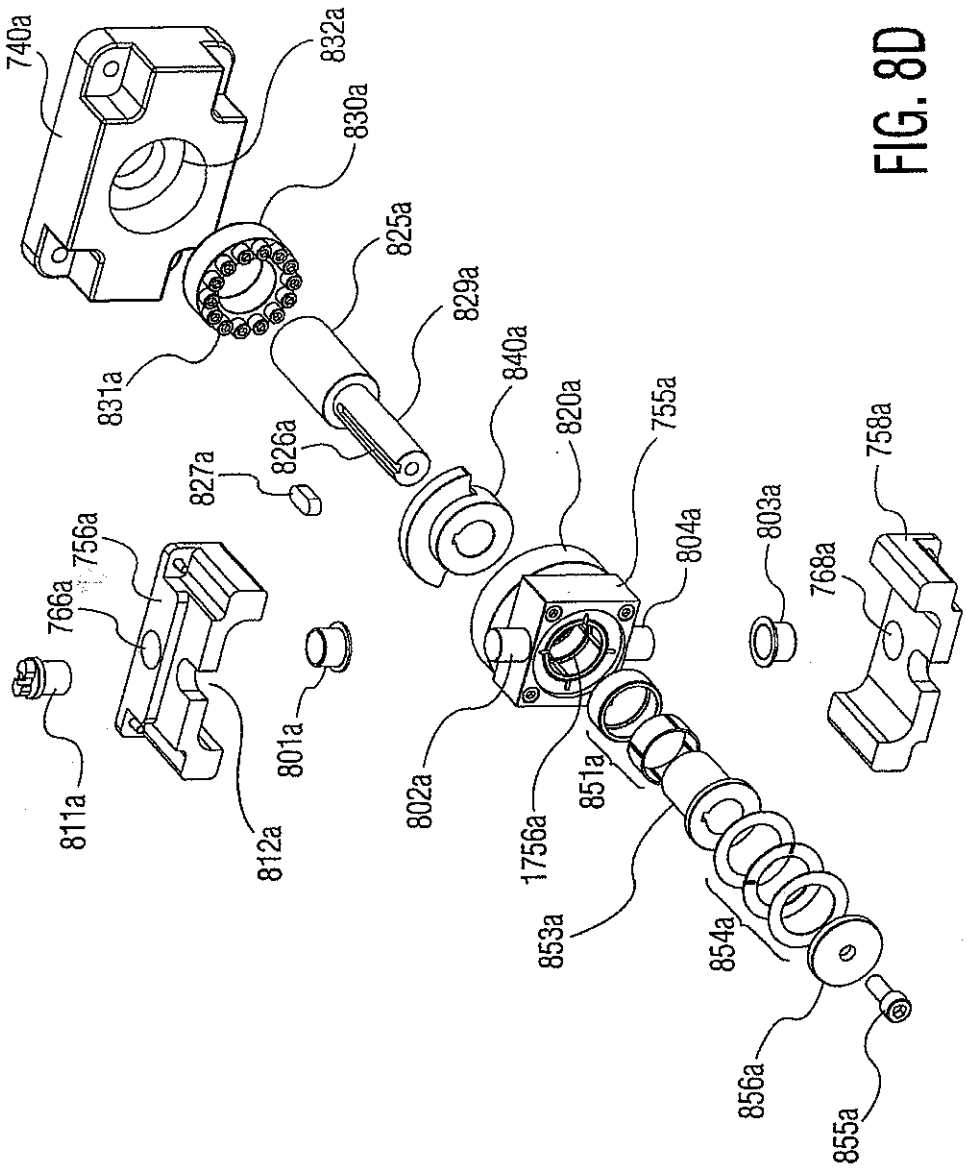
740a
832a
830a
825a
829a
840a
820a
755a
804a
803a
758a
768a
831a
827a
826a
756a
766a
811a
812a
801a
802a
1756a
851a
853a
854a
856a
855a

FIG. 8D

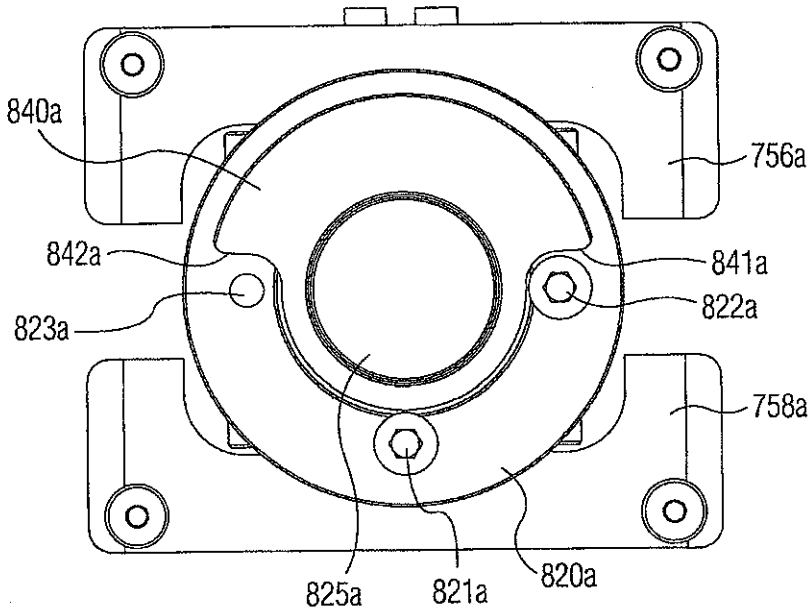
840a
756a
842a
841a
823a
822a
758a
825a
821a
820a

FIG.8E

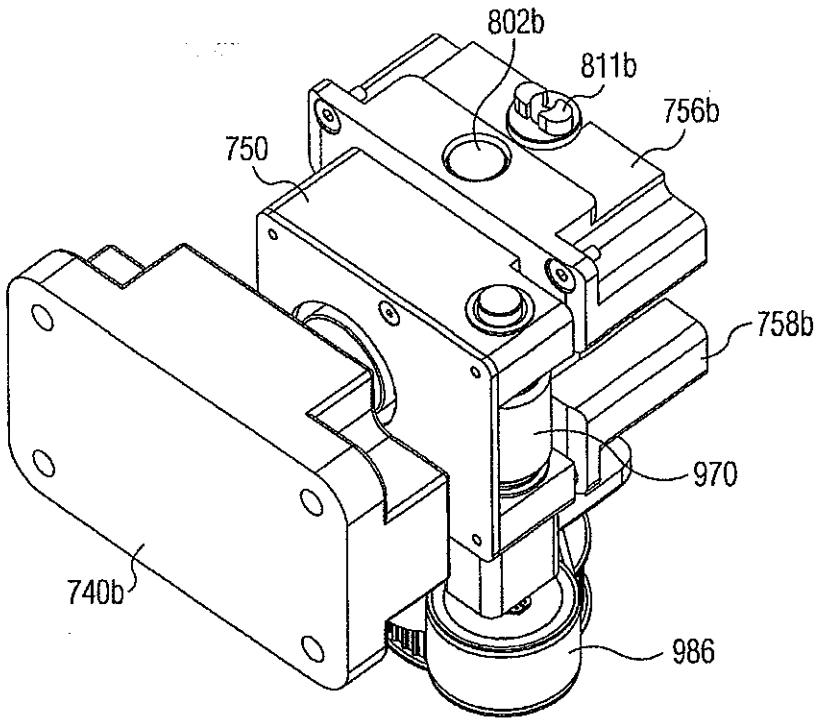
802b
811b
756b
750
758b
970
740b
986

FIG.9A

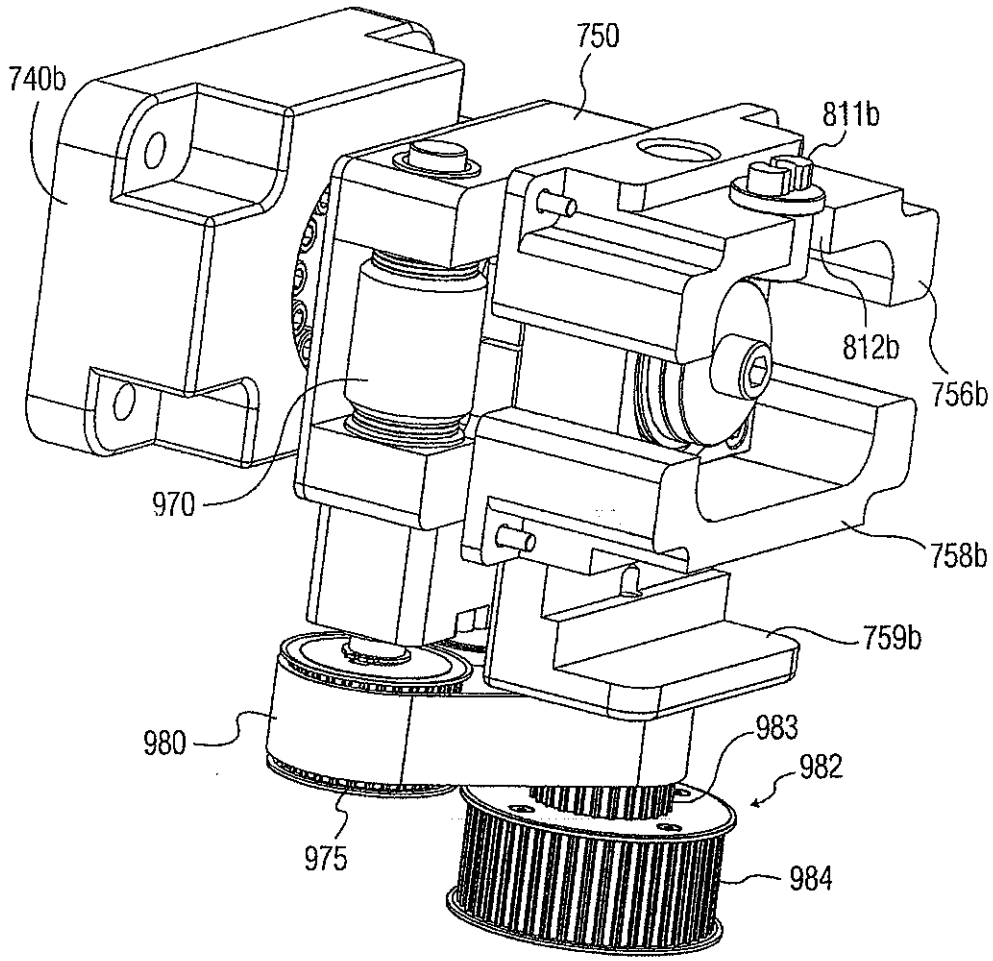

FIG.9B

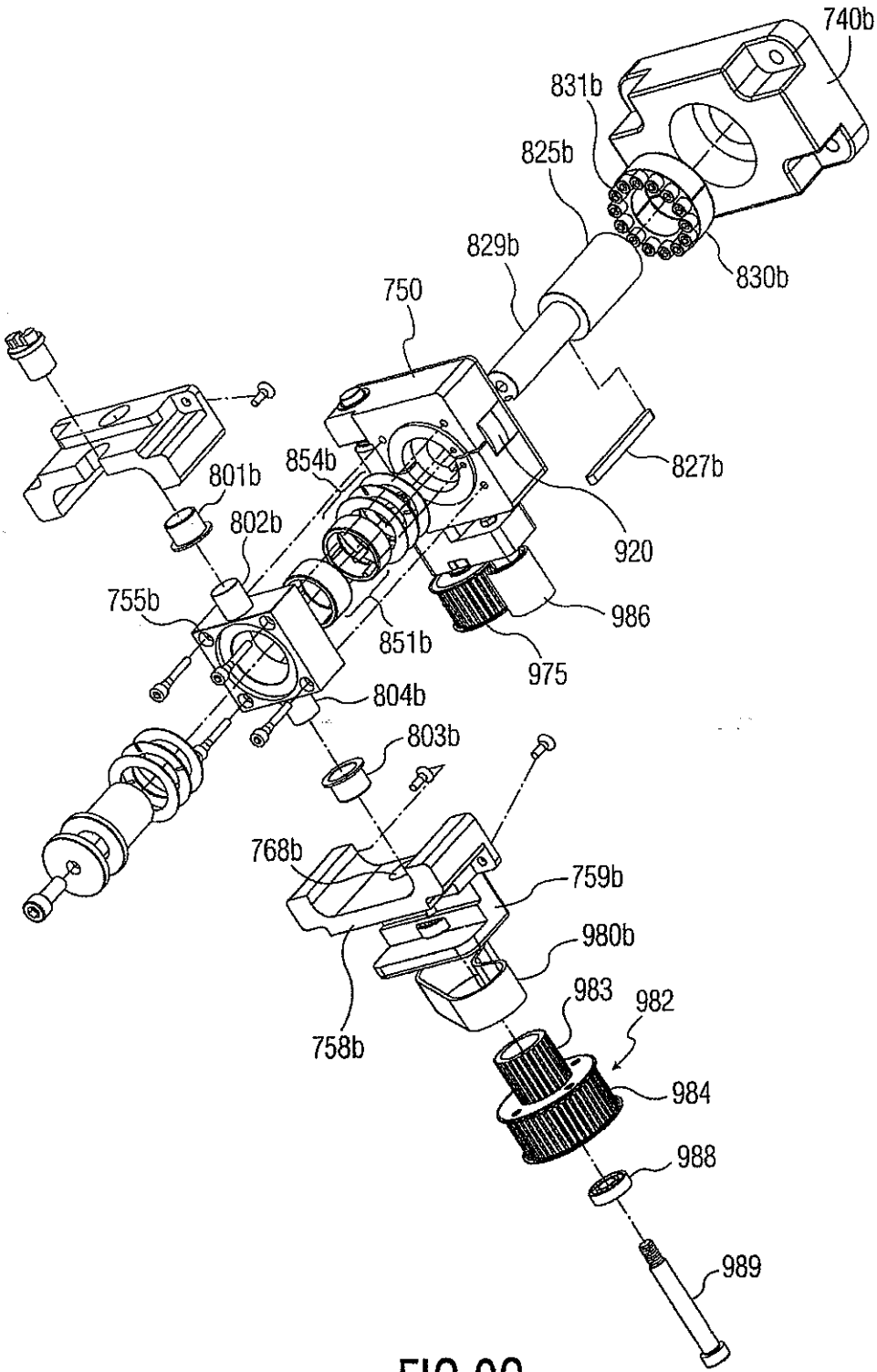
740b
831b
825b
829b
830b
750
827b
854b
801b
802b
920
755b
986
851b
975
804b
803b
768b
759b
980b
983
982
758b
984
988
989

FIG.9C

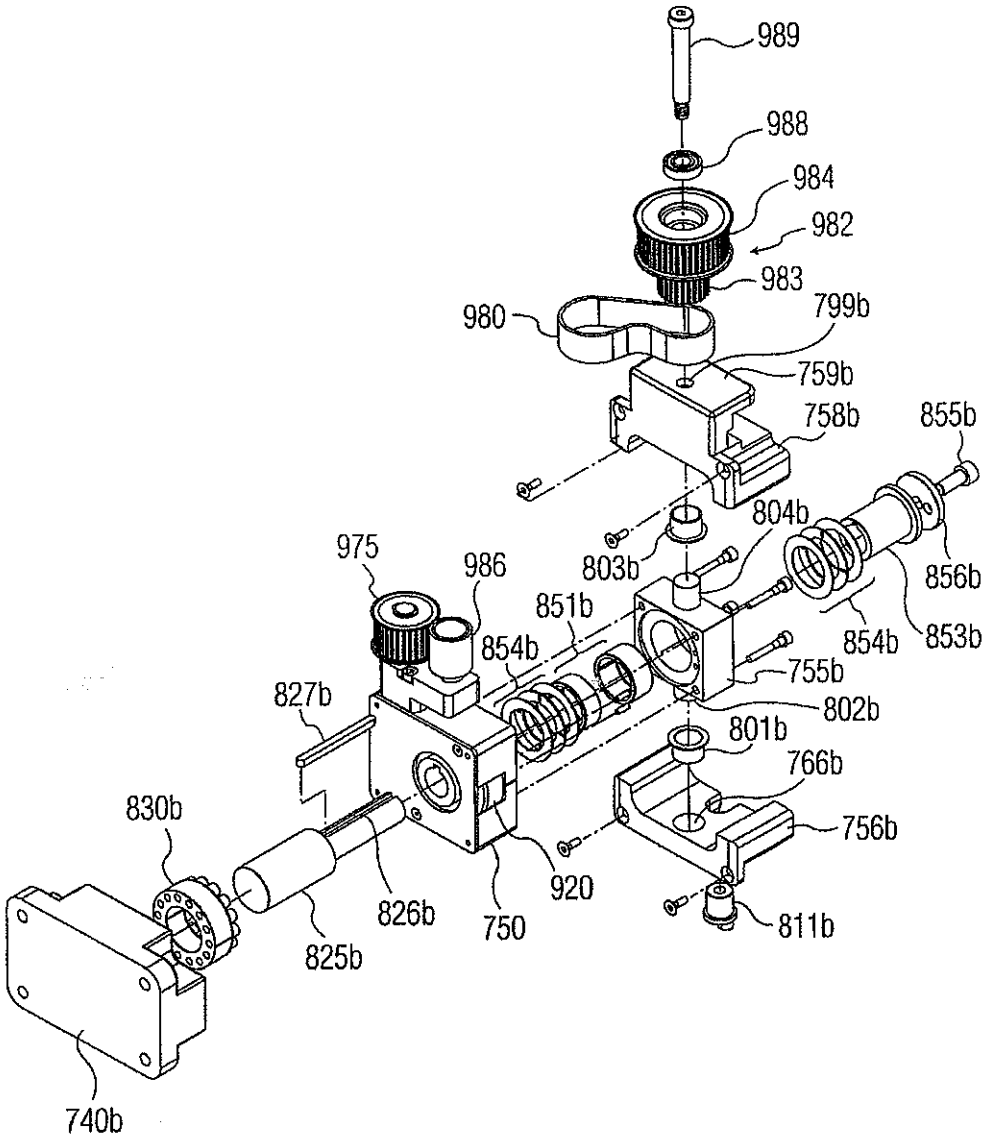
989
988
984
982
983
980
799b
759b
758b
855b
804b
803b
975
986
851b
856b
854b
853b
854b
755b
827b
802b
801b
766b
830b
756b
920
826b
750
811b
825b
740b

FIG.9D

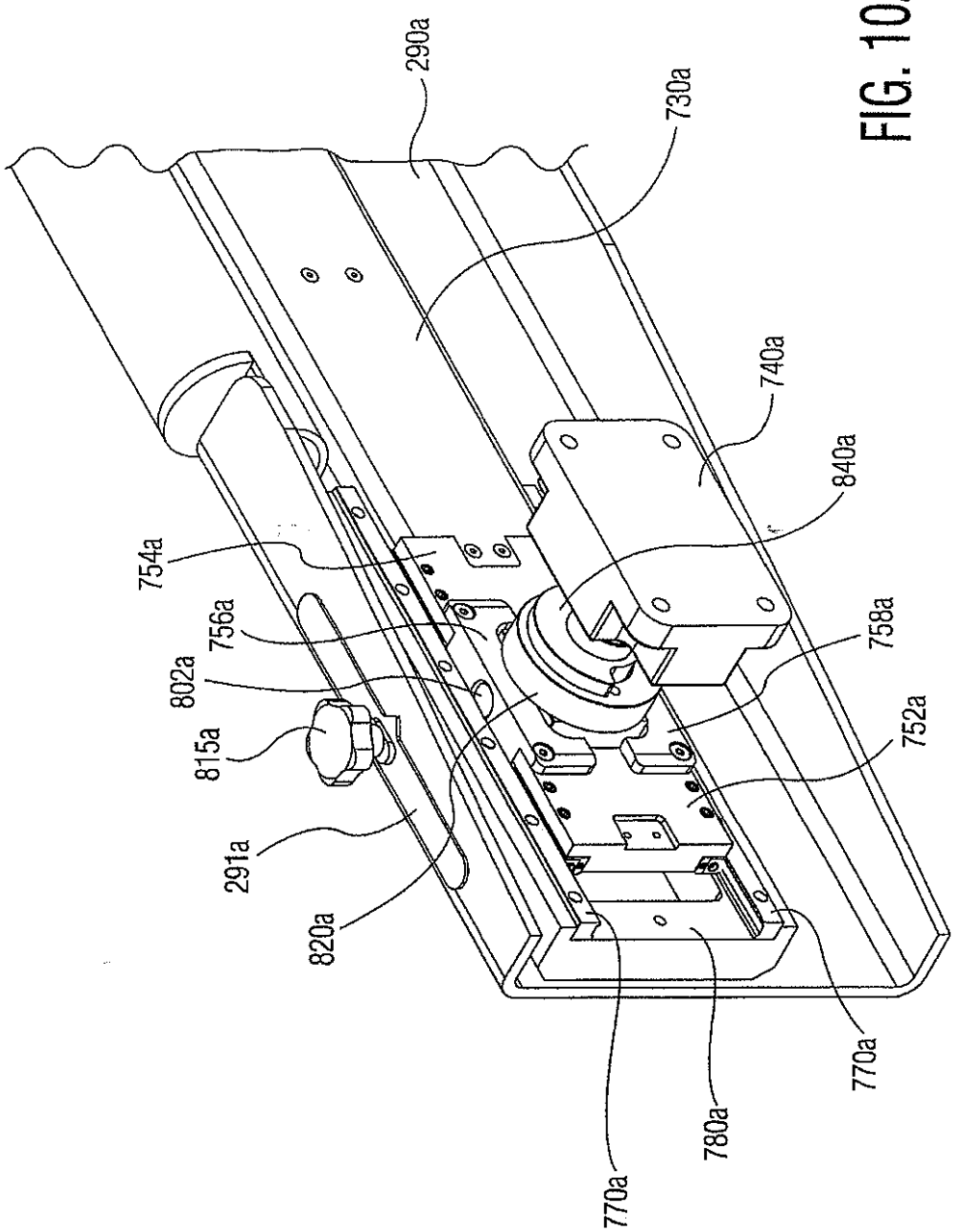
290a
730a
740a
840a
754a
756a
758a
802a
752a
815a
291a
820a
770a
780a
770a

