Flächen zueinander zu verändern, wobei der Arm Einrichtungen (80, 580) zur beweglichen Kopplung eines ersten Endes davon mit einer der zwei Flächen aufweist, und Einrichtungen (64), die an dem zweiten Ende des Arms angeordnet sind, um die winklige Verschiebung des Arms relativ zu der anderen der zwei Flächen, zu ermöglichen, falls sich der Abstand zwischen den zwei Flächen ändert, aufweist, dadurch gekennzeichnet, daß die Verbindungseinrichtung einen Nocken (80; 580) aufweist, der an dem ersten Ende des Arms angeordnet ist, wobei der Nocken eine größere bogenformige Fläche (80B) und eine kleinere bogenförmige Fläche (80A) aufweist und wobei die Nockenflächen einen imaginären Schwenkpunkt bilden, um die sich der Nocken schwenkt, wenn der Trägerarm winklig verstellt wird.

2. Aufhängungseinrichtung nach Anspruch 1, dadurch gekennzeichnet, daß eine Einrichtung im wesentlichen nahe dem ersten Ende des Arms (60; 560) zur betriebsmäßigen Verbindung des Arms mit einem Trägerteil befestigt ist, das an einem Ende der zwei Flächen befestigt ist.

3. Aufhängungseinrichtung nach Anspruch 2, dadurch gekennzeichnet, daß die Einrichtung zur betriebsmäßigen Verbindung eine Stange (95, 592) aufweist, die mit einer Vorspanneinrichtung (90; 500) der Aufhängungseinrichtung verbunden ist.

4. Aufhängungseinrichtung nach Anspruch 1, 2 oder 3, dadurch gekennzeichnet, daß die Einrichtung zur Vornahme der Winkelverstellung eine Fläche (65; 530) aufweist, die das zweite Ende des Arms führt, um sie im wesentlichen parallel zu den zwei Flächen zu bewegen.

5. Aufhängungseinrichtung nach Anspruch 1, dadurch gekennzeichnet, daß der Nocken (80) weiterhin eine Einrichtung (150) zum Eingriff in einen Höheneinstellmechanismus (95) aufweist.

6. Aufhängungseinrichtung nach Anspruch 1, dadurch gekennzeichnet, daß sie Nockenabtasteinrichtungen (120, 122; 522, 523), die mit den Nockenflächen zusammenwirken und die die Bewegung des Nockens (80; 580) festlegen, falls die zwei Flächen relativ zueinander bewegt werden, aufweist.

7. Aufhängungseinrichtung nach Anspruch 6, dadurch gekennzeichnet, daß die Vorspanneinrichtung (90; 500) betriebsmäßig mit dem Arm (60; 560) zur Bildung einer Aufhängungskraft in der Aufhängungseinrichtung in Eingriff steht.

8. Aufhängungseinrichtung nach Anspruch 7, dadurch gekennzeichnet, daß Einrichtungen (70; 570) zur Aufrechterhaltung der Stabilität der Aufhängungseinrichtung vorgesehen sind.

9. Aufhängungseinrichtung nach Anspruch 8, dadurch gekennzeichnet, daß die Nockenabtasteinrichtung (120,122; 522,523) an den Stabilisierungseinrichtungen (70; 570) befestigt sind.

10. Aufhängungseinrichtung nach Anspruch 7, 8 oder 9, dadurch gekennzeichnet, daß weiterhin Einrichtungen (95; 150) zur Einstellung der Höhe der Aufhängungseinrichtung vorgesehen sind.

11. Aufhängungseinrichtung nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß weiterhin Einrichtungen (25; 525) zur Dämpfung der Schwingungsbewegung der Aufhängungseinrichtung vorgesehen sind.

Revendications

1. Système de suspension pour maintenir deux surfaces parallèles l'une à l'autre tandis qu'elles restent généralement espacées, comprenant un bras de support (60 ; 560) pouvant être déplacé angulairement pour faire varier la séparation des deux surfaces, le bras comportant un moyen (80 ; 580) pour coupler de façon mobile une première extrémité de lui-même à l'une des deux surfaces et un moyen (64) disposé au niveau de la seconde extrémité du bras pour permettre un déplacement angulaire dudit bras par rapport à l'autre desdites deux surfaces lorsque la distance séparant les deux surfaces varie ; caractérisé en ce que le moyen de couplage comprend une came (80 ; 580) disposée au niveau de ladite première extrémité du bras, ladite came comportant une surface incurvée plus grande (80B) et une surface incurvée plus petite (80A) et lesdites surfaces de came définissant un pivot imaginaire autour duquel ladite came pivote lorsque le bras de support est déplacé angulairement.

2. Système de suspension selon la revendication 1, incluant un moyen fixé de façon générale à proximité de ladite première extrémité dudit bras (60 ; 560) pour connecter de façon opé-

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rationnelle ledit bras à une partie de suspension fixée à l'une des deux surfaces.

3. Système de suspension selon la revendication 2, dans lequel ledit moyen de connexion opérationnelle comprend une tige (95, 592) connectée à un dispositif de poussée (90 ; 500) du système de suspension.