FIG. 10A

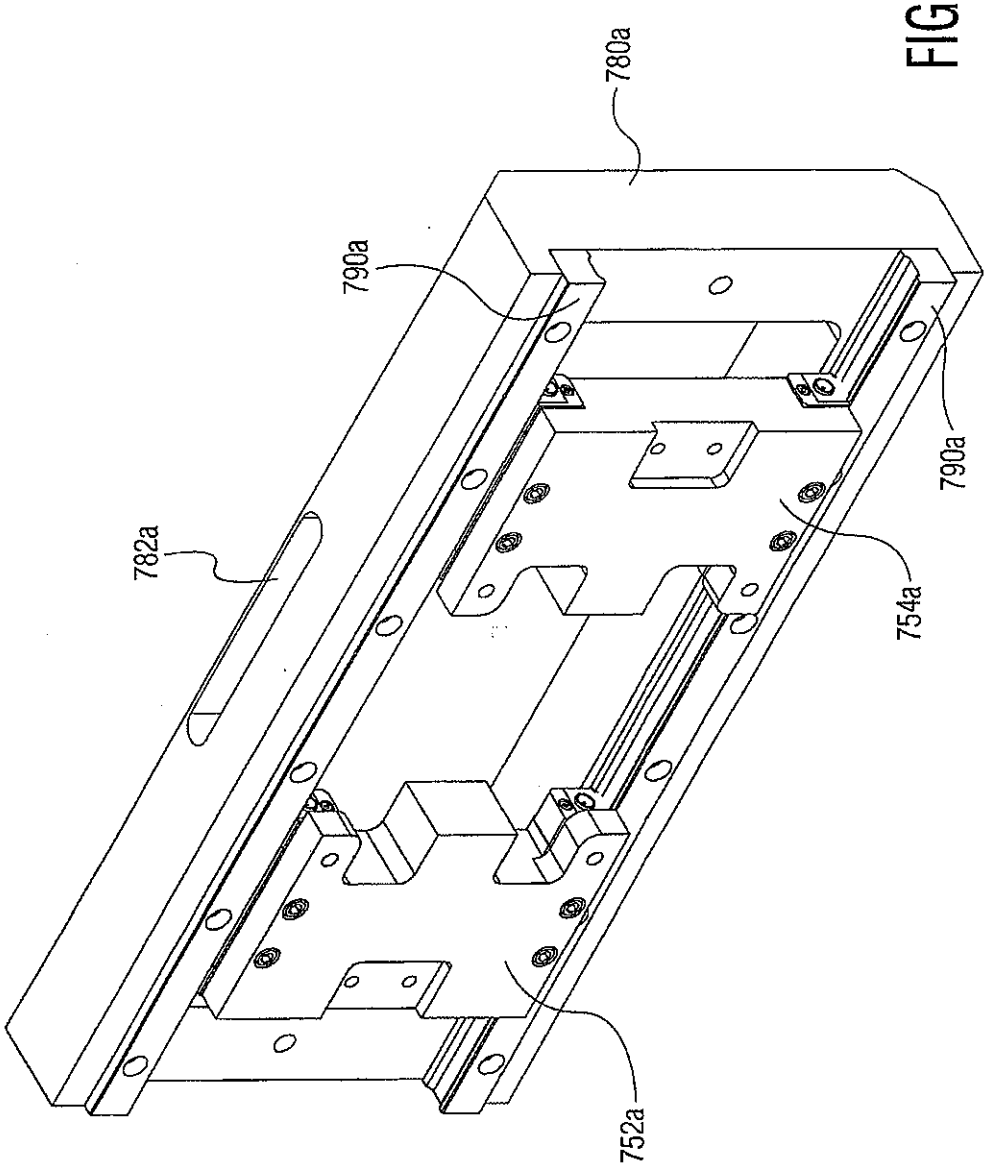

FIG. 10B

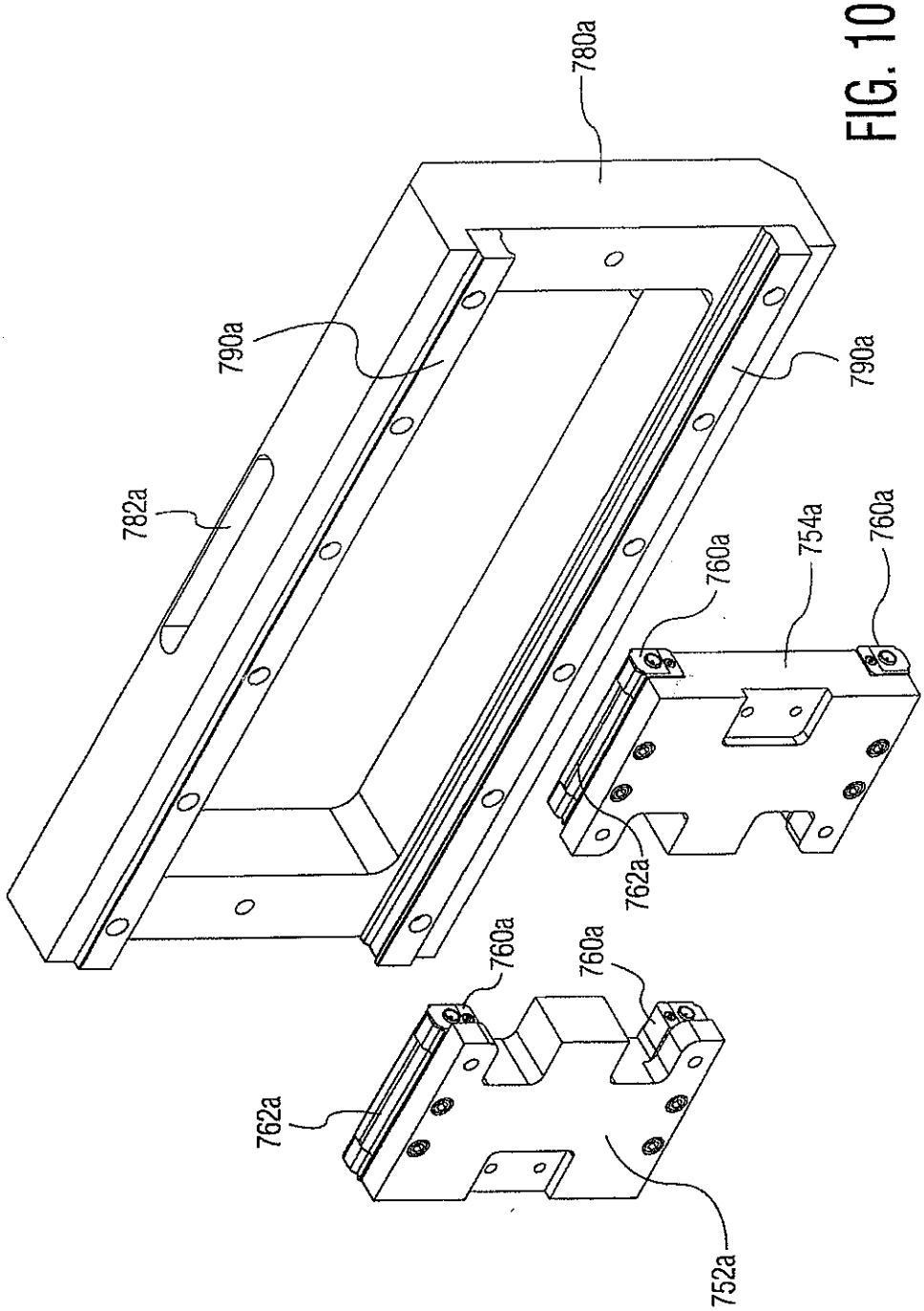

FIG. 10C

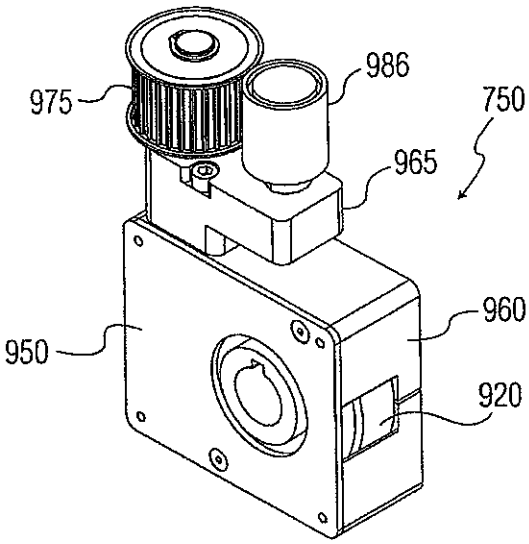

FIG.11A

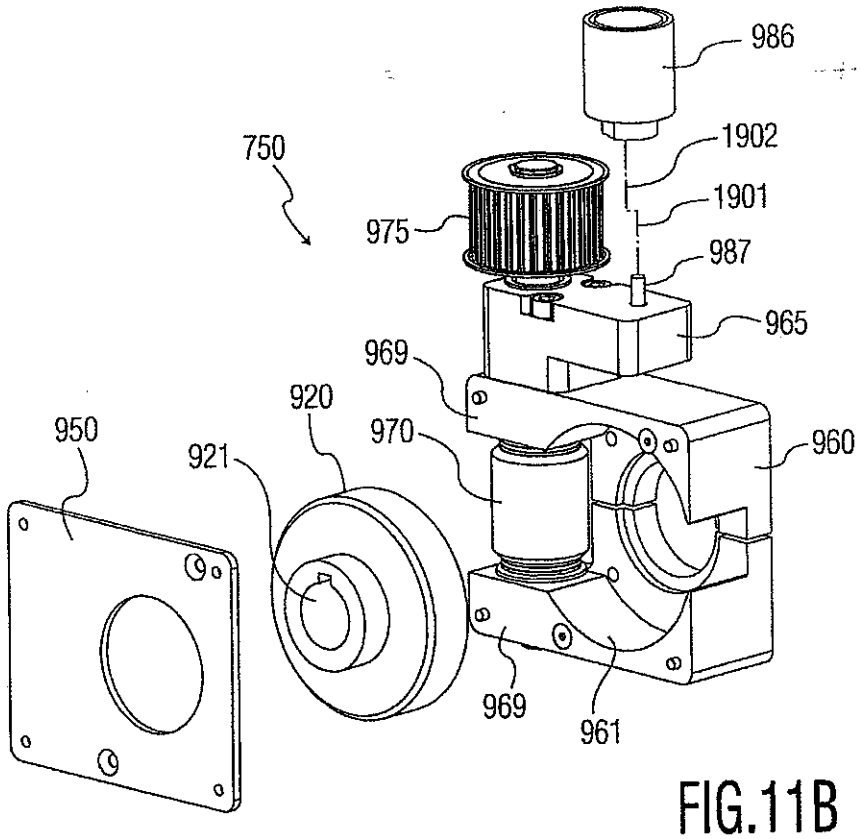

FIG.11B

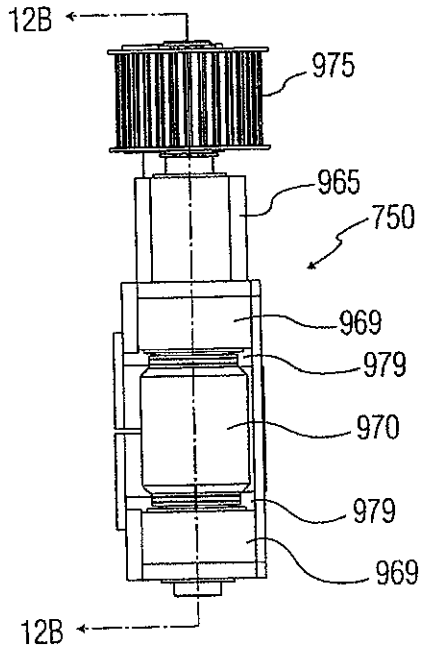

FIG.12A

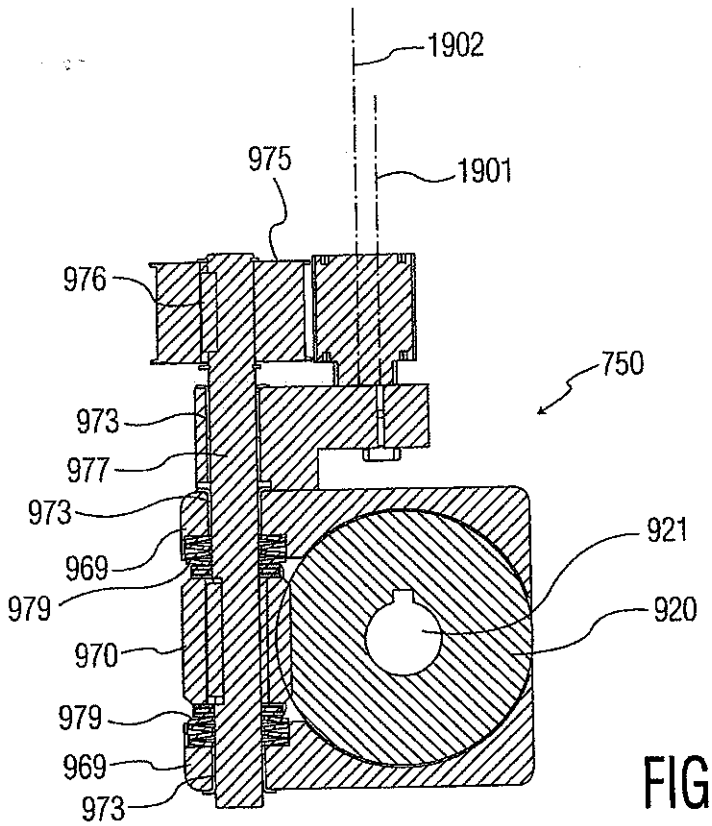

FIG.12B

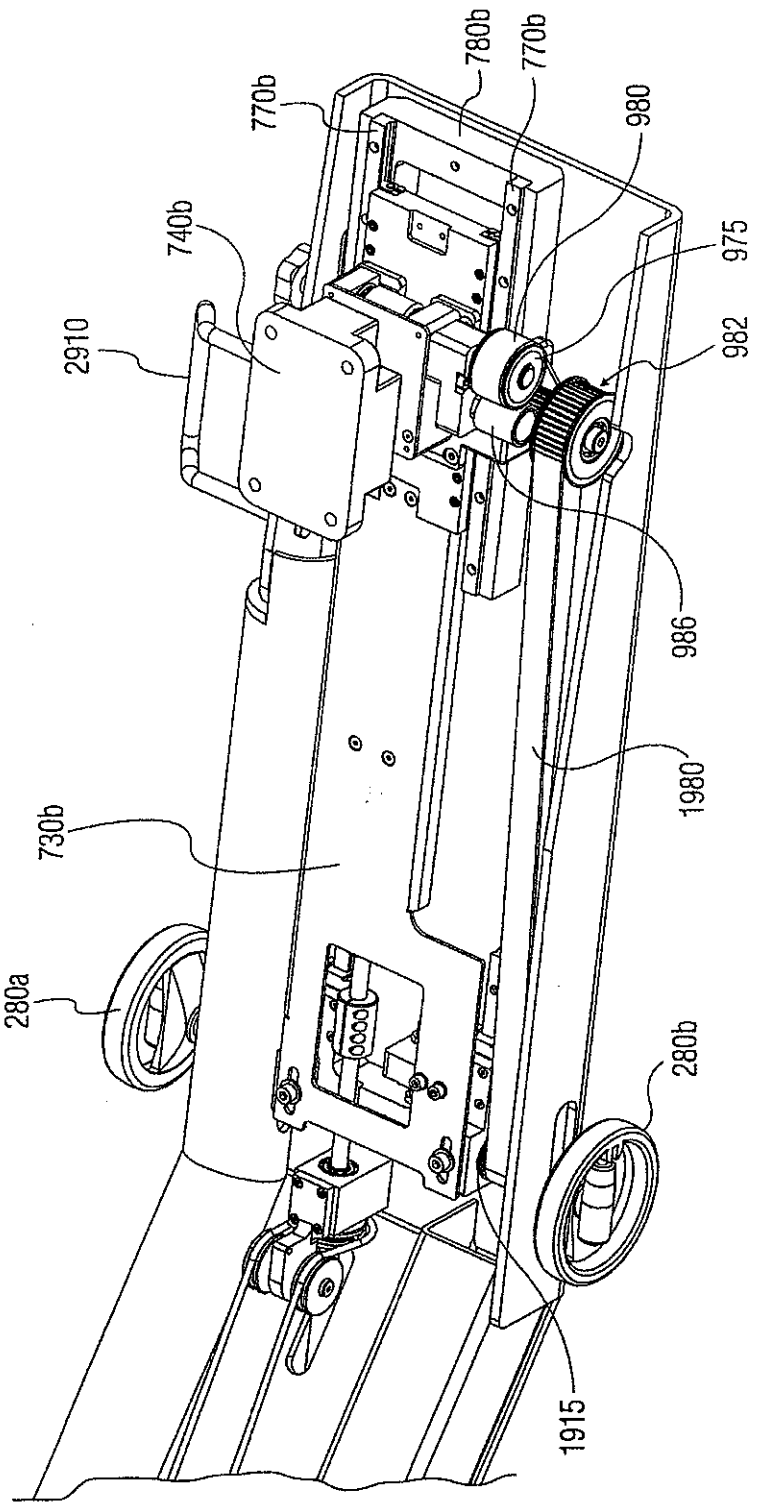
780b
770b
770b
980
740b
975
2910
982
986
1980
730b
280a
280b
1915

FIG. 13A

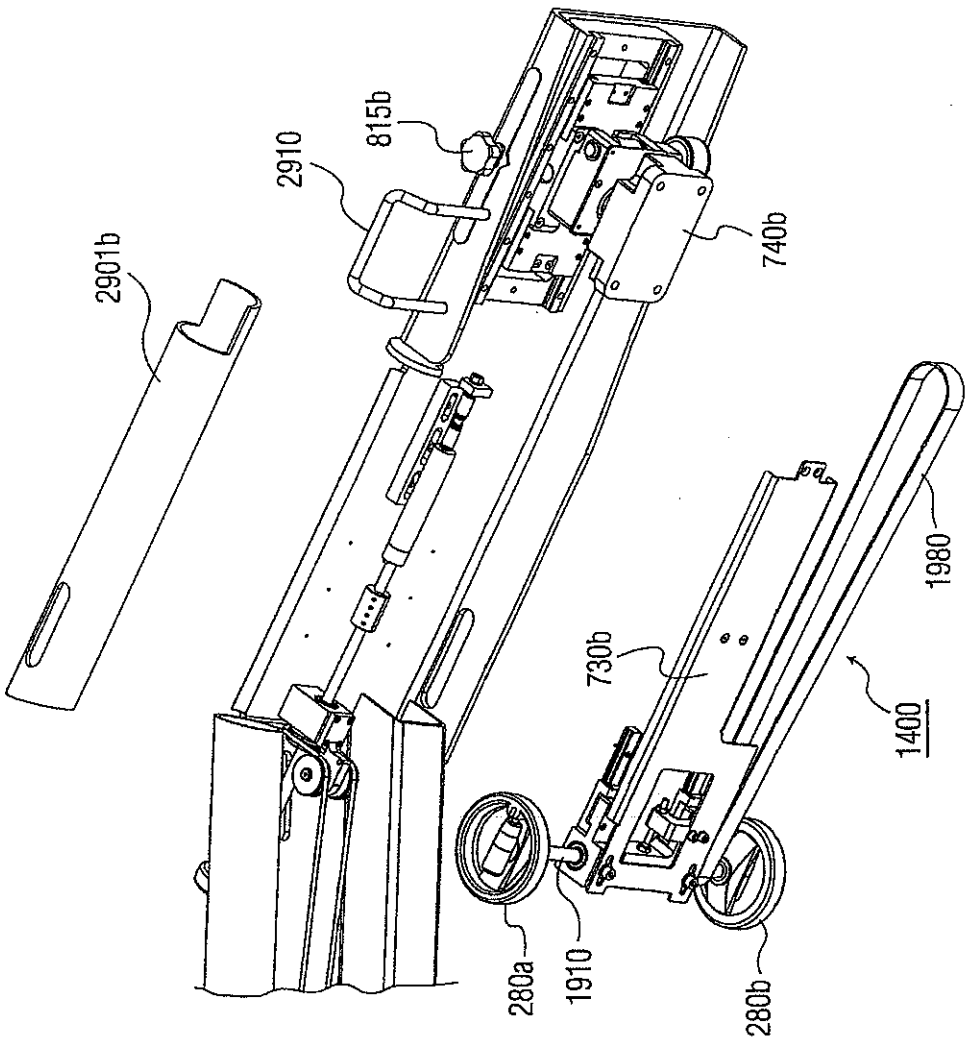

FIG. 13B

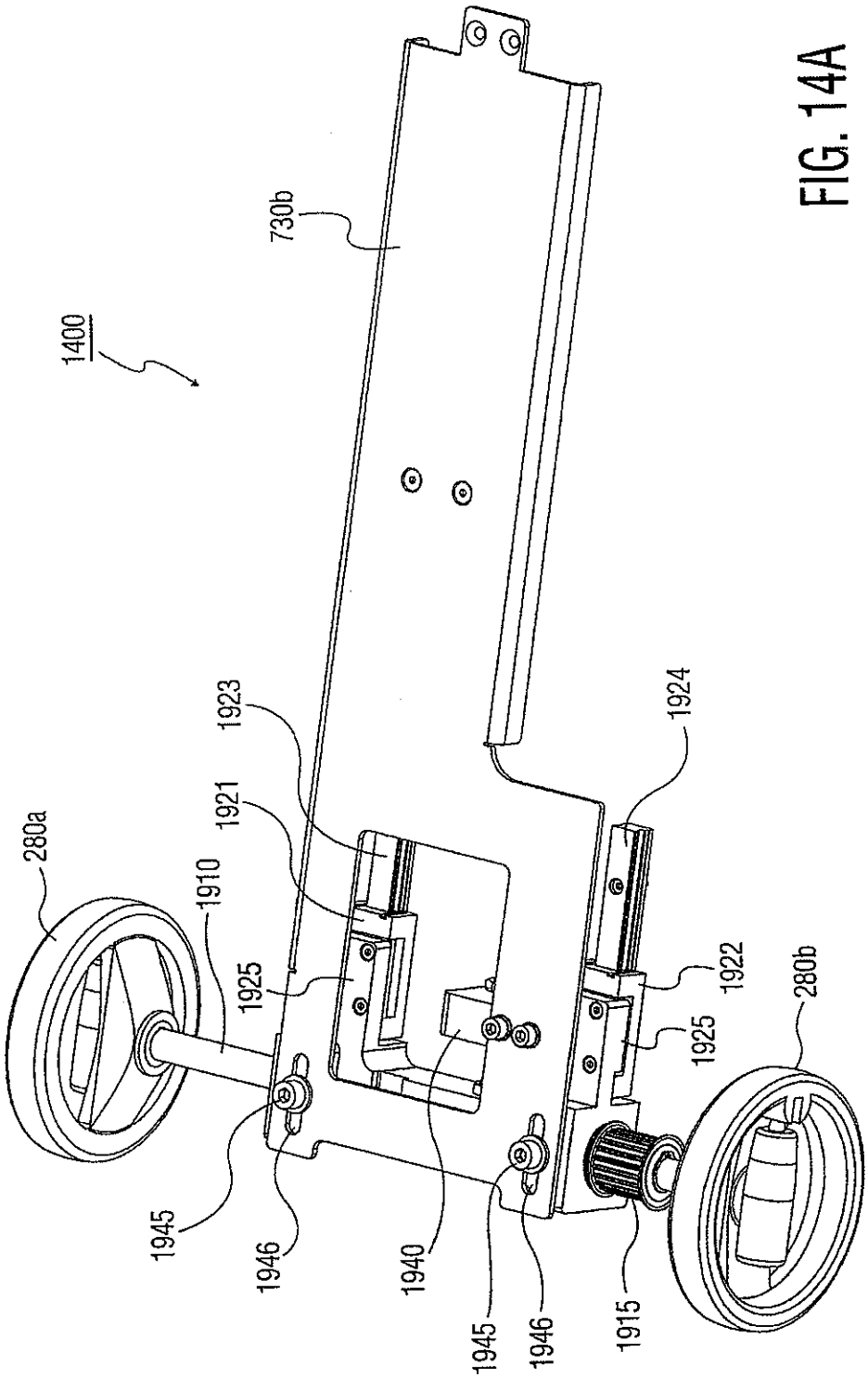
1400
730b
280a
1910
1923
1921
1925
1924
1922
1925
280b
1945
1946
1940
1945
1946
1915

FIG. 14A

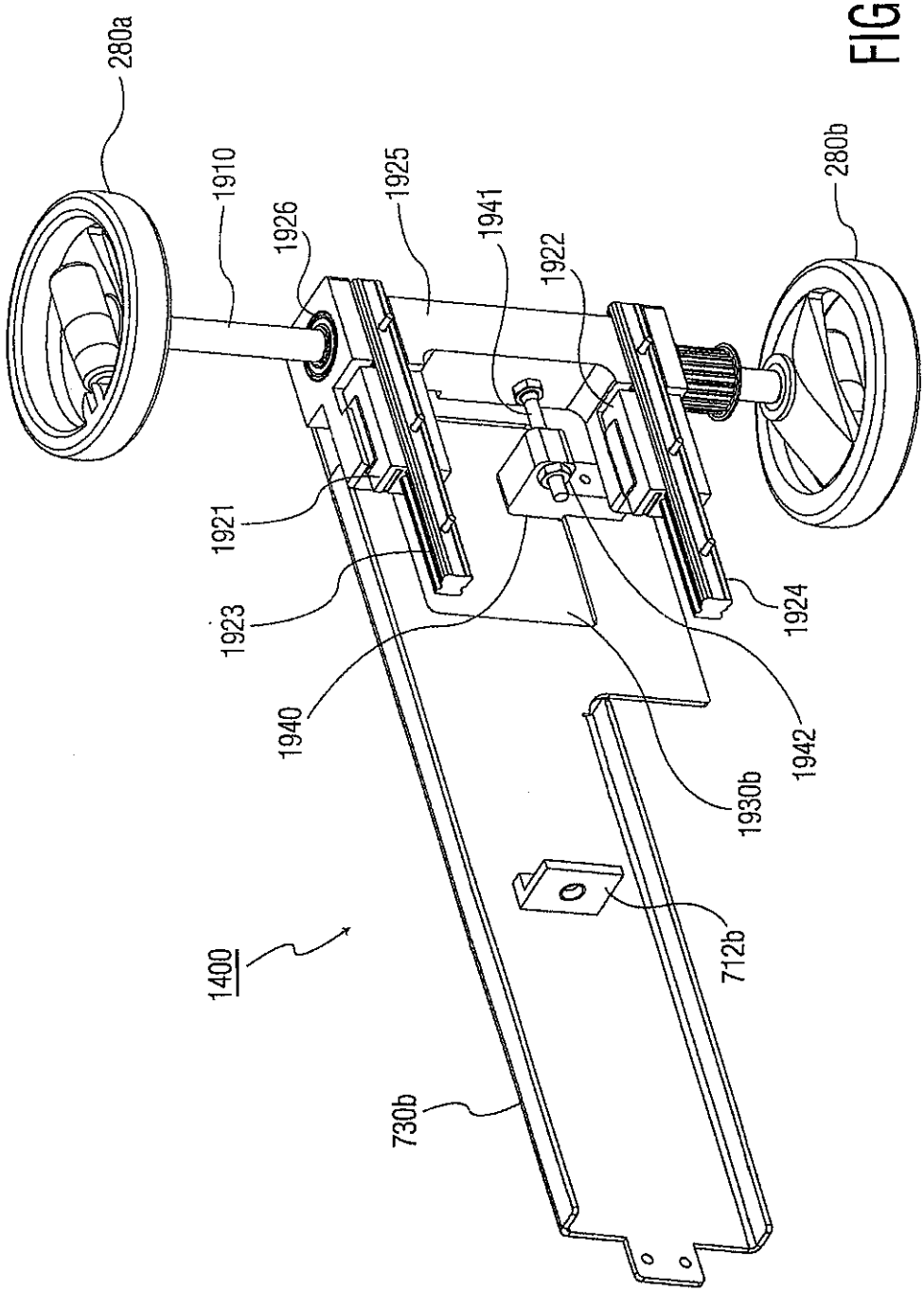
280a
1910
1926
1925
1941
1922
280b
1921
1923
1940
1924
1942
1930b
712b
1400
730b

FIG. 14B

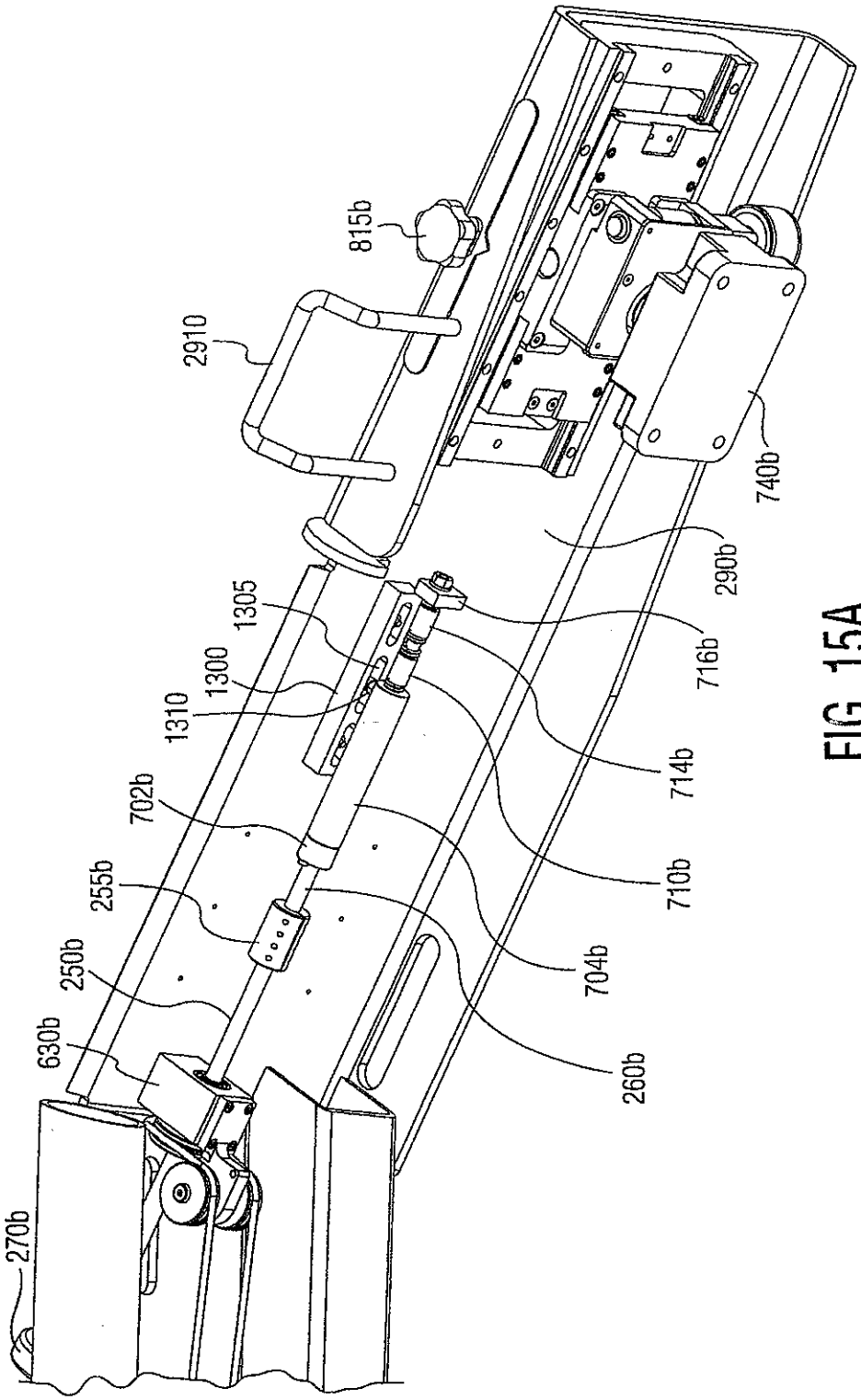
815b
2910
740b
290b
716b
1305
1300
1310
714b
702b
710b
255b
704b
250b
260b
630b
270b

FIG. 15A

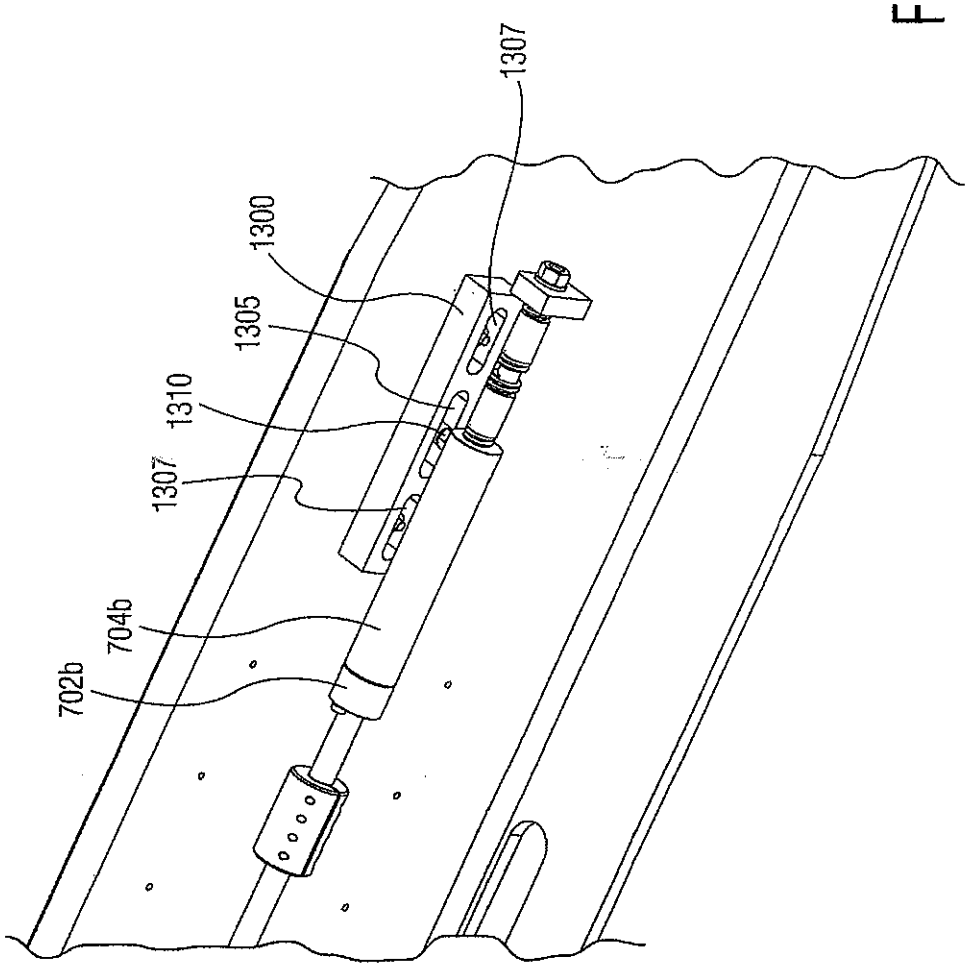

FIG. 15B

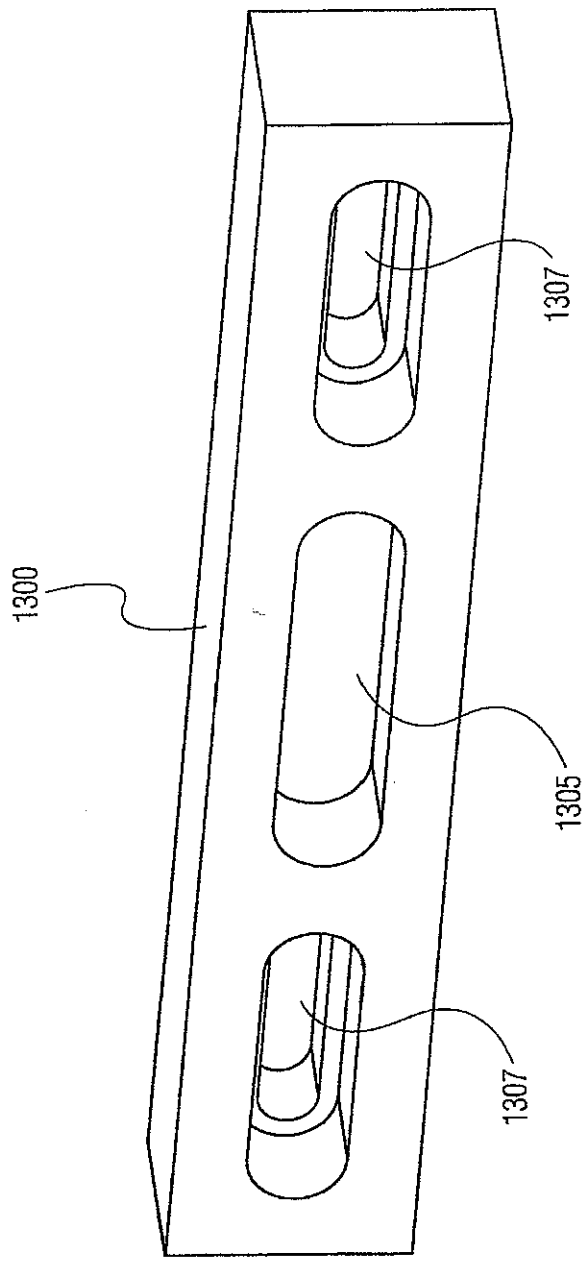

FIG. 15C

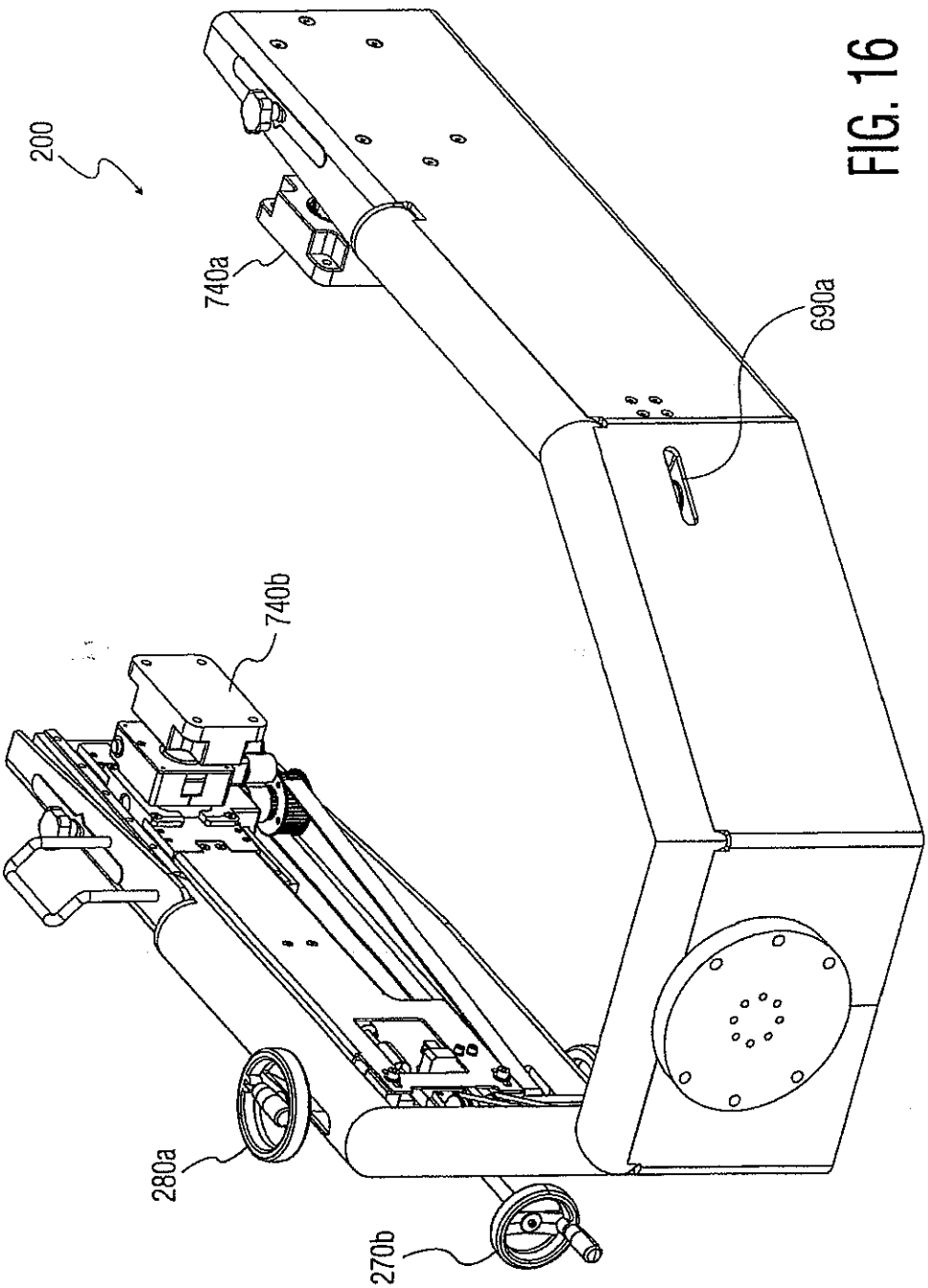

FIG. 16

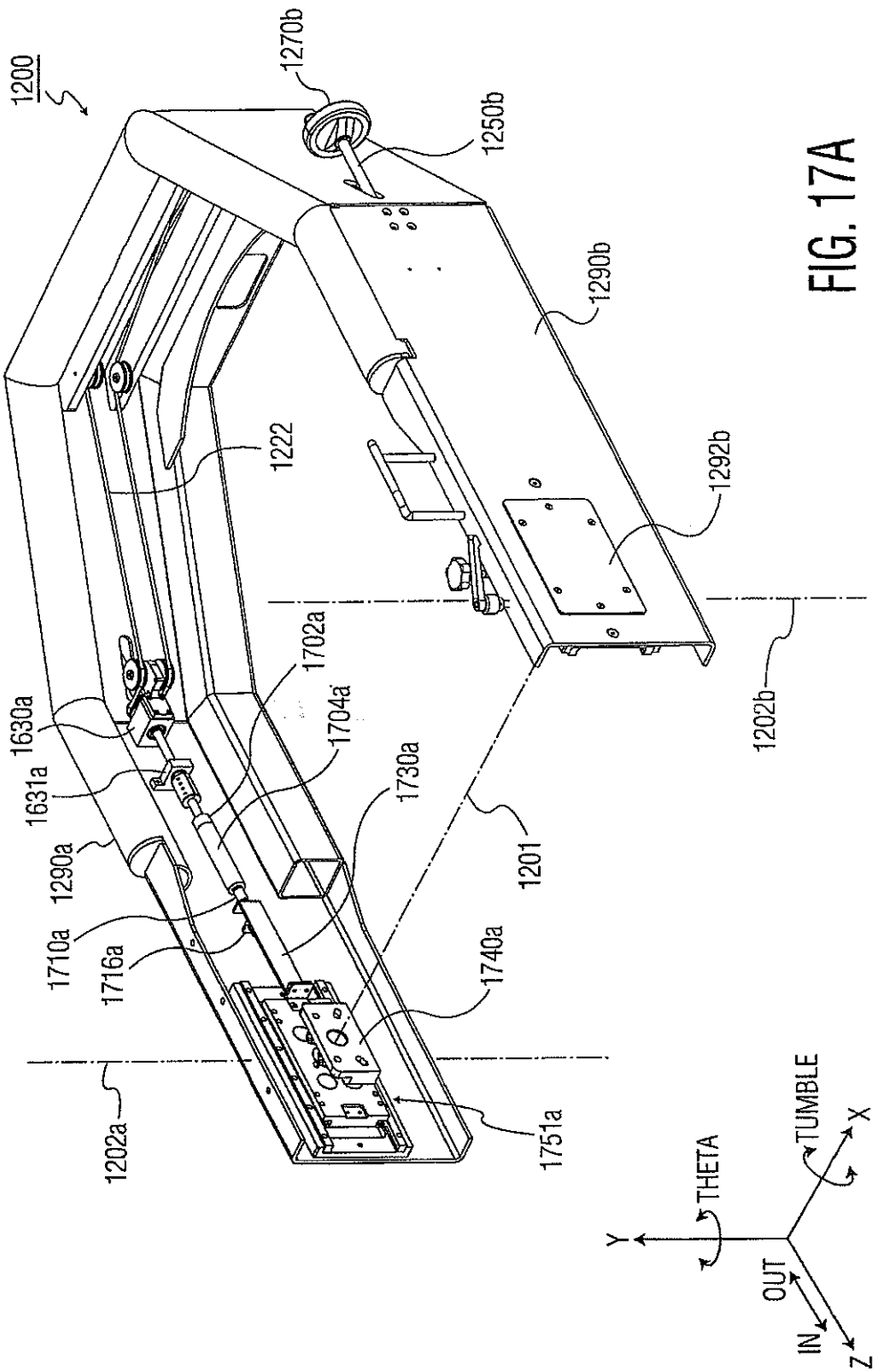
1200
1270b
1250b
1290b
1222
1292b
1702a
1704a
1630a
1631a
1730a
1290a
1201
1710a
1716a
1740a
1202b
1202a
1751a
THETA
TUMBLE
Y
X
OUT
IN
Z

FIG. 17A

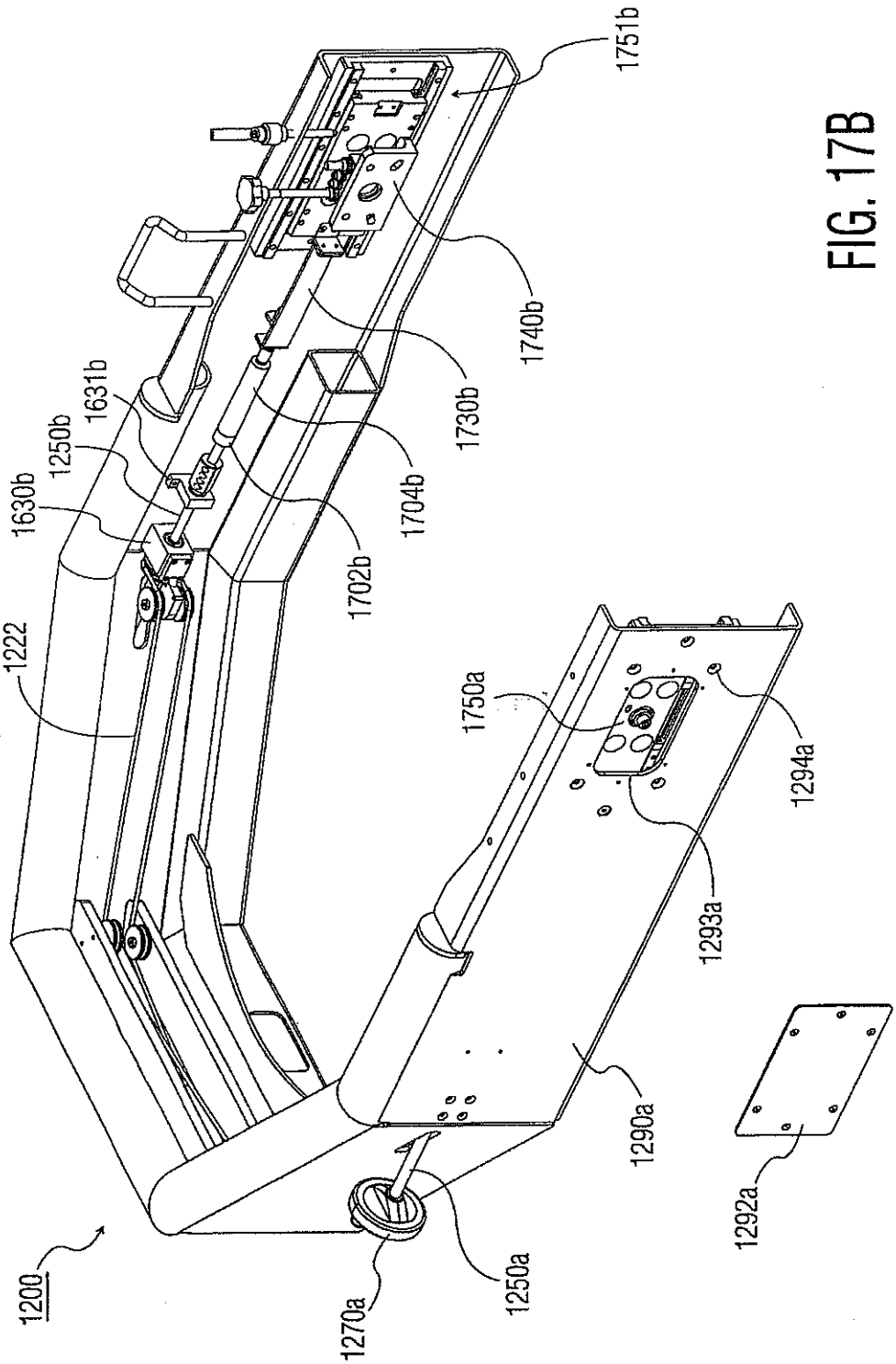
1751b
1740b
1730b
1631b
1250b
1630b
1704b
1702b
1222
1750a
1294a
1293a
1290a
1292a
1200
1270a
1250a