4. Système de suspension selon la revendication 1, 2 ou 3, dans lequel ledit moyen permettant un déplacement angulaire inclut une surface (65 ; 530) guidant la seconde extrémité du bras afin de le déplacer généralement parallèlement aux deux surfaces.

5. Système de suspension selon la revendication 1, dans lequel ladite came (80) comprend en outre un moyen (150) destiné à coopérer avec un mécanisme de réglage de hauteur (95).

6. Système de suspension selon la revendication 1, incluant un moyen suiveur de came (120, 122 ; 522, 523) destiné à coopérer avec les surfaces de came et à définir le déplacement de ladite came (80 ; 580) lorsque lesdites deux surfaces se déplacent l'une par rapport à l'autre.

7. Système de suspension selon la revendication 6, incluant un moyen de poussée (90 ; 500) coopérant de façon opérationnelle avec ledit bras (60 ; 560) pour produire une force de suspension dans le système de suspension.

8. Système de suspension selon la revendication 7, comprenant en outre un moyen (70 ; 570) pour maintenir la stabilité du système de suspension.

9. Système de suspension selon la revendication 8, dans lequel ledit moyen suiveur de came (120, 122 ; 522, 523) est fixé audit moyen de stabilisation (70 ; 570).

10. Système de suspension selon la revendication 7, 8 ou 9, comprenant en outre un moyen (95, 150) pour régler la hauteur dudit système de suspension.

11. Système de suspension selon l'une quelconque des revendications précédentes, comprenant en outre un moyen (25 ; 525) pour amortir tout mouvement oscillatoire dudit système de suspension.