FIG. 17B

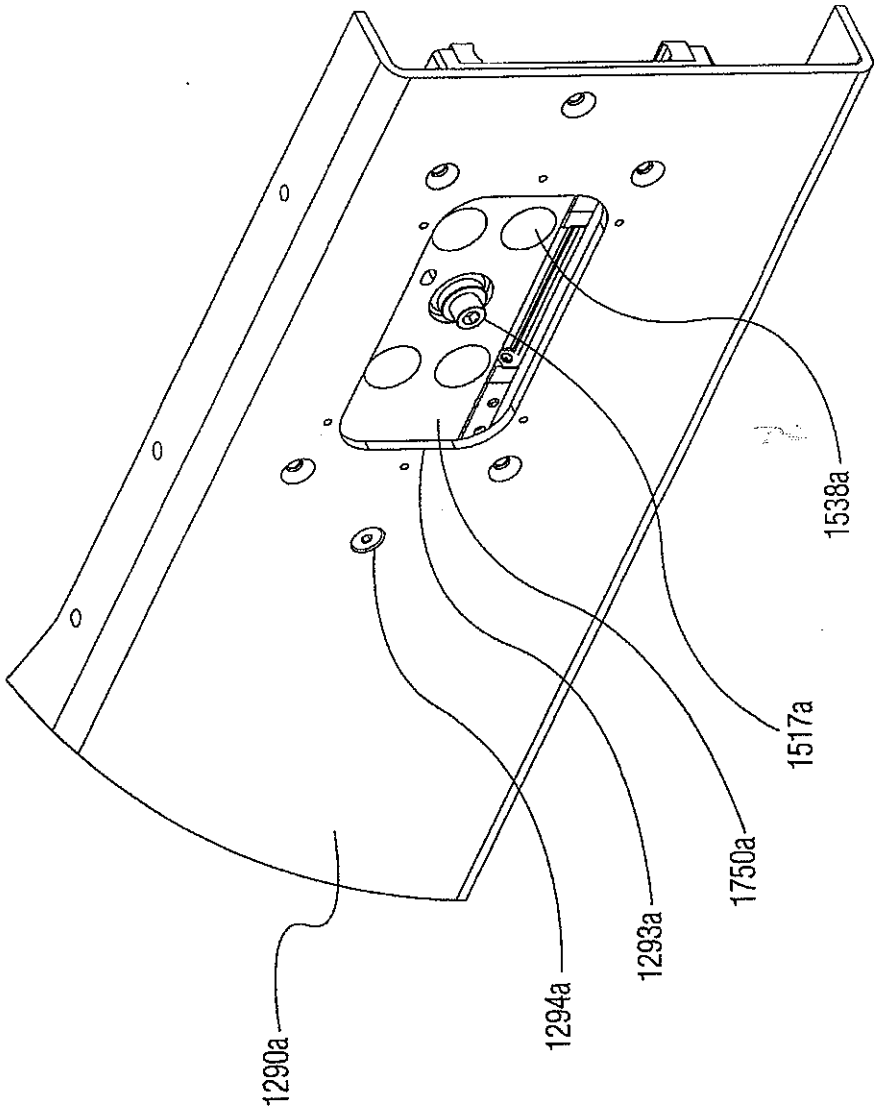

FIG. 17C

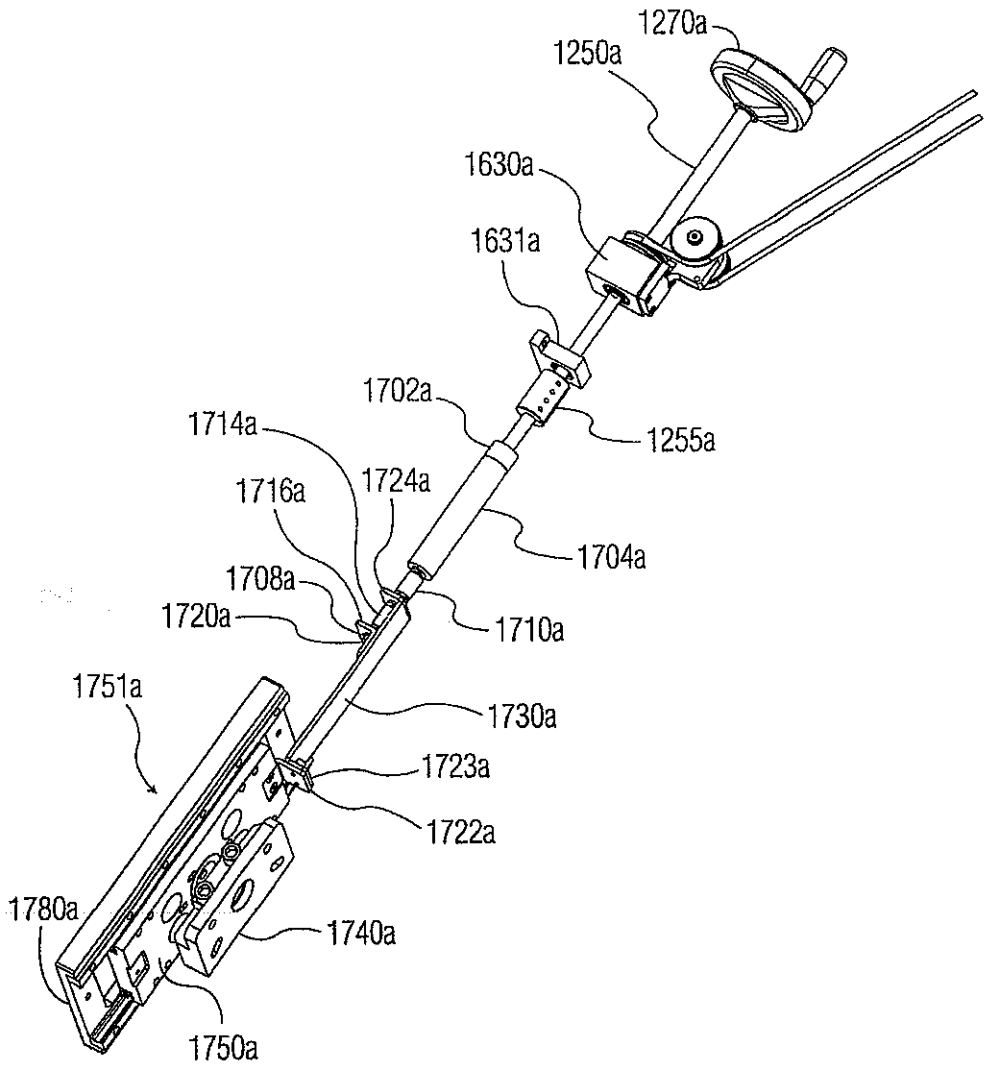
1270a
1250a
1630a
1631a
1702a
1255a
1714a
1724a
1716a
1704a
1708a
1720a
1710a
1751a
1730a
1723a
1722a
1780a
1740a
1750a

FIG. 17D

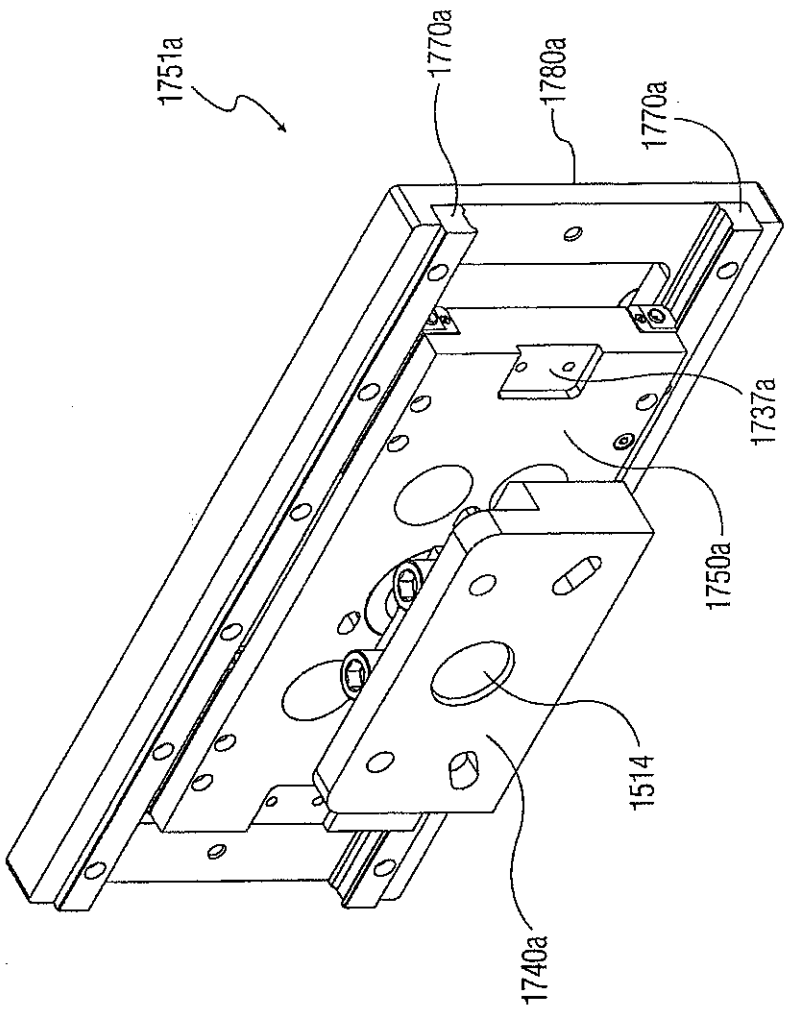

FIG. 18A

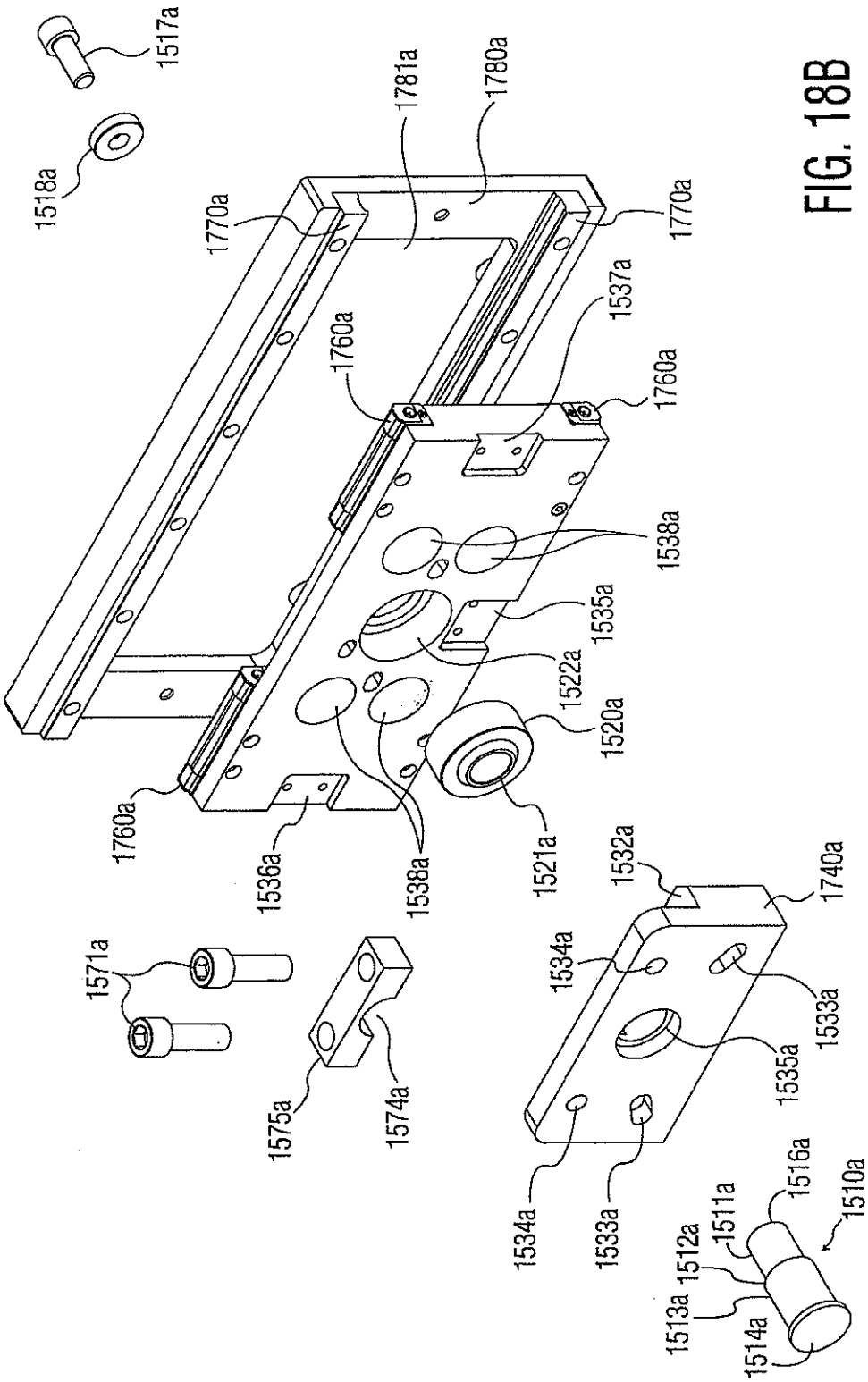
1517a
1518a
1781a
1780a
1770a
1770a
1537a
1760a
1760a
1760a
1538a
1535a
1522a
1520a
1521a
1536a
1538a
1532a
1740a
1534a
1533a
1535a
1571a
1575a
1574a
1534a
1533a
1516a
1510a
1511a
1512a
1513a
1514a

FIG. 18B

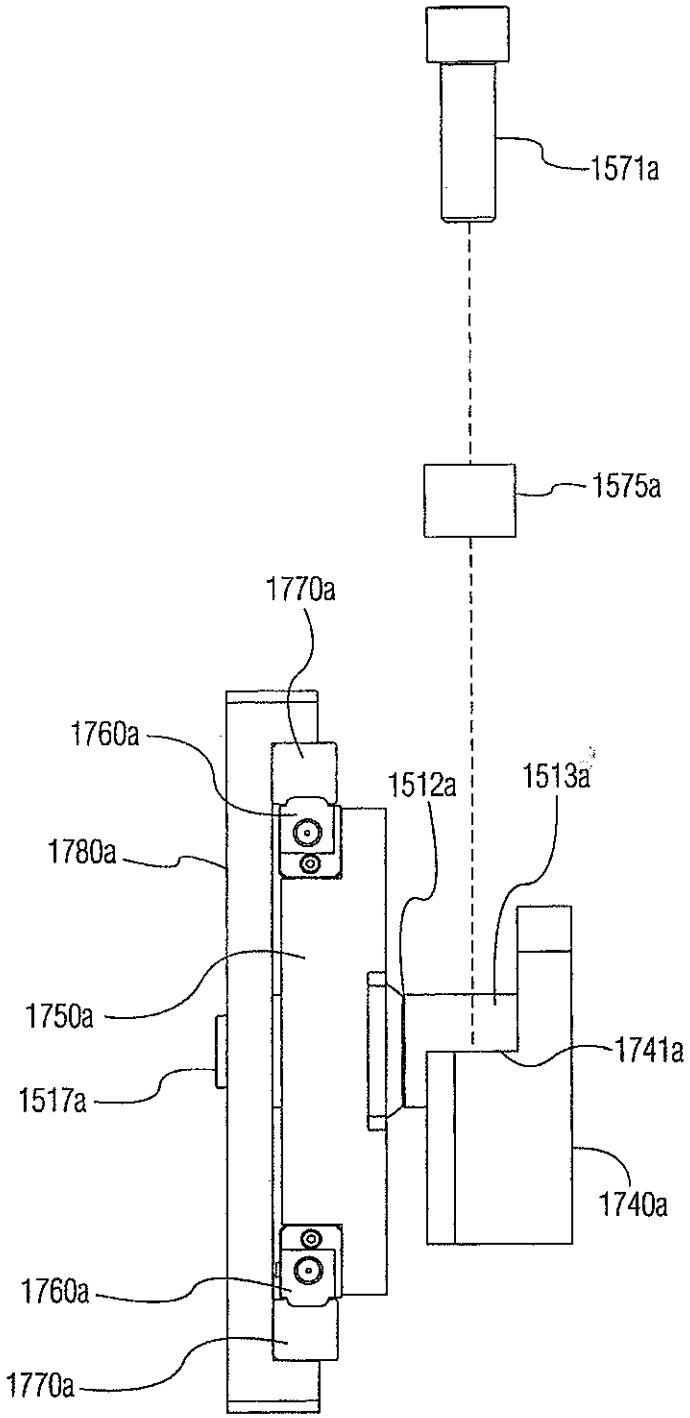
1571a
1575a
1770a
1760a
1512a
1513a
1780a
1750a
1741a
1517a
1740a
1760a
1770a

FIG. 18C

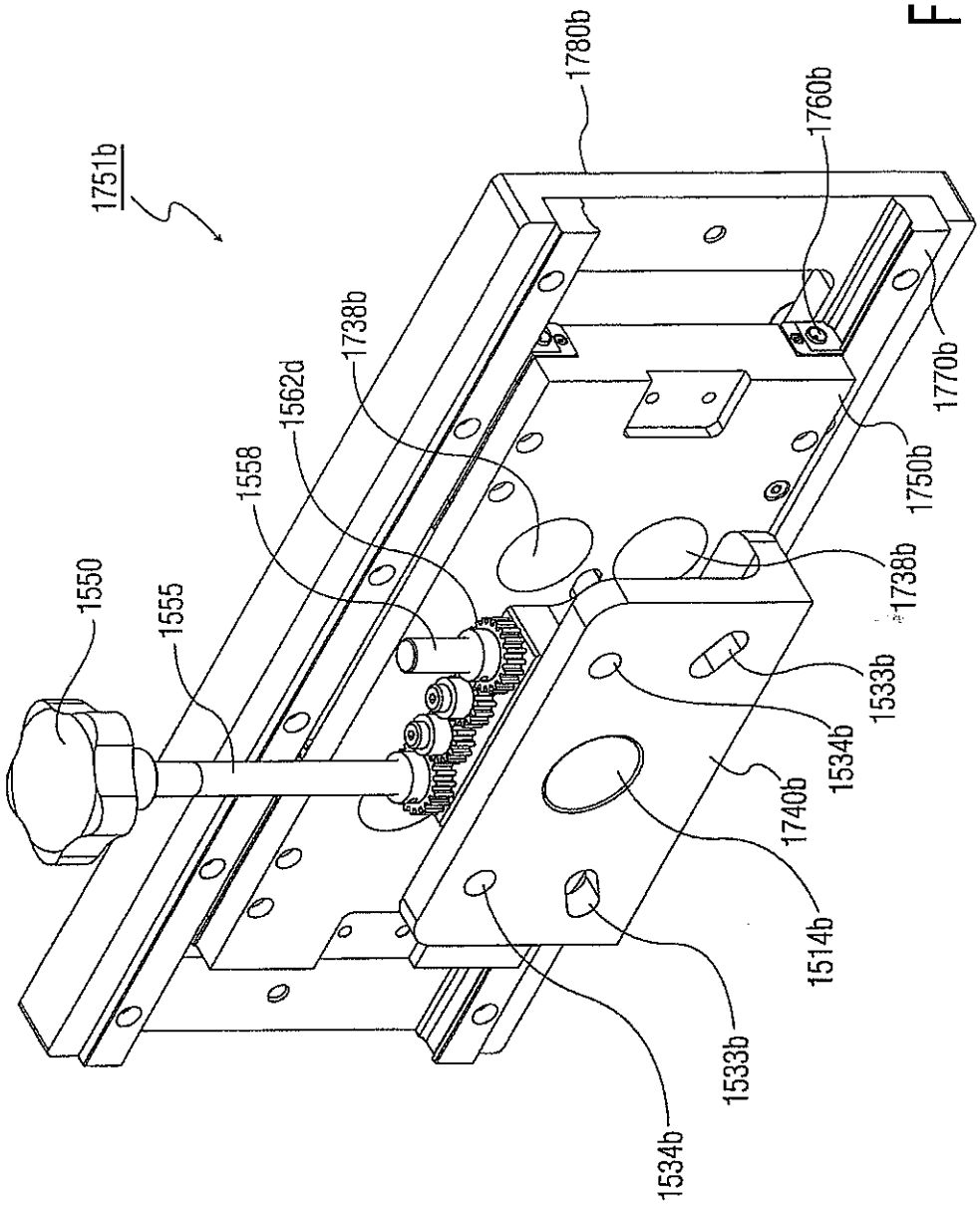
1751b
1780b
1760b
1738b
1562d
1558
1770b
1750b
1550
1555
1738b
1533b
1534b
1740b
1514b
1533b
1534b

FIG. 19A

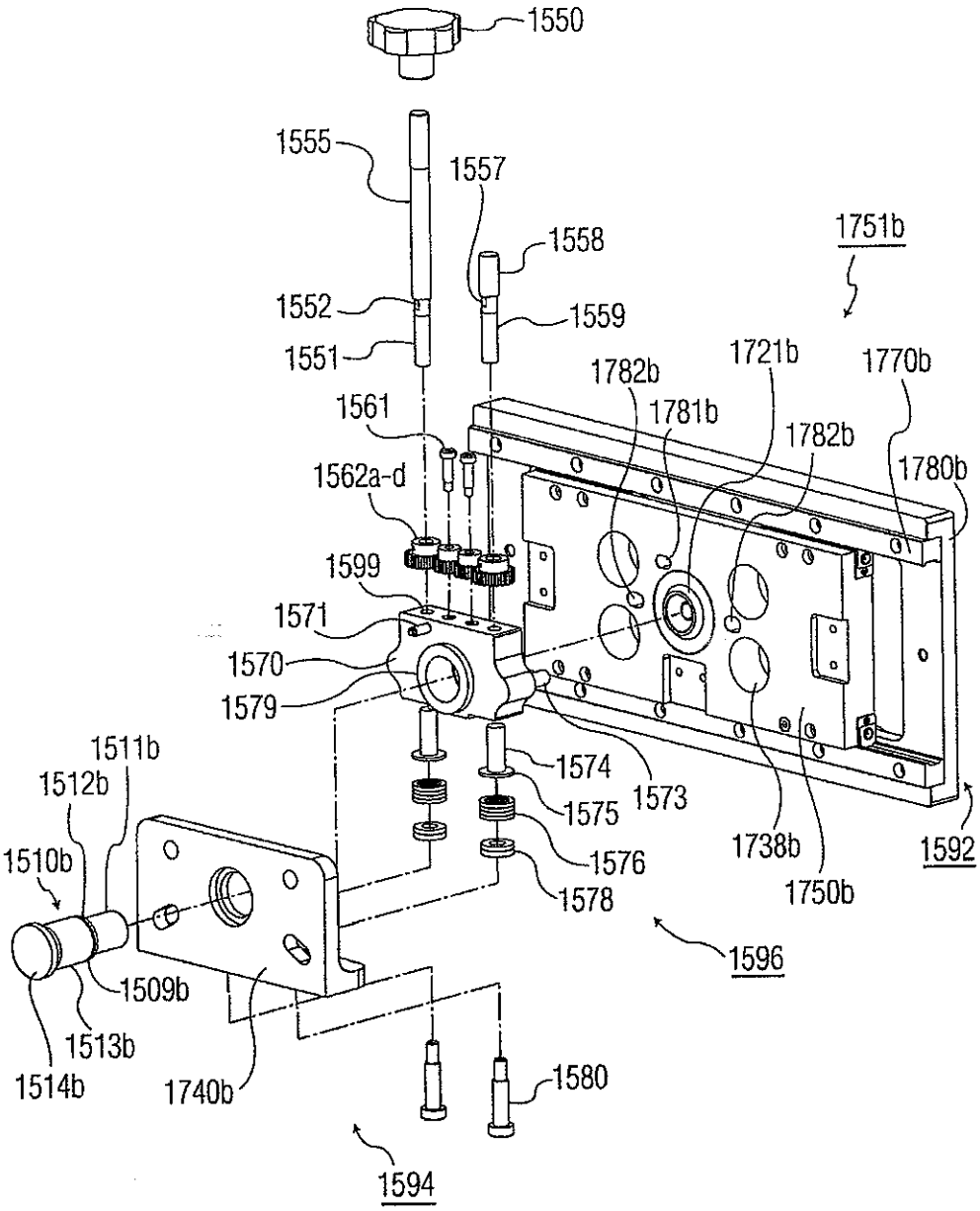
1550
1555
1557
1558
1751b
1552
1559
1551
1721b
1770b
1782b
1781b
1561
1782b
1780b
1562a-d
1599
1571
1570
1579
1574
1573
1575
1576
1578
1738b
1750b
1592
1511b
1512b
1510b
1596
1509b
1513b
1514b
1740b
1580
1594

FIG. 19B

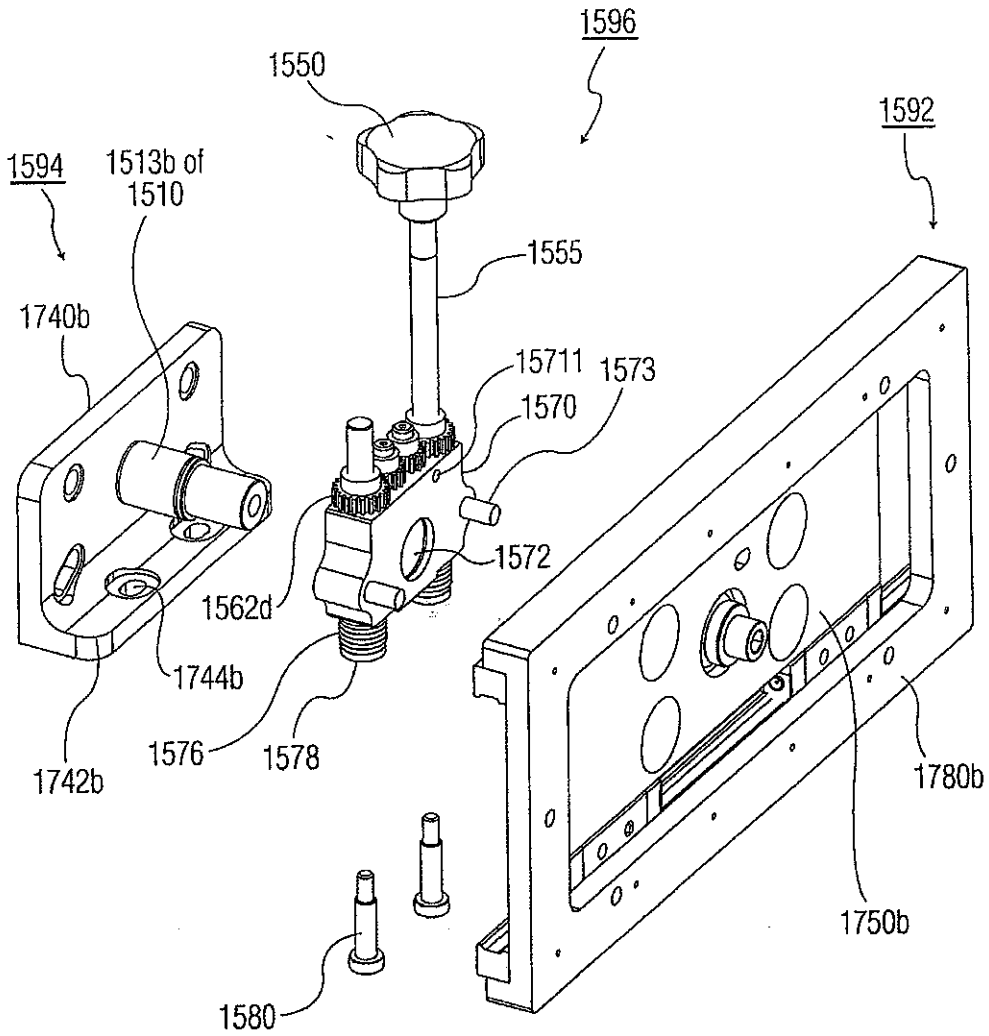
1596
1550
1592
1594
1513b of
1510
1555
1740b
15711
1573
1570
1572
1562d
1744b
1742b
1576
1578
1780b
1750b
1580

FIG. 19C

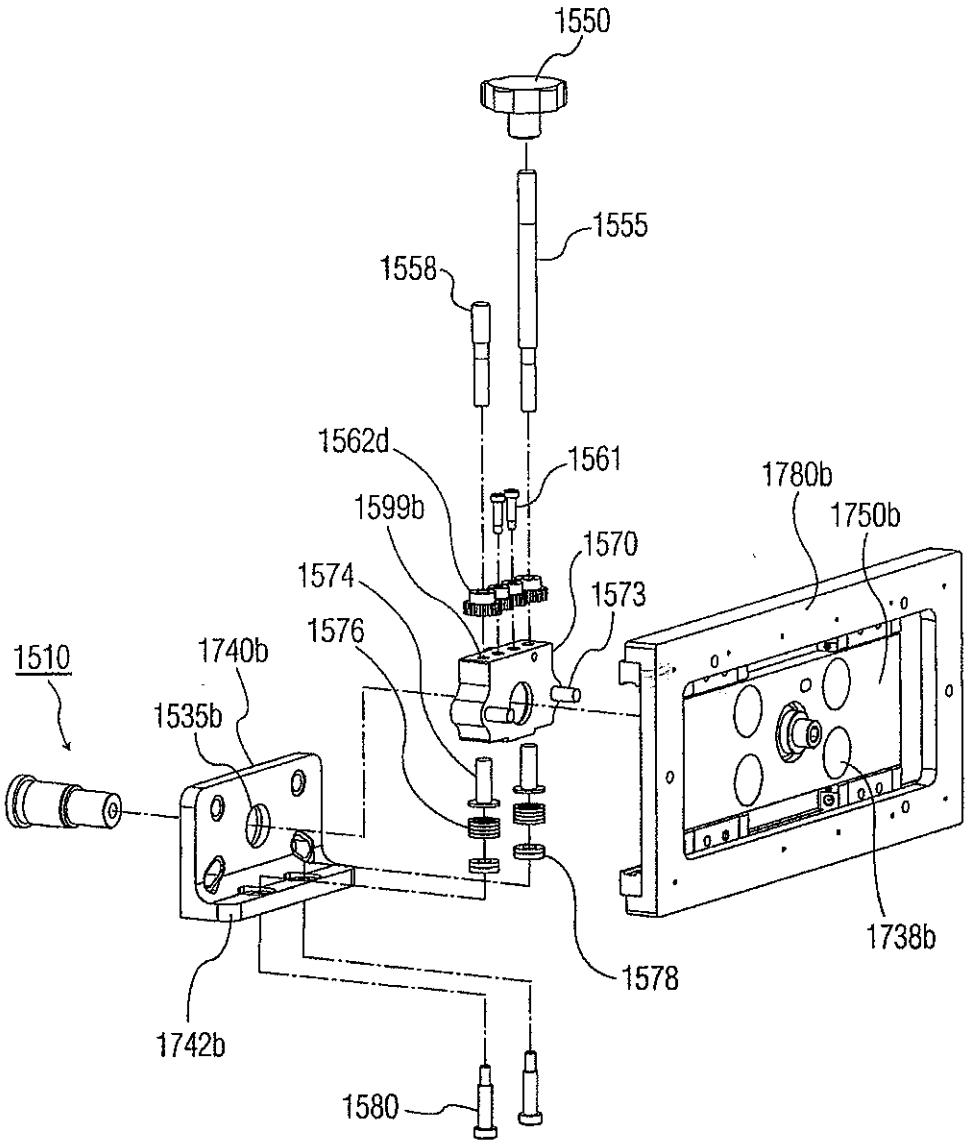
1550
1555
1558
1562d
1561
1599b
1570
1574
1573
1576
1780b
1750b
1510
1740b
1535b
1738b
1578
1742b
1580

FIG. 19D

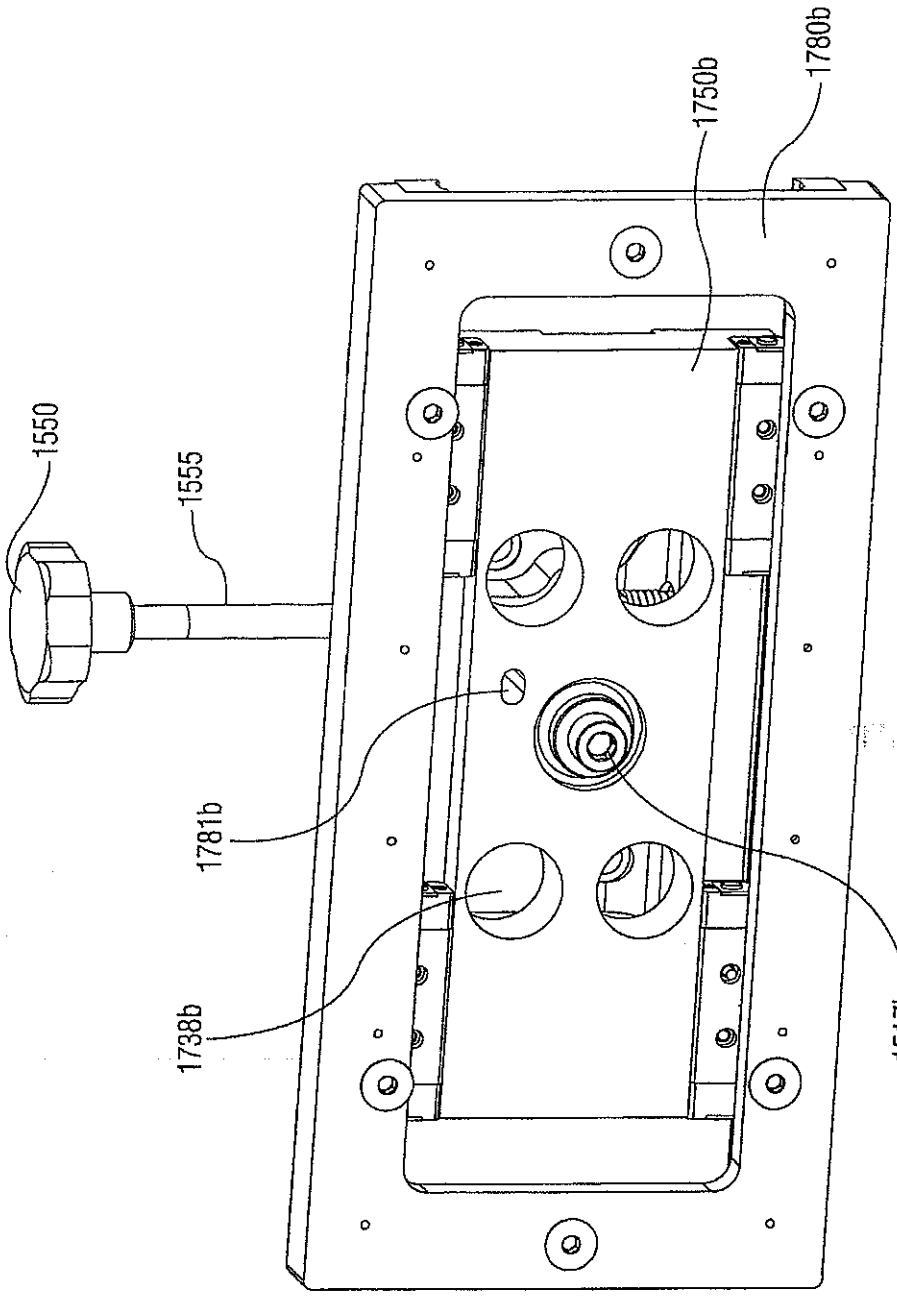

FIG. 19E

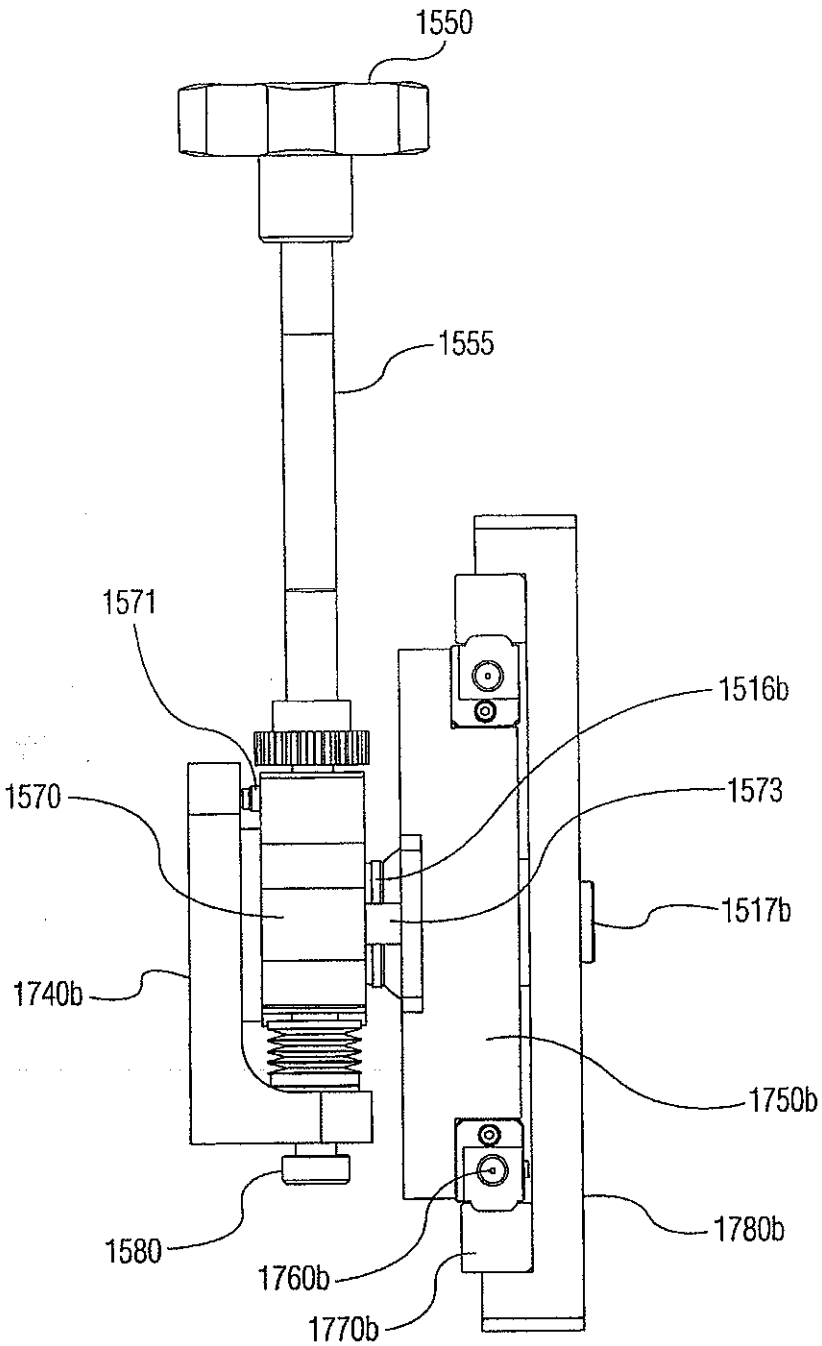
1550
1555
1571
1516b
1570
1573
1517b
1740b
1750b
1780b
1580
1760b
1770b

FIG. 19F

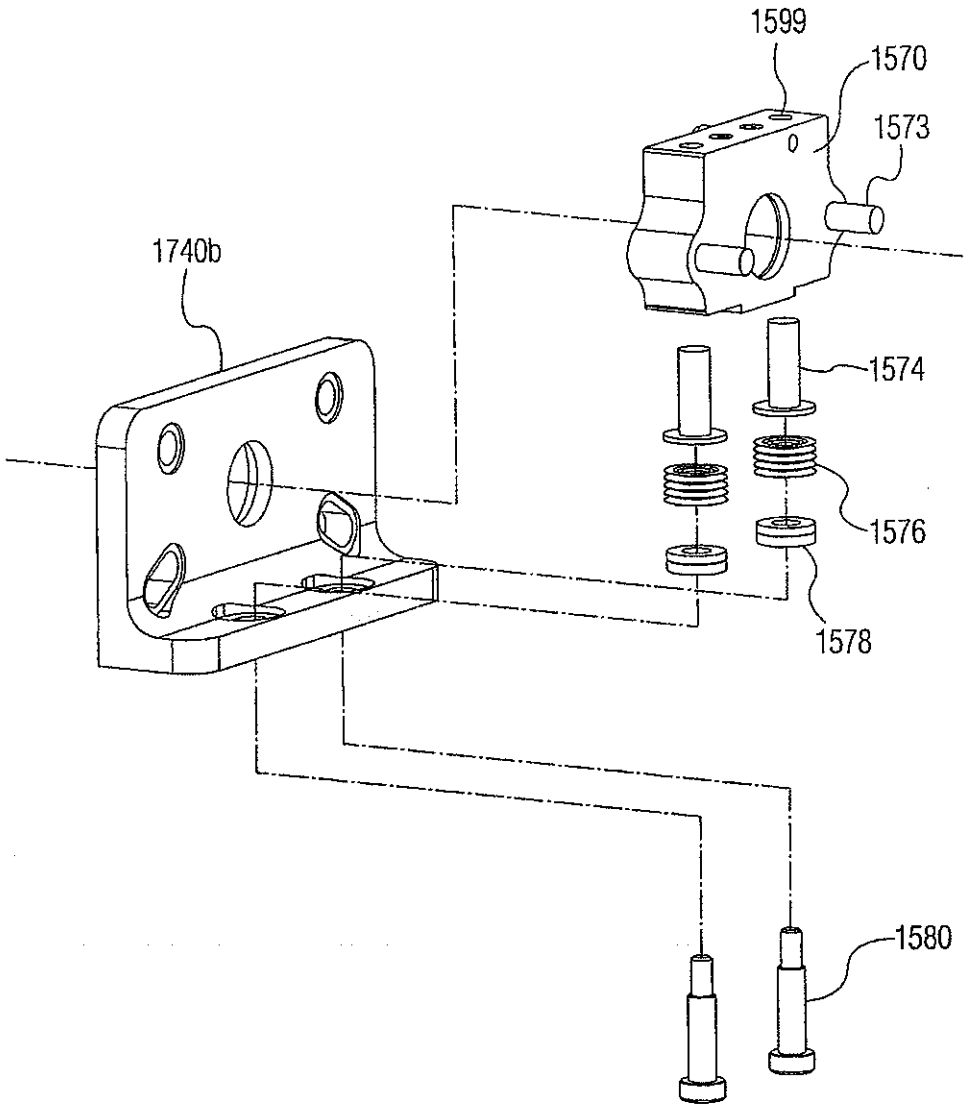

FIG. 19G

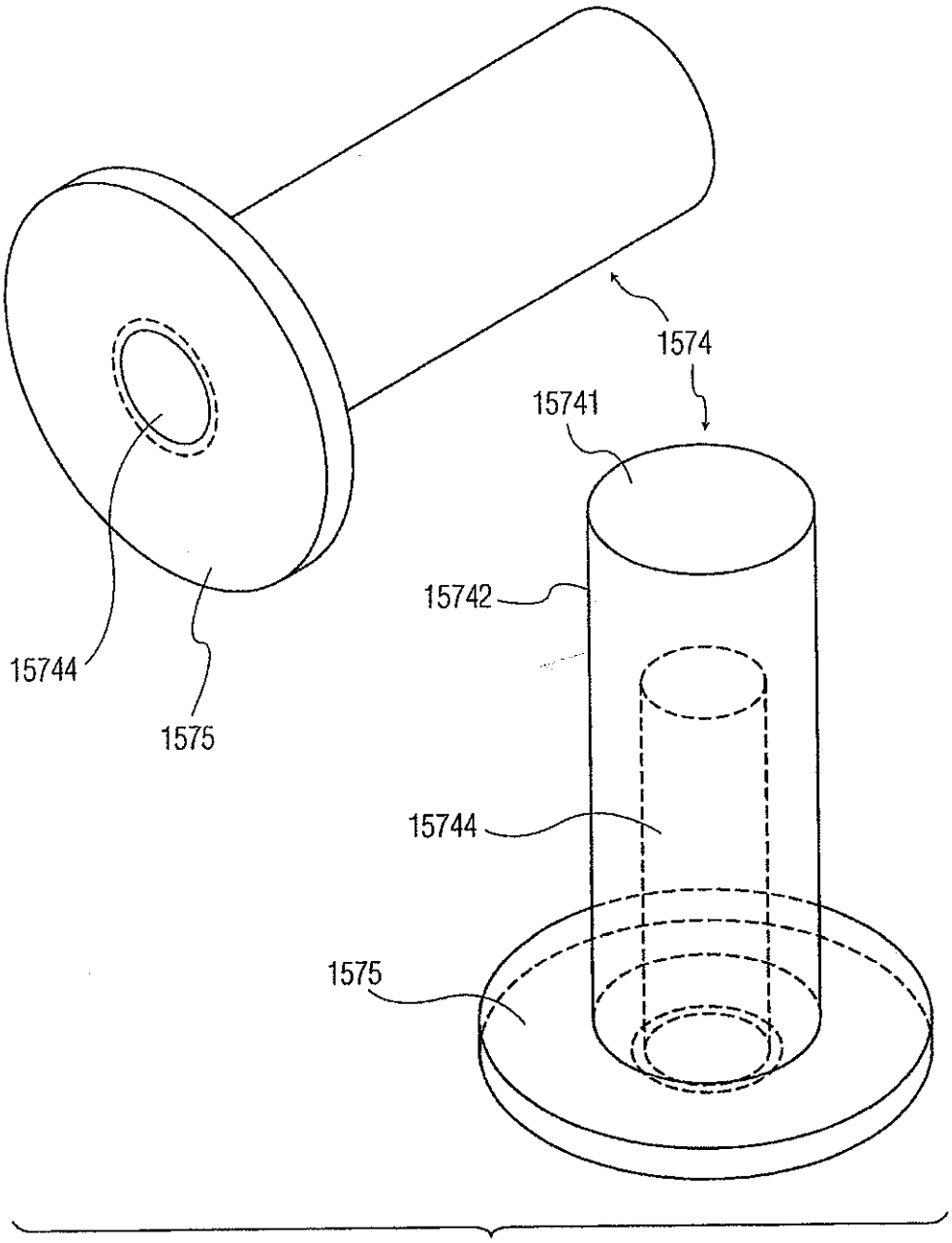

FIG. 19H

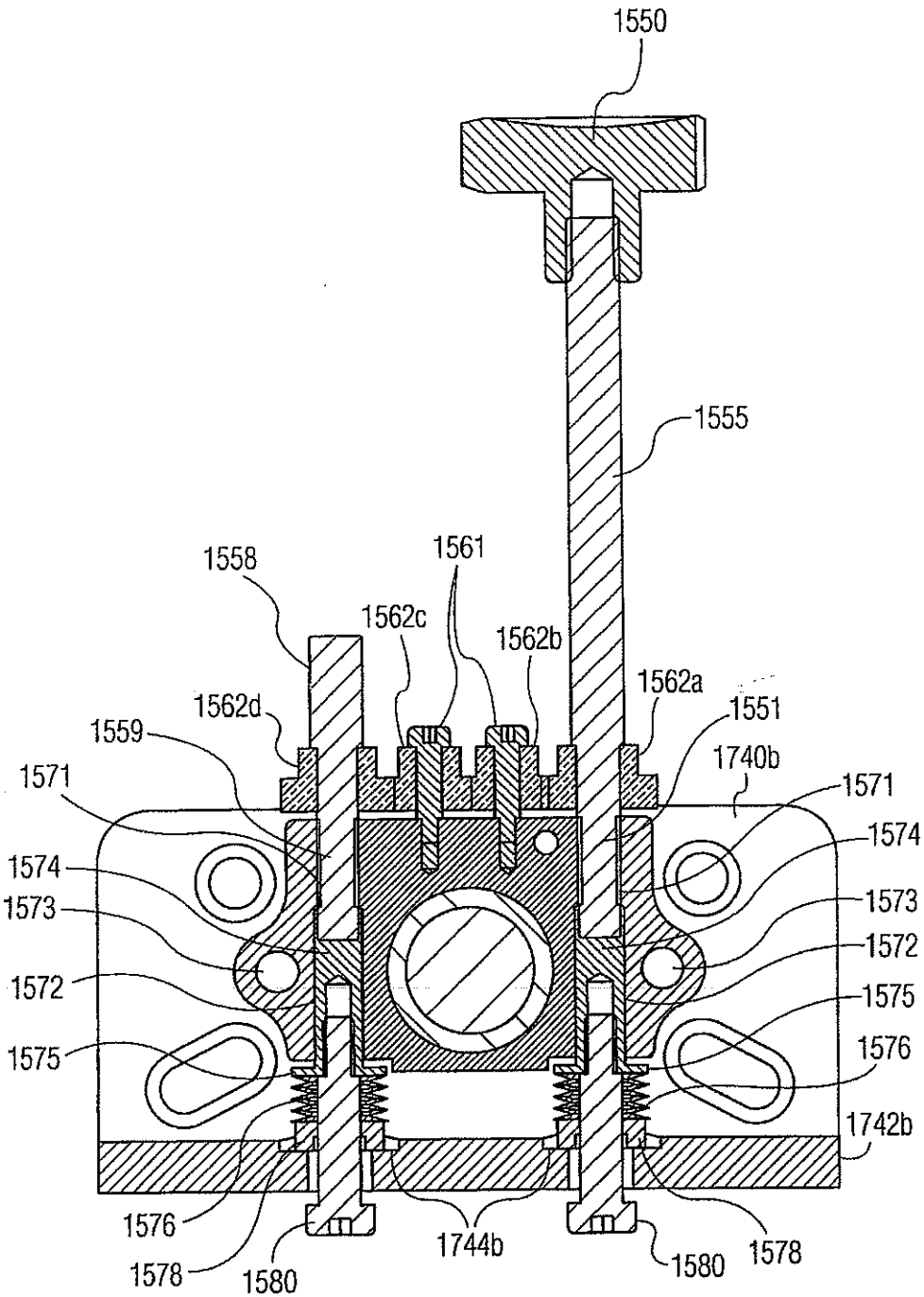
1550
1555
1558
1561
1562c
1562b
1562a
1562d
1559
1551
1740b
1571
1571
1574
1574
1573
1573
1572
1572
1575
1575
1576
1742b
1576
1578
1580
1744b
1580
1578

FIG. 19I

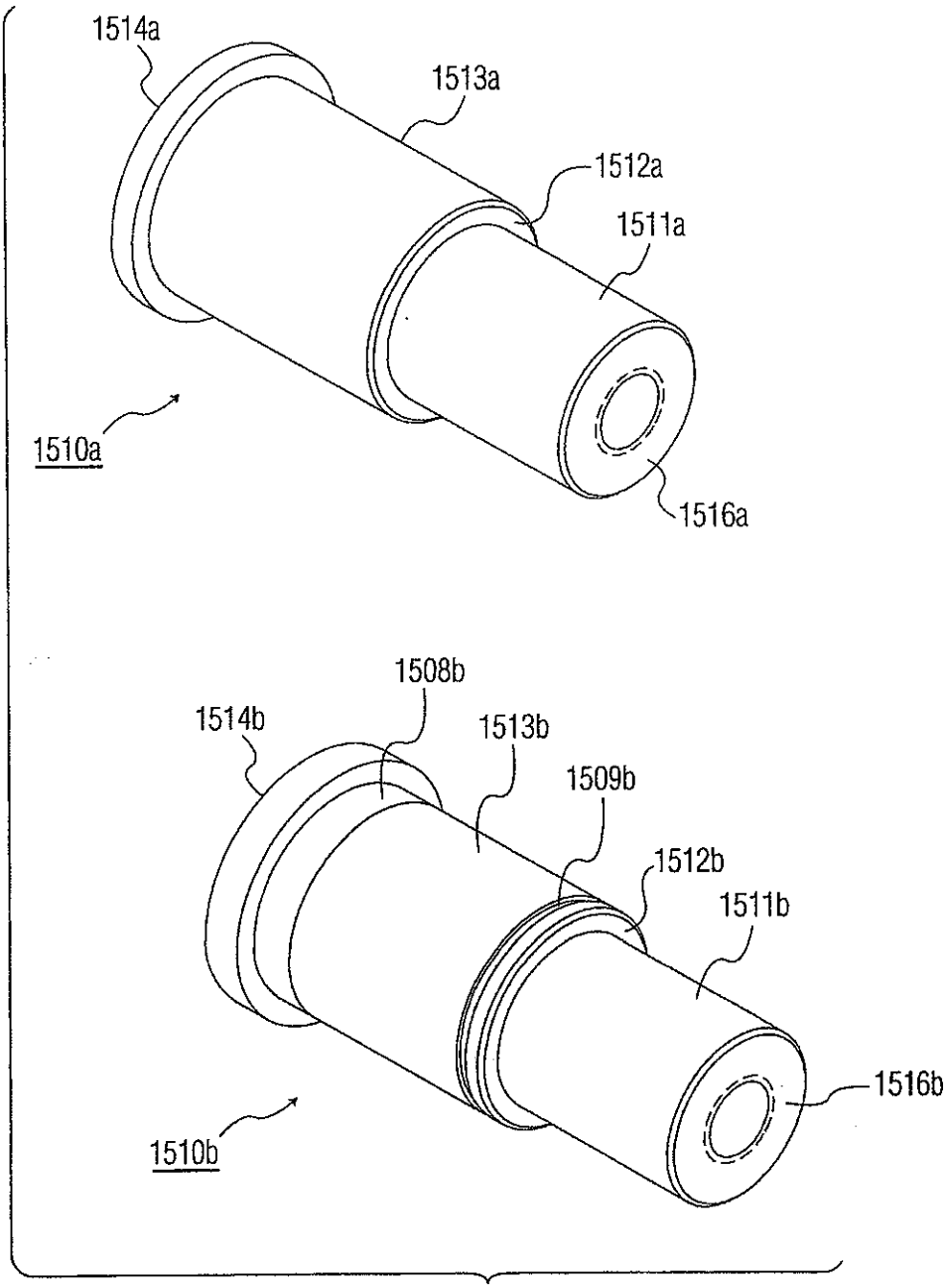
1514a
1513a
1512a
1511a
1510a
1516a
1508b
1514b
1513b
1509b
1512b
1511b
1516b
1510b

FIG. 19J

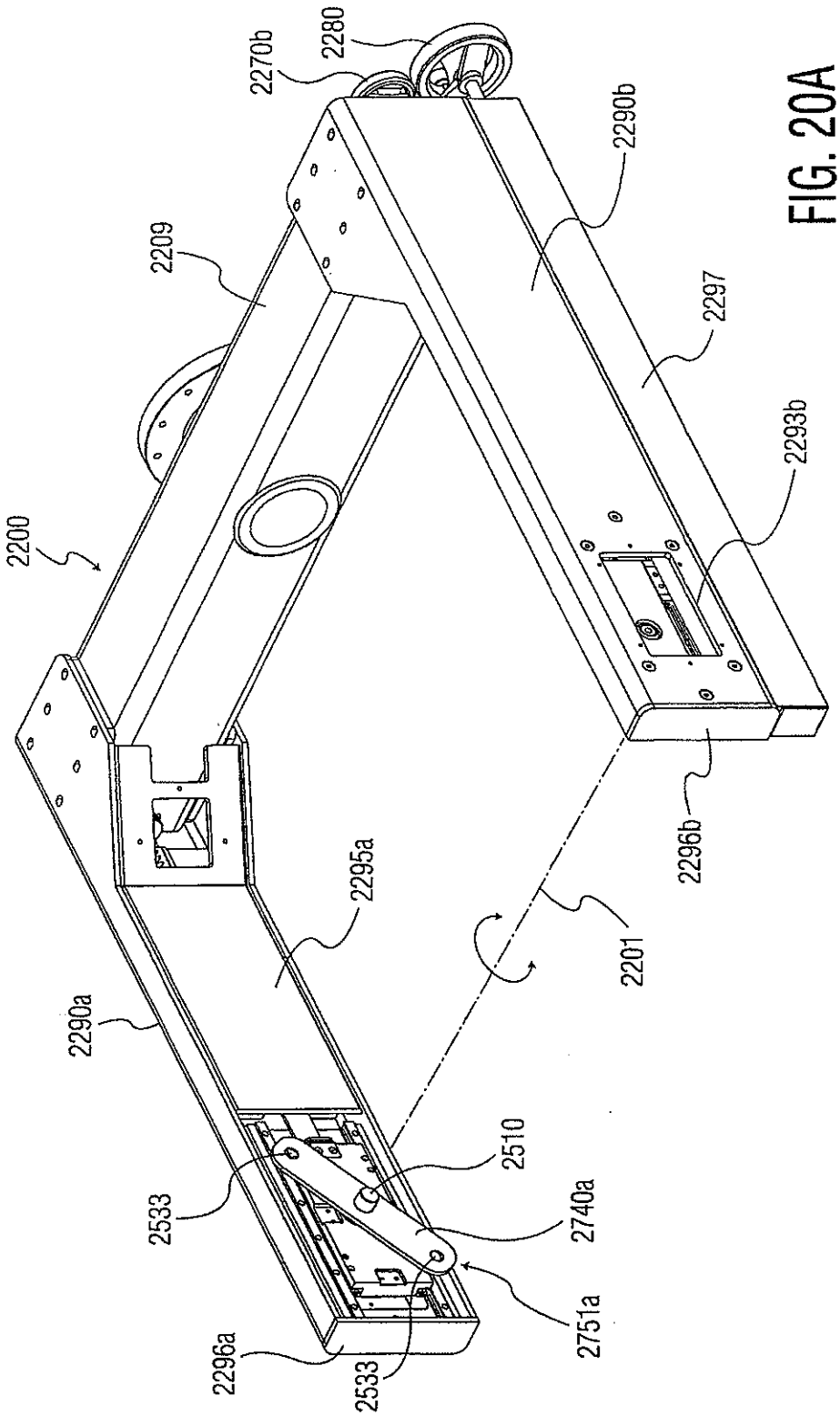
2270b
2280
2290b
2209
2297
2200
2293b
2295a
2296b
2201
2290a
2510
2533
2740a
2751a
2296a
2533

FIG. 20A

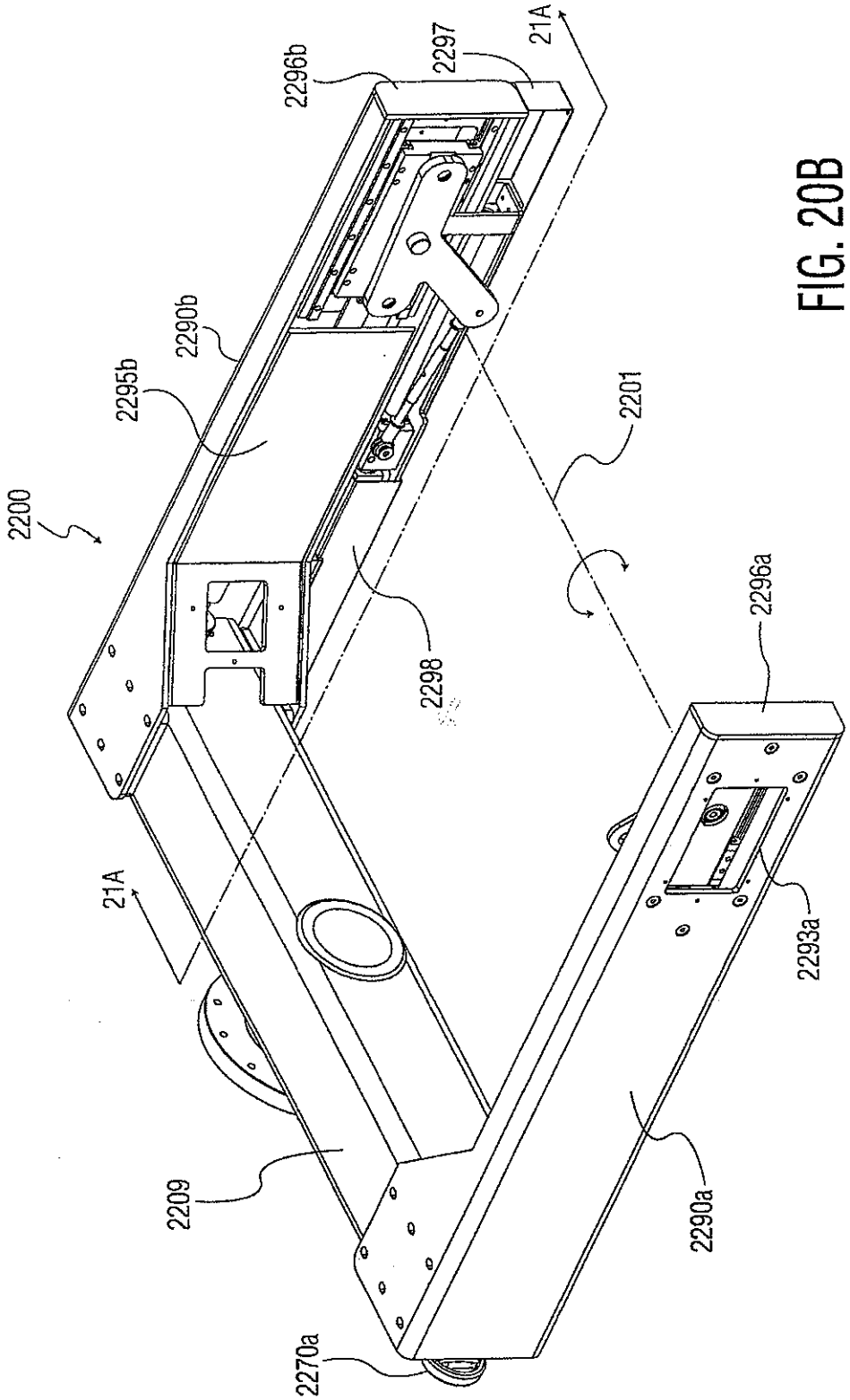
2200
2295b
2290b
2296b
2297
21A
2201
2298
2296a
21A
2293a
2209
2290a
2270a

FIG. 20B

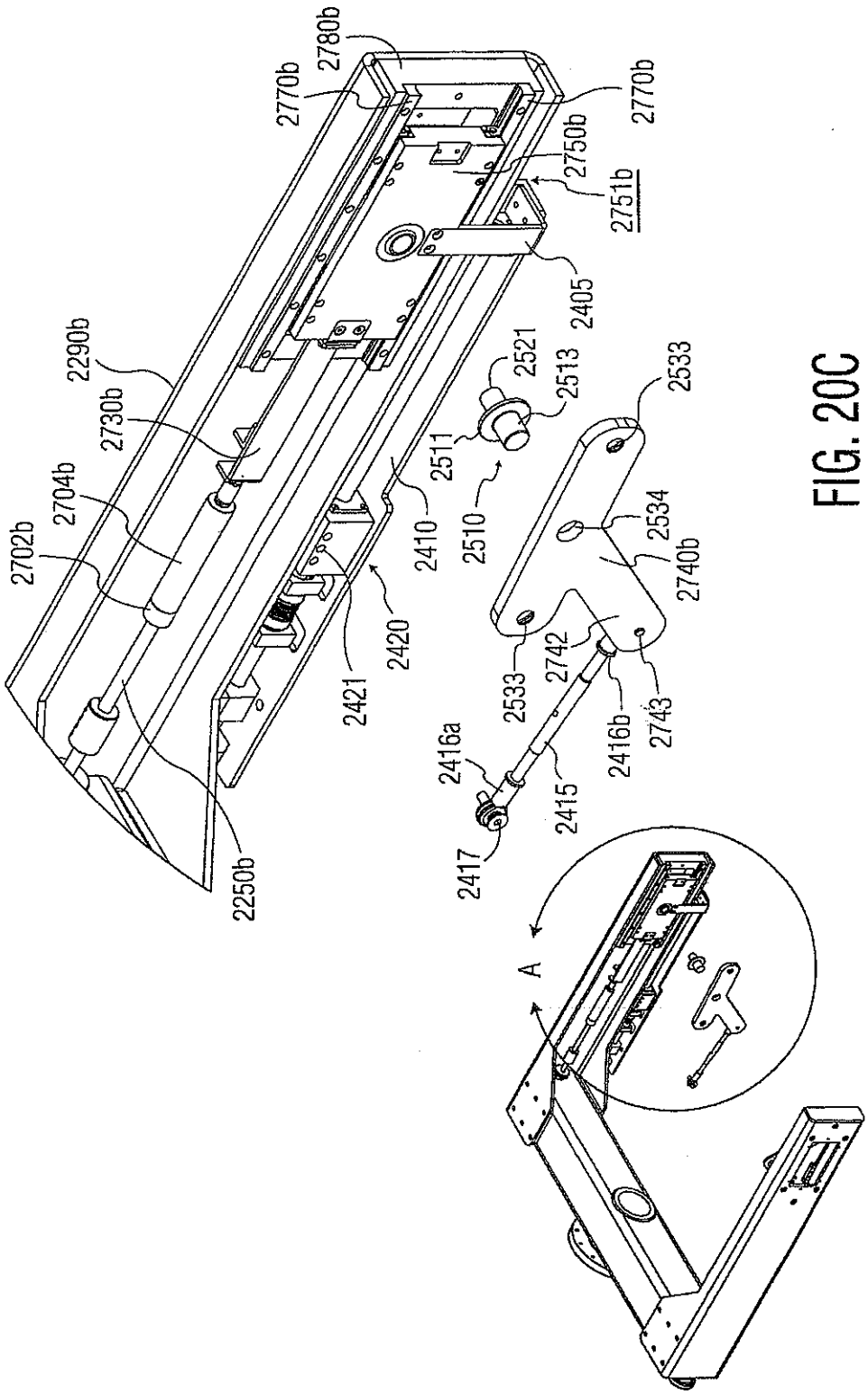
2780b
2770b
2770b
2750b
2751b
2405
2290b
2730b
2704b
2702b
2521
2513
2533
2511
2410
2510
2534
2740b
2742
2533
2421
2420
2416b
2743
2416a
2415
2417
2250b
A

FIG. 20C

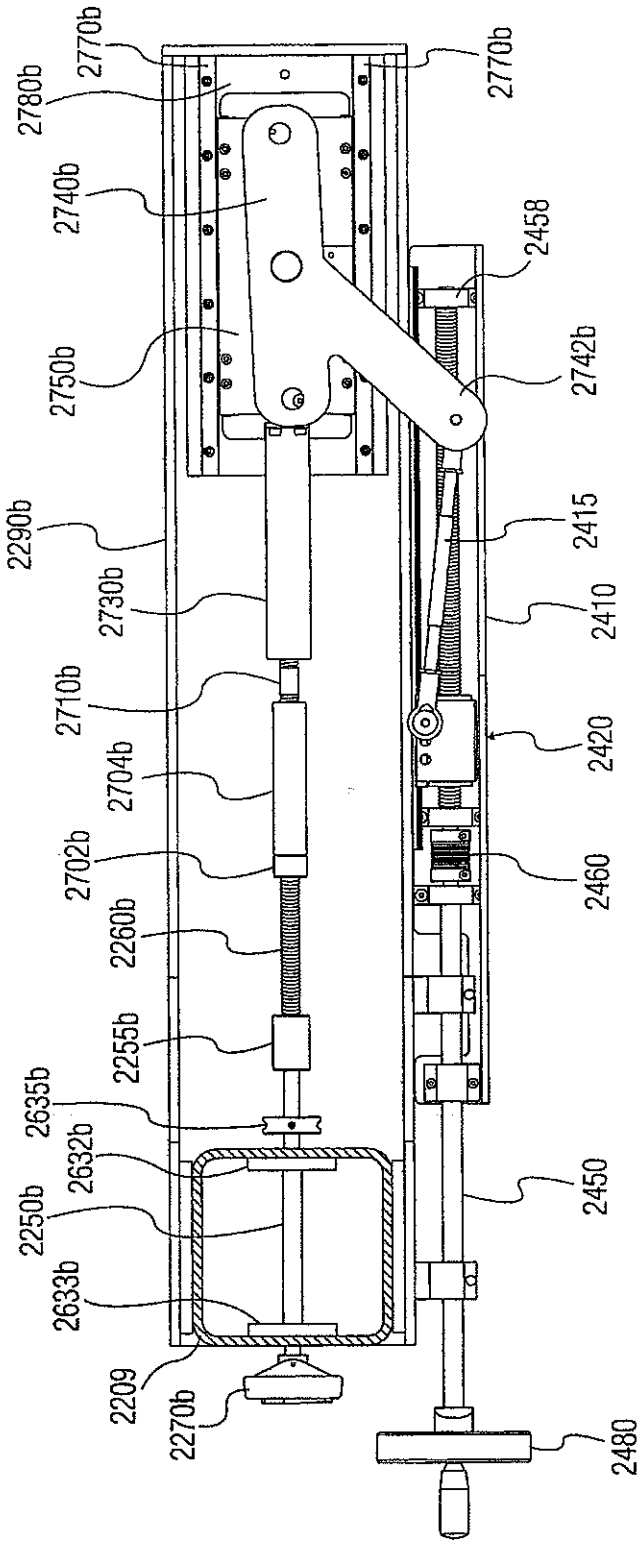
2770b
2780b
2740b
2750b
2290b
2730b
2710b
2704b
2702b
2260b
2255b
2635b
2632b
2250b
2633b
2209
2270b
2480
2450
2460
2420
2410
2415
2742b
2458
2770b

FIG. 21A

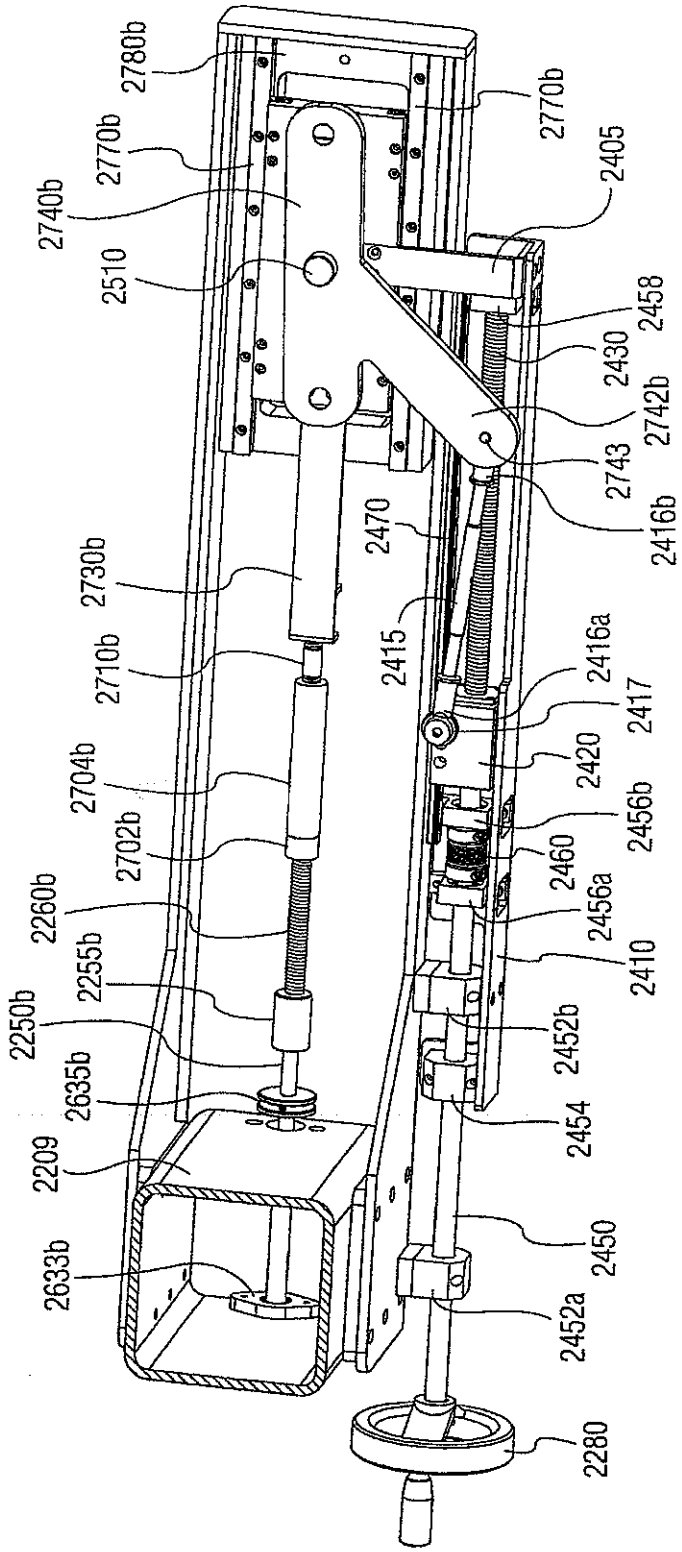
2780b
2770b
2740b
2770b
2405
2510
2458
2430
2742b
2743
2416b
2470
2730b
2415
2710b
2416a
2417
2704b
2420
2702b
2456b
2460
2260b
2456a
2255b
2410
2250b
2452b
2635b
2454
2209
2450
2633b
2452a
2280

FIG. 21B

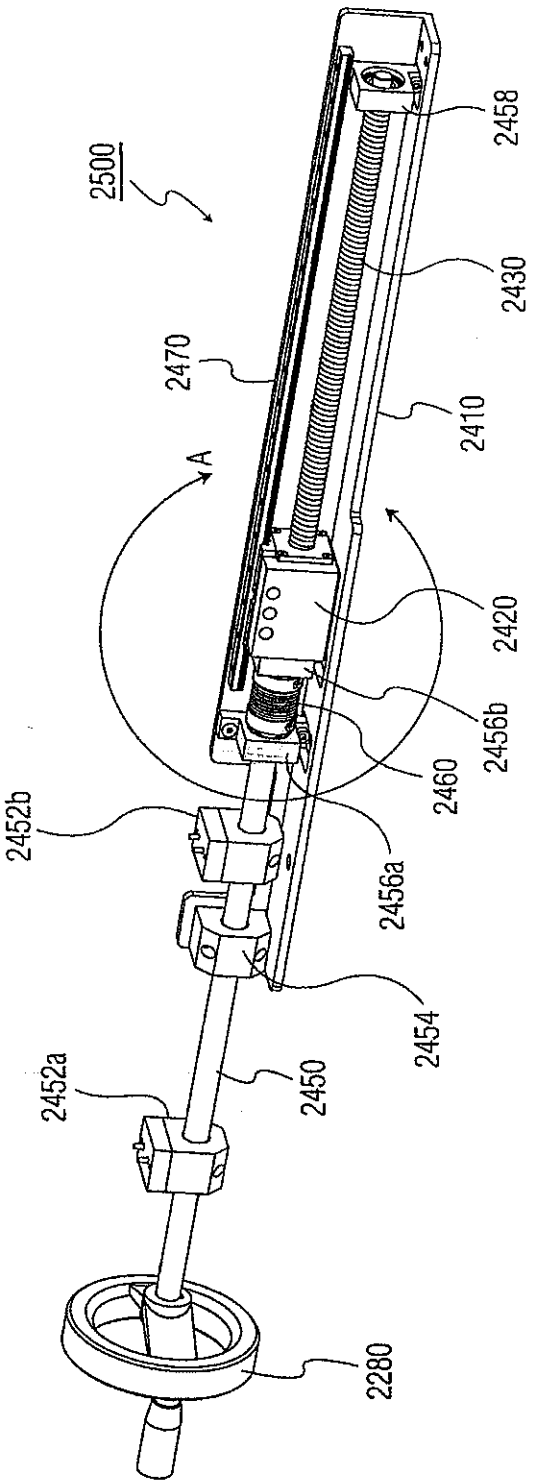
2500
2458
2430
2470
2410
A
2420
2456b
2460
2452b
2456a
2454
2452a
2450
2280

FIG. 22

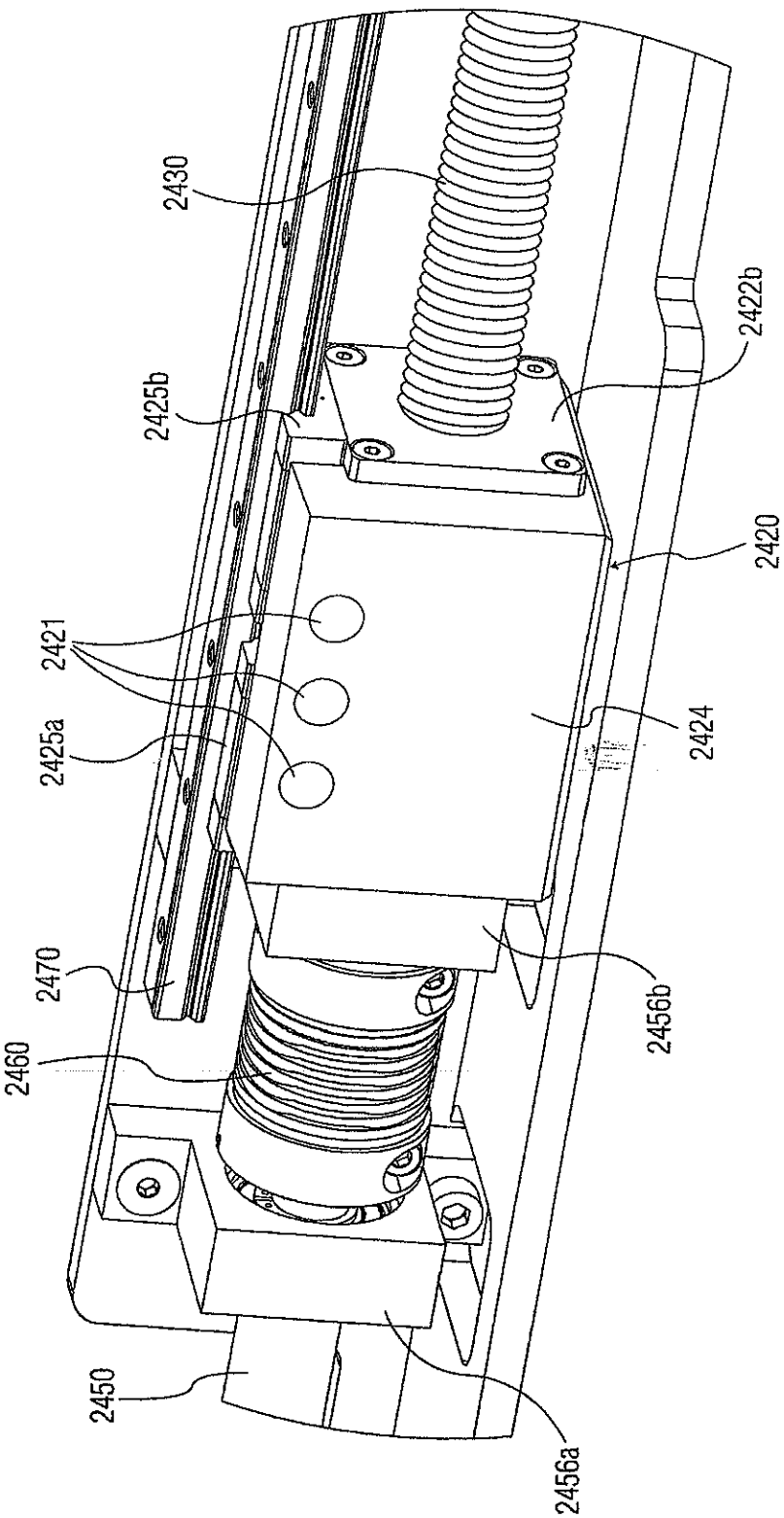
2430
2422b
2425b
2420
2421
2425a
2424
2470
2460
2456b
2450
2456a

FIG. 22A

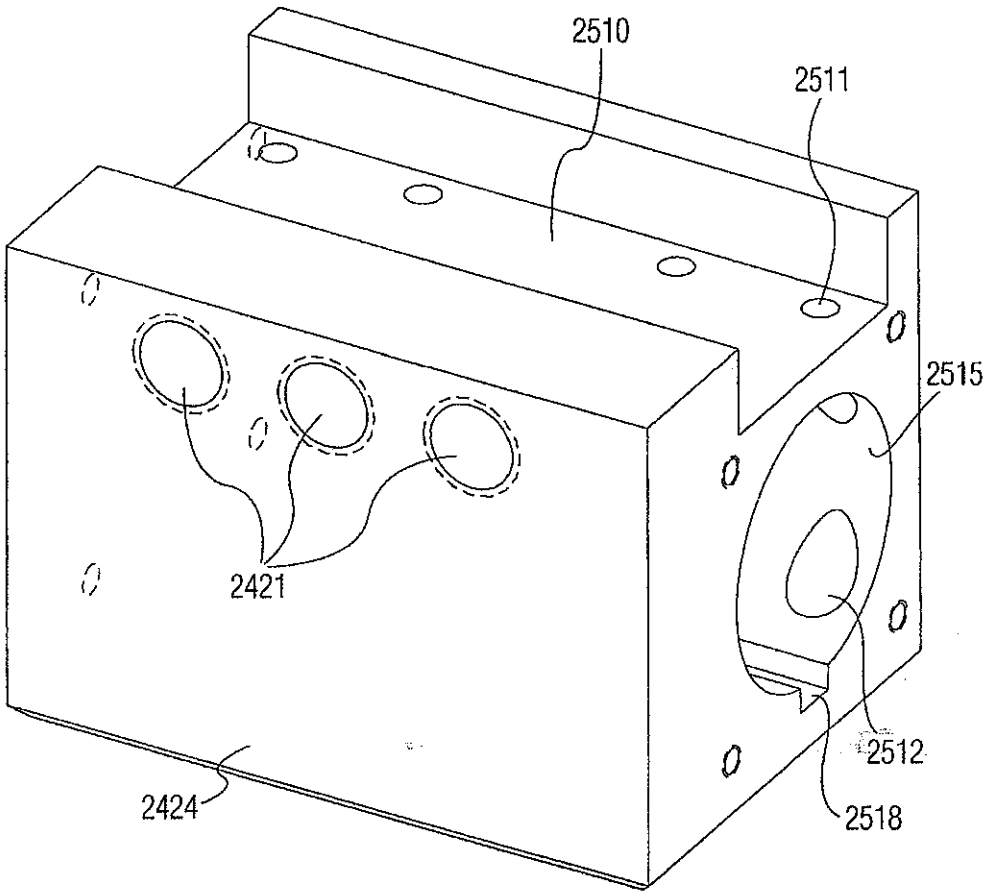

FIG. 23

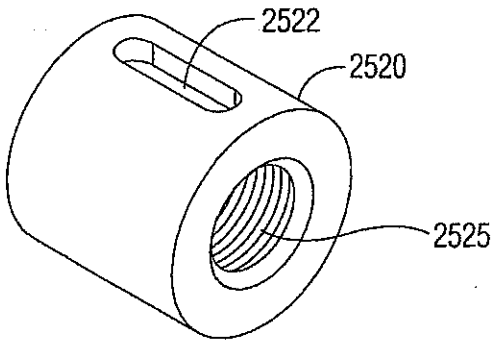

FIG. 24

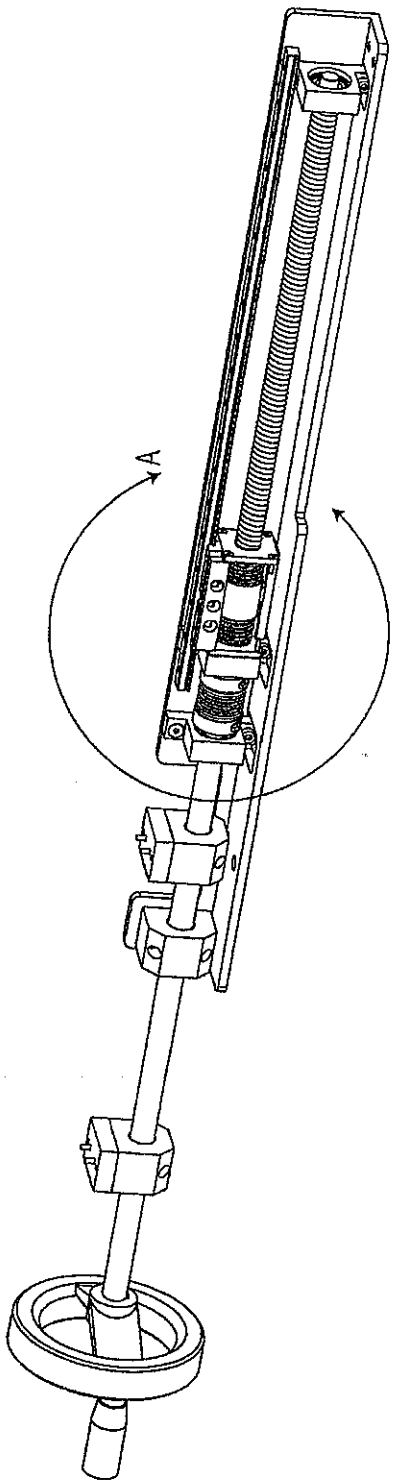

FIG. 25

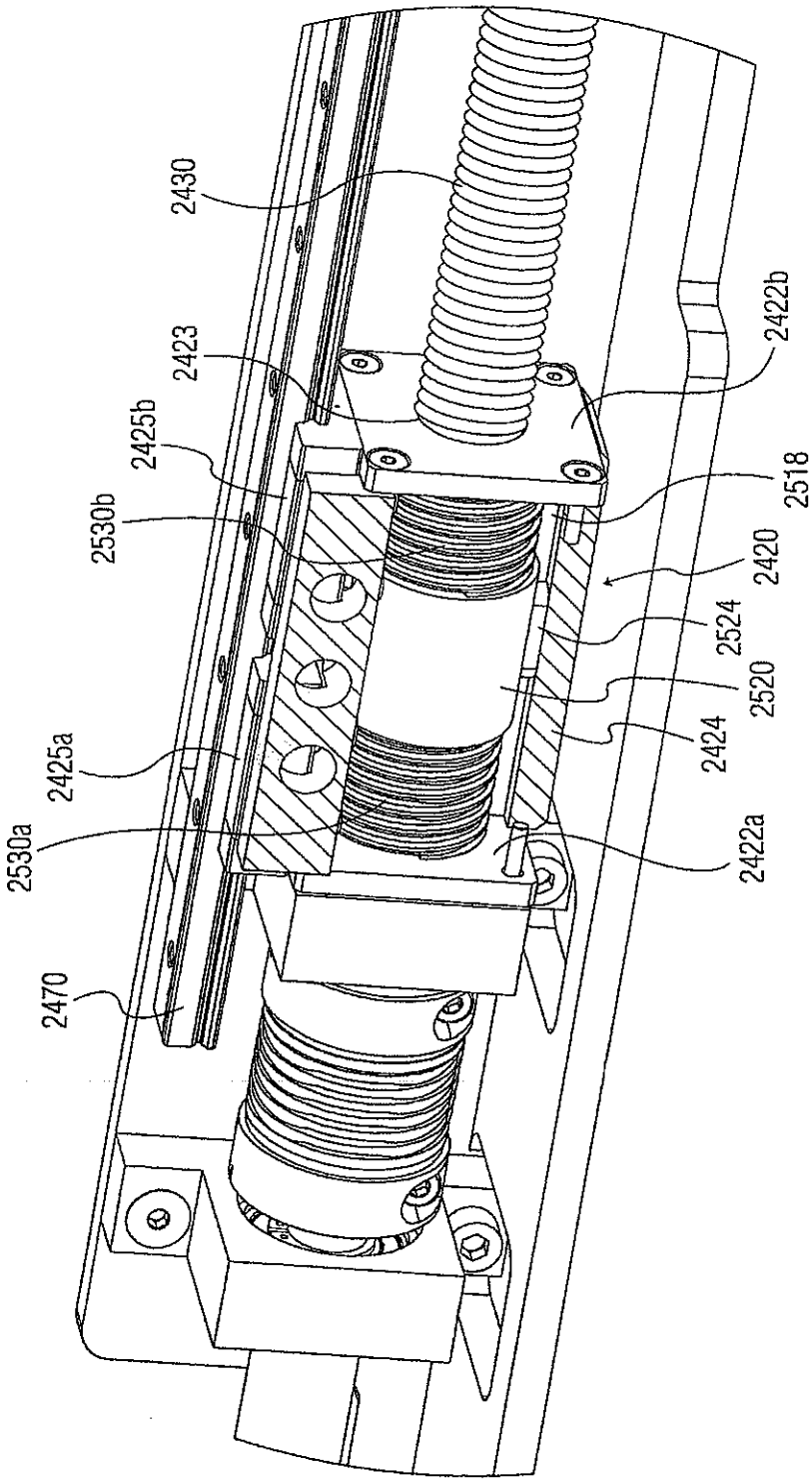
2430
2423
2425b
2530b
2425a
2530a
2470
2422b
2518
2420
2524
2520
2424
2422a

FIG. 25A

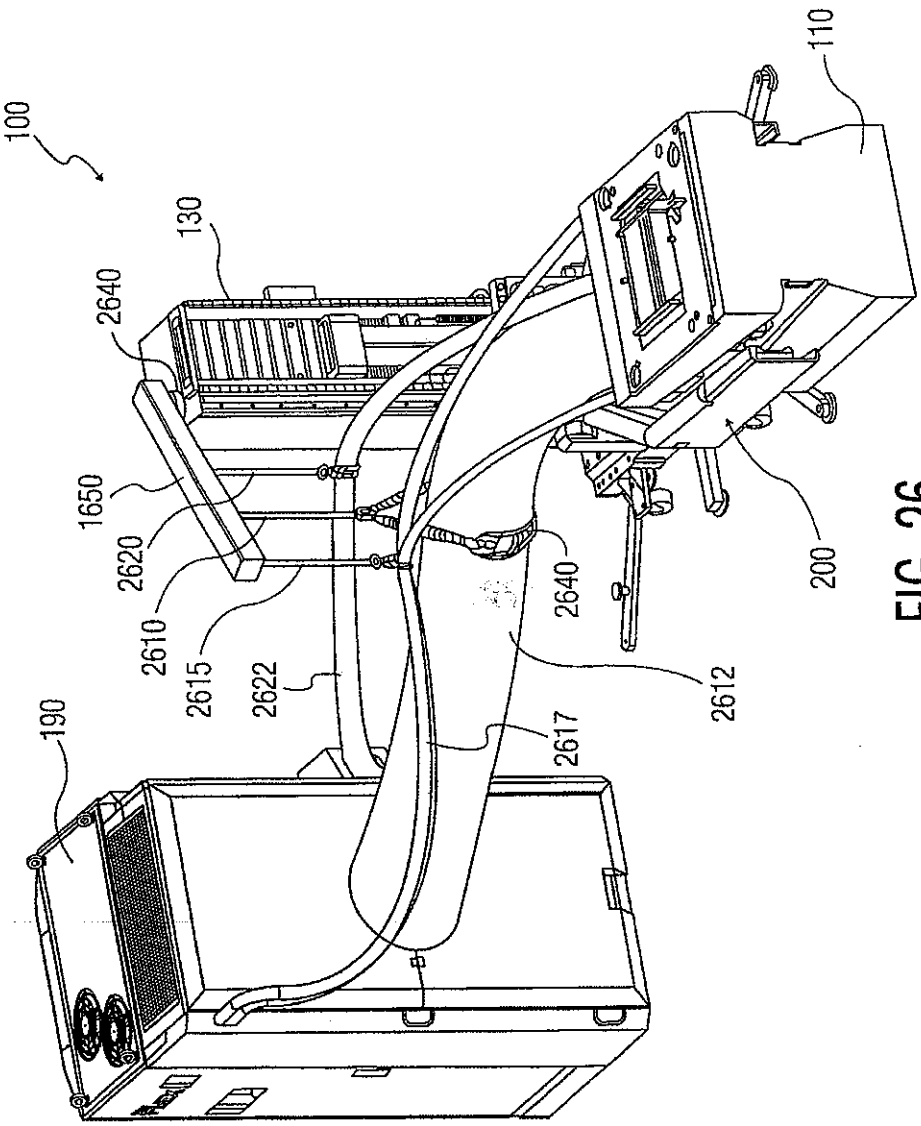
100
110
130
2640
1650
2620
2610
2615
2622
2617
190
2612
2640
200

FIG. 26

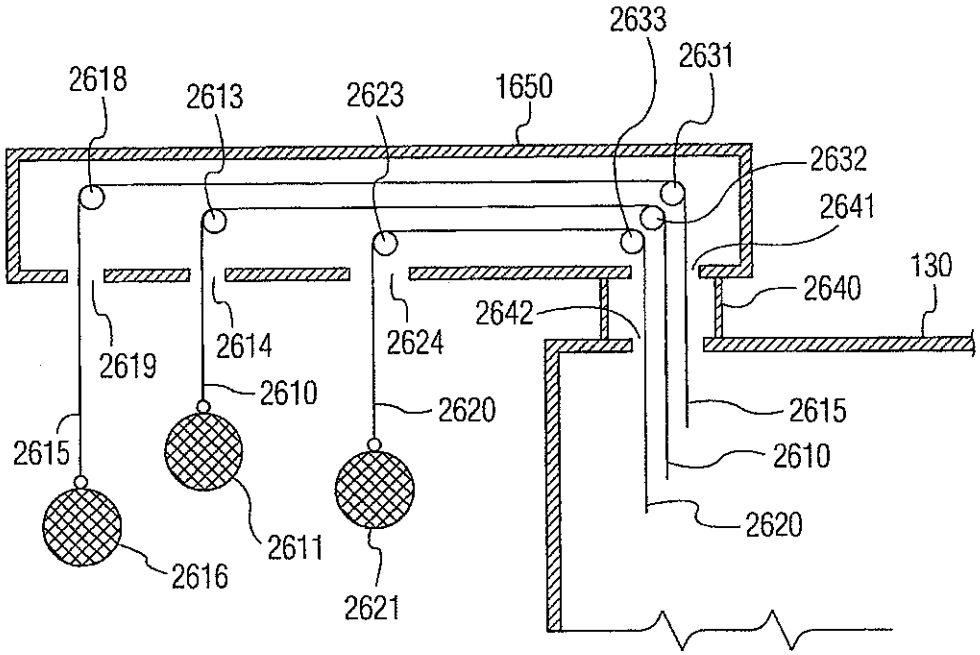
2633
2631
2618
2613
2623
1650
2632
2641
2640
130
2642
2619
2614
2624
2610
2620
2615
2615
2610
2620
2611
2616
2621

FIG. 27

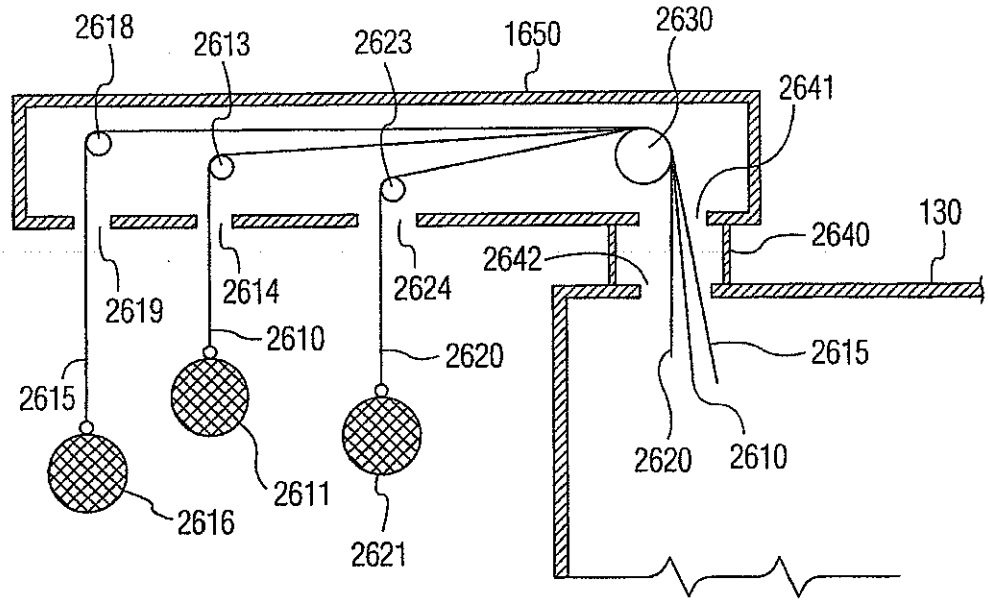
2618
2613
2623
1650
2630
2641
2640
130
2642
2619
2614
2624
2610
2620
2615
2615
2620
2610
2611
2616
2621

FIG. 28

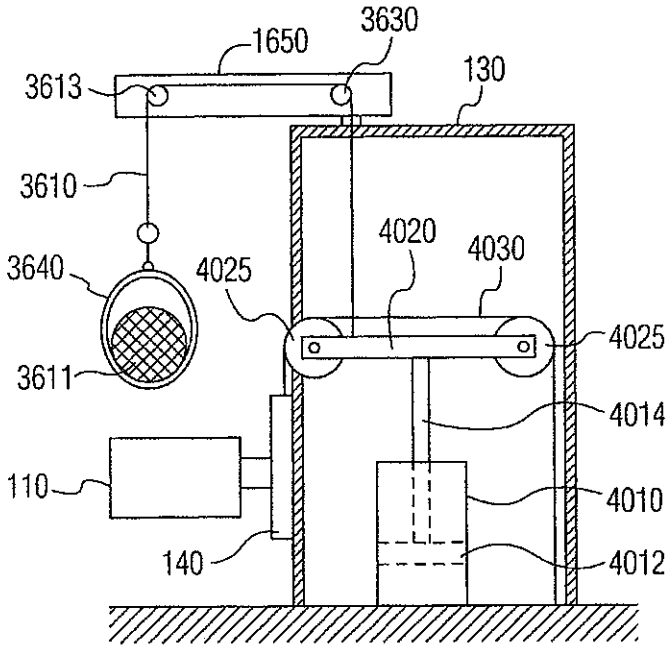

FIG. 29A

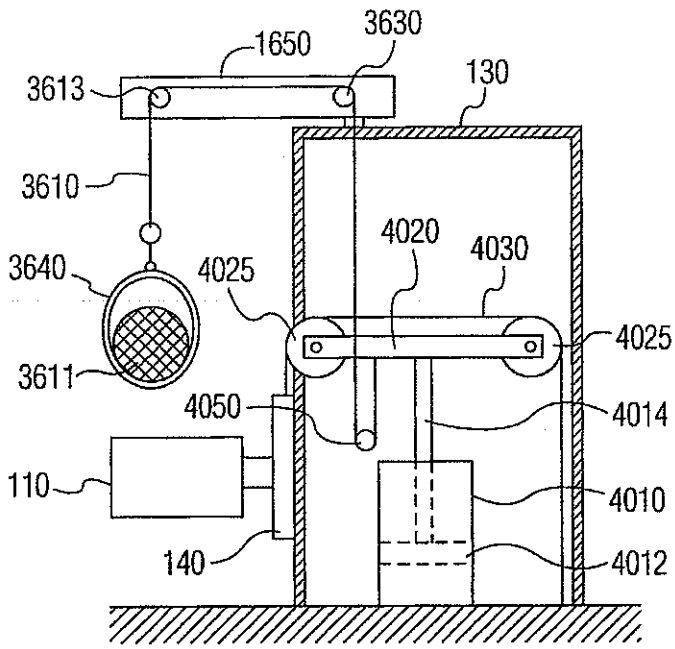

FIG. 29B

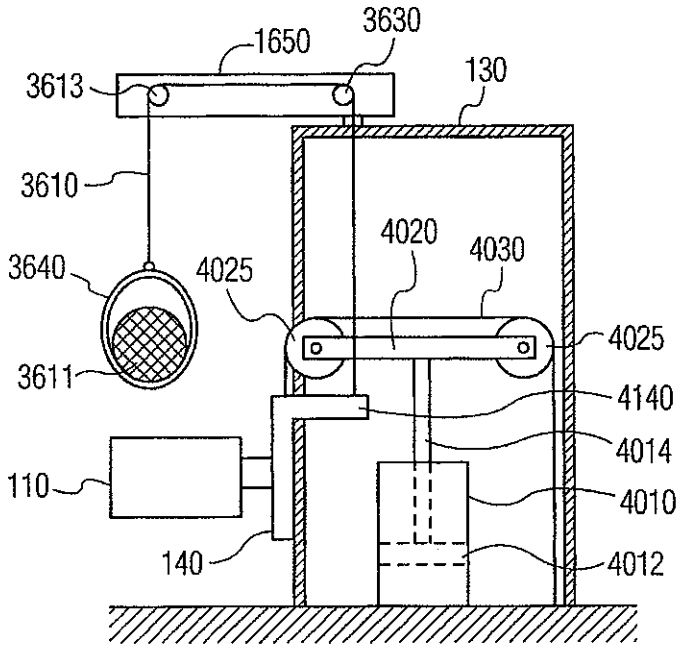

FIG. 29C

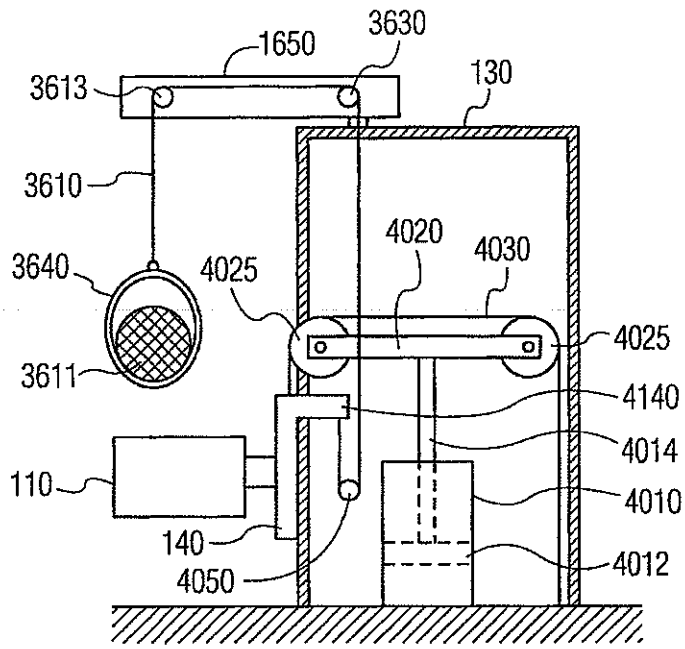

FIG. 29D

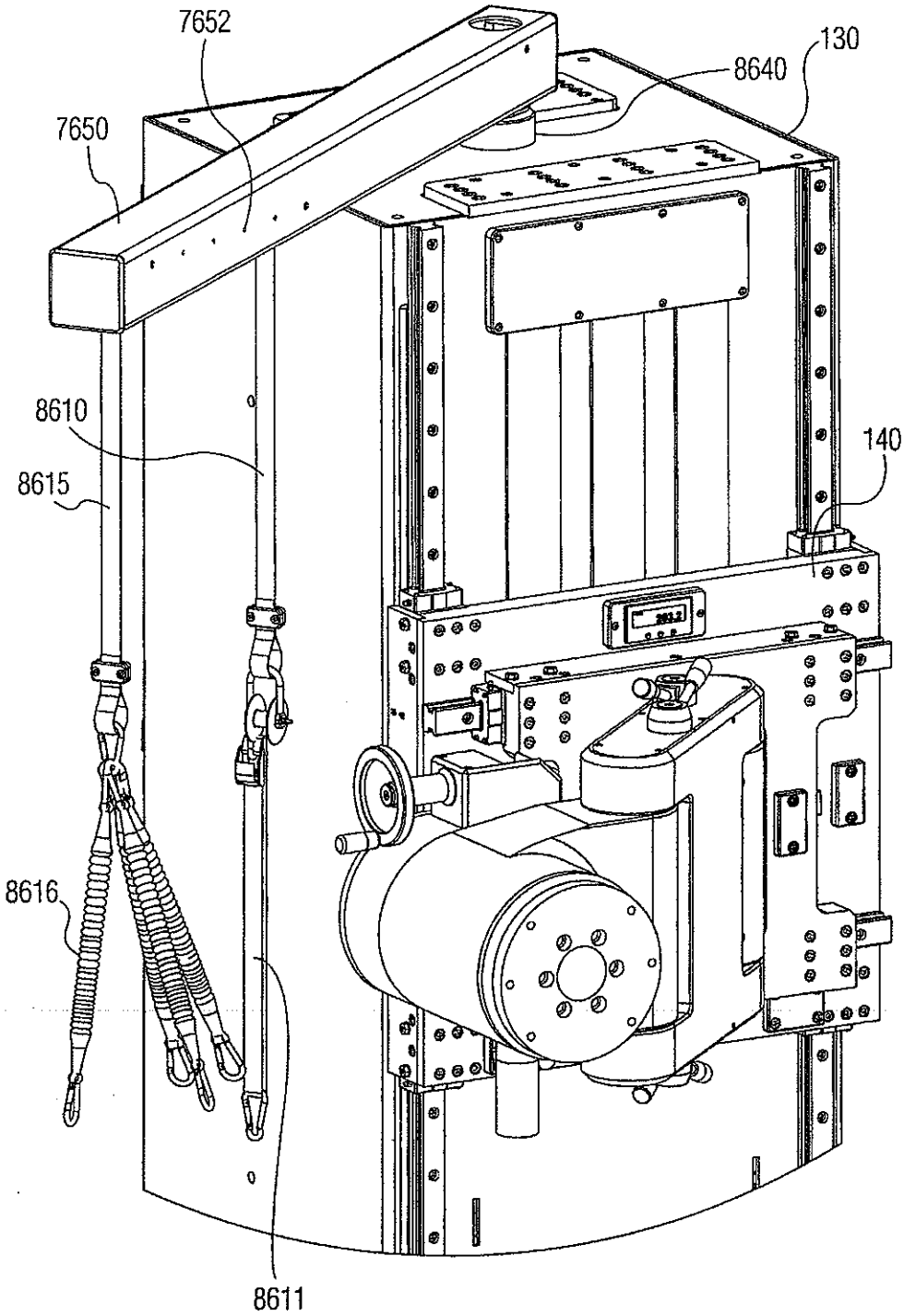

FIG. 30

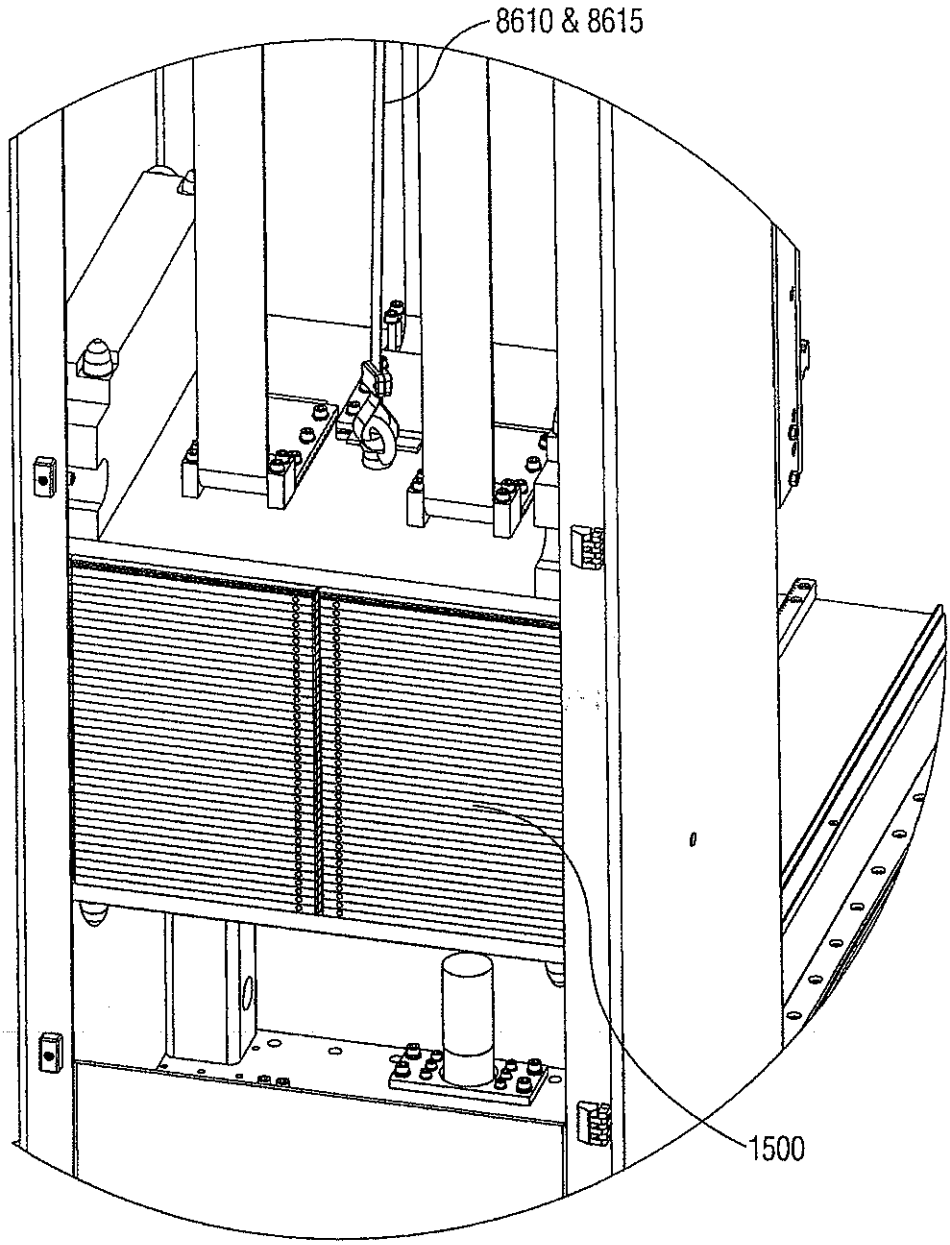

FIG. 31

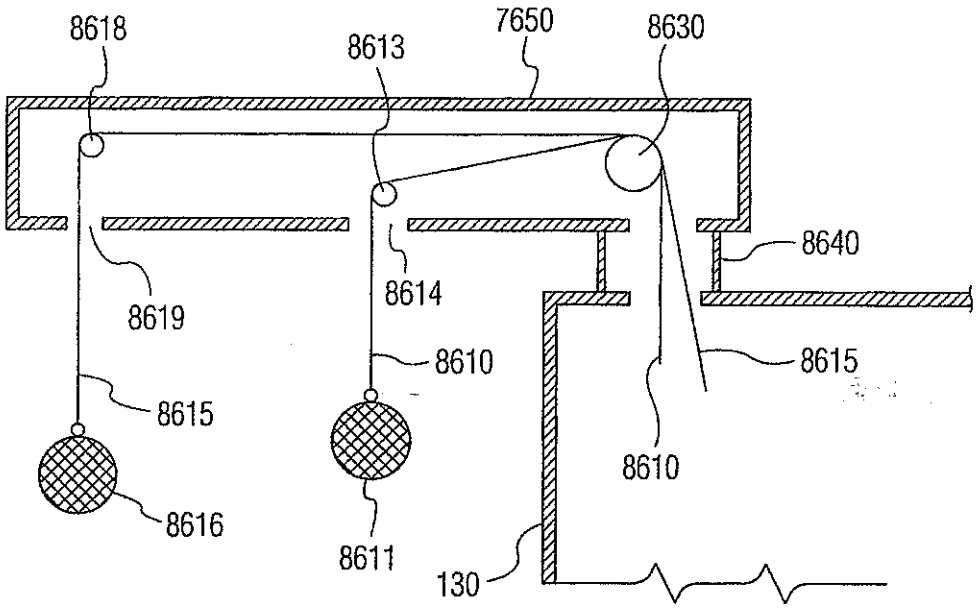
8618
8613
7650
8630
8640
8619
8614
8610
8615
8615
8610
8616
8611
130

FIG. 32

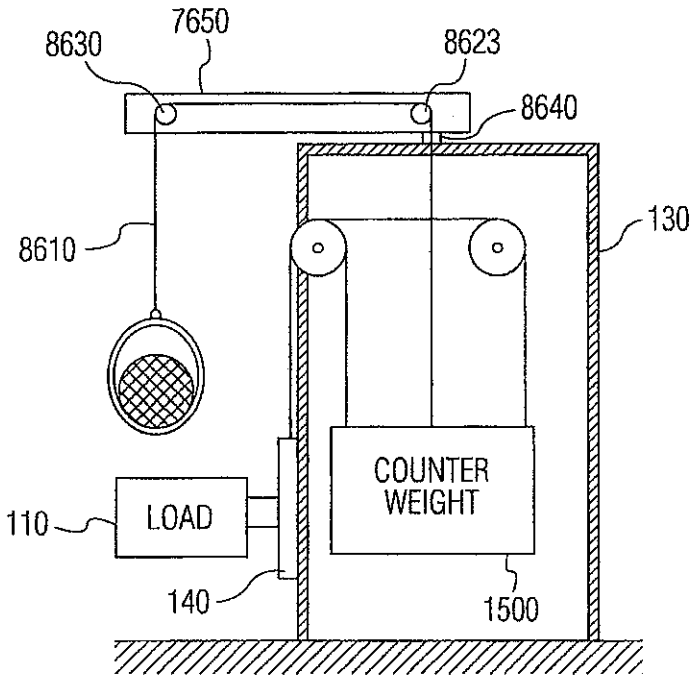

FIG. 33A

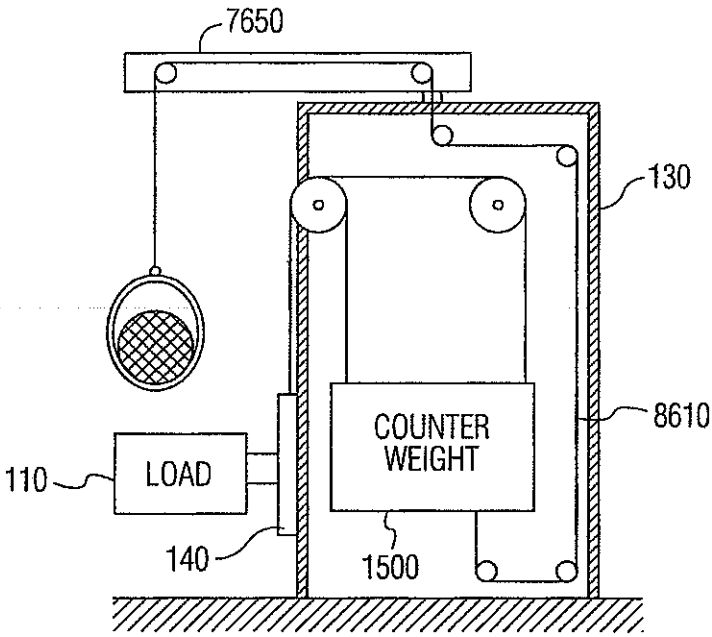

FIG. 33B

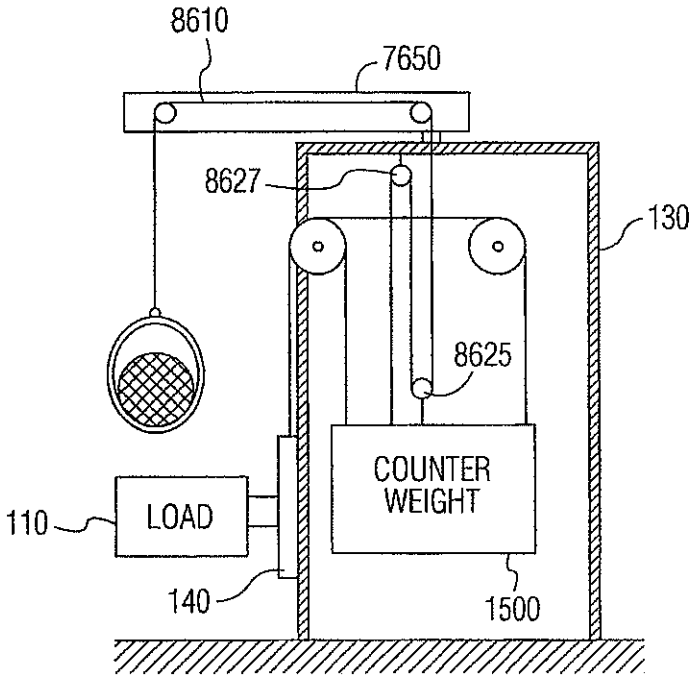

FIG. 33C

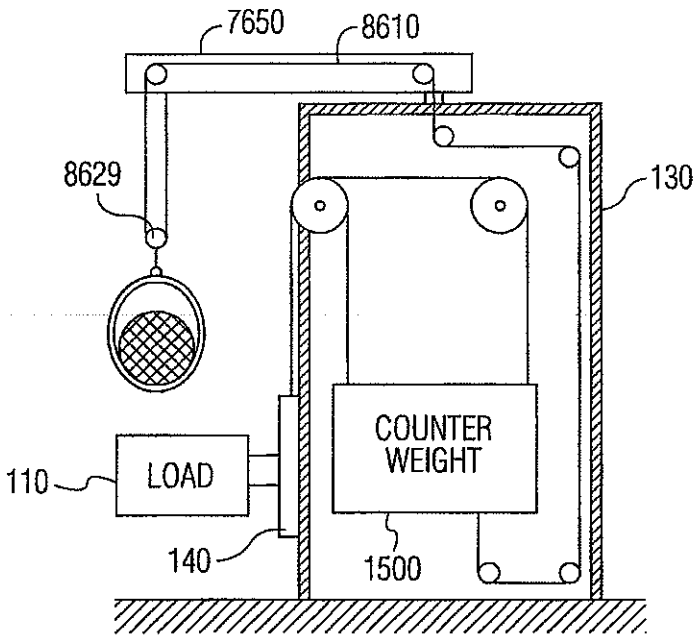

FIG. 33D

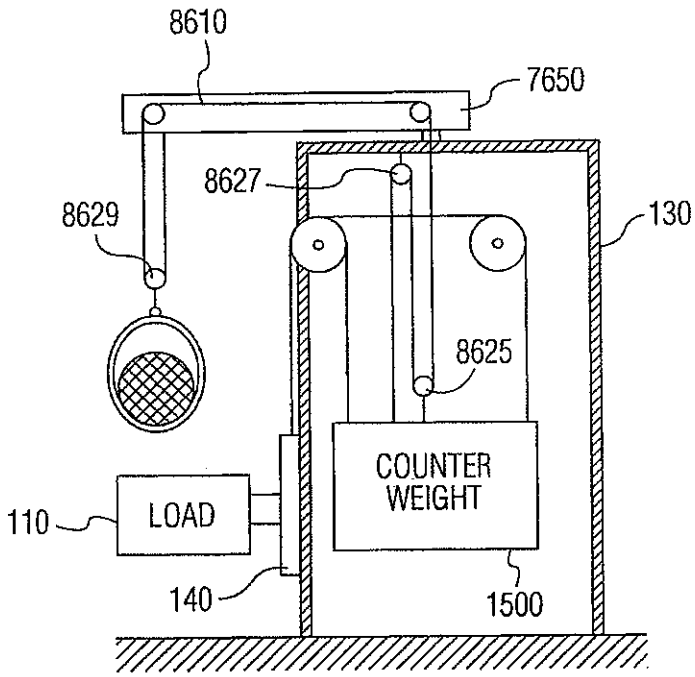
8610
7650
8627
8629
130
8625
COUNTER WEIGHT
110
LOAD
140
1500

FIG. 33E