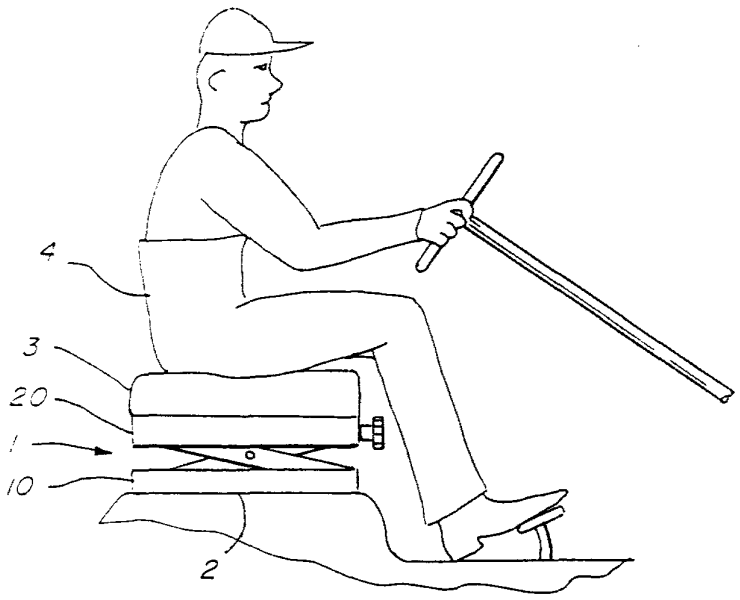


FIG. 1

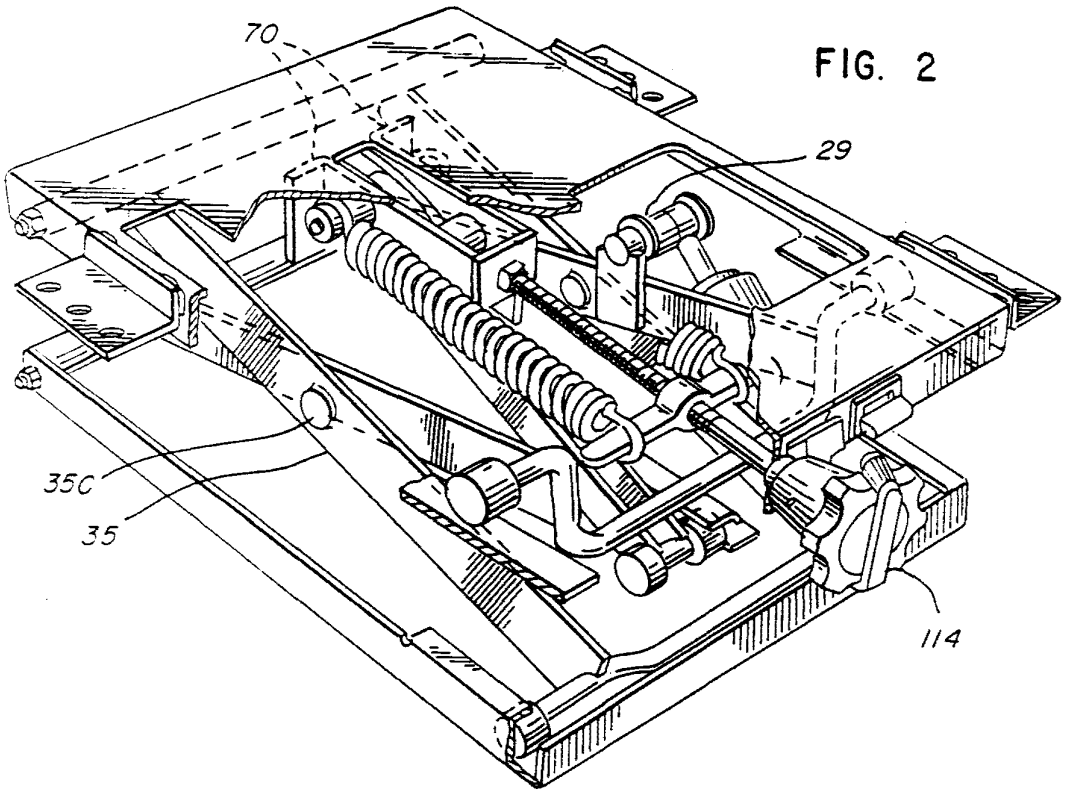


FIG. 2

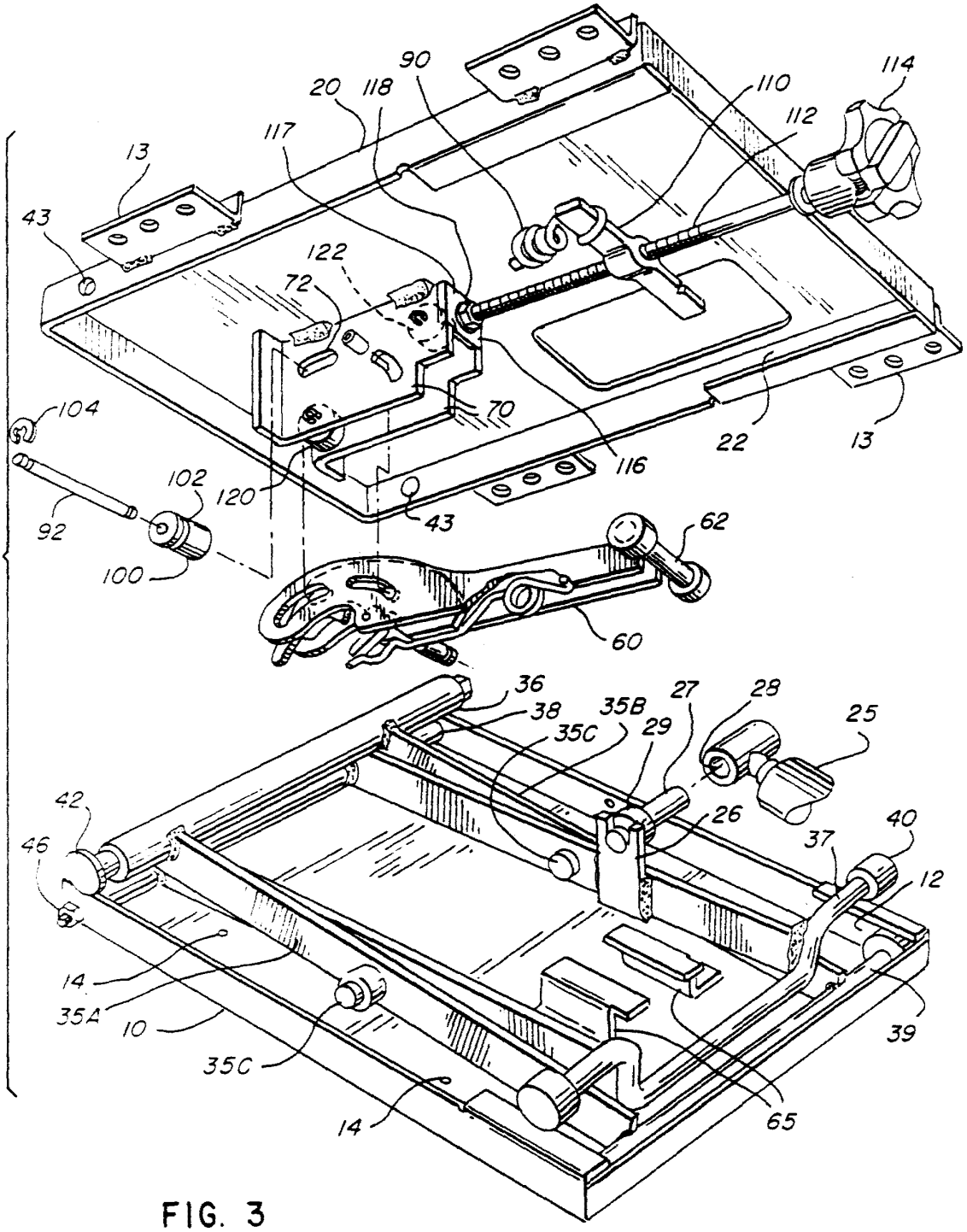

90
20
118
117
114
110
112
13
43
122
72
104
70
116
22
13
102
120
92
43
62
100
60
36
38
35B
27
28
25
35C
29
42
26
40
46
37
12
14
35A
10
39
35C
65
14

FIG. 3

FIG. 4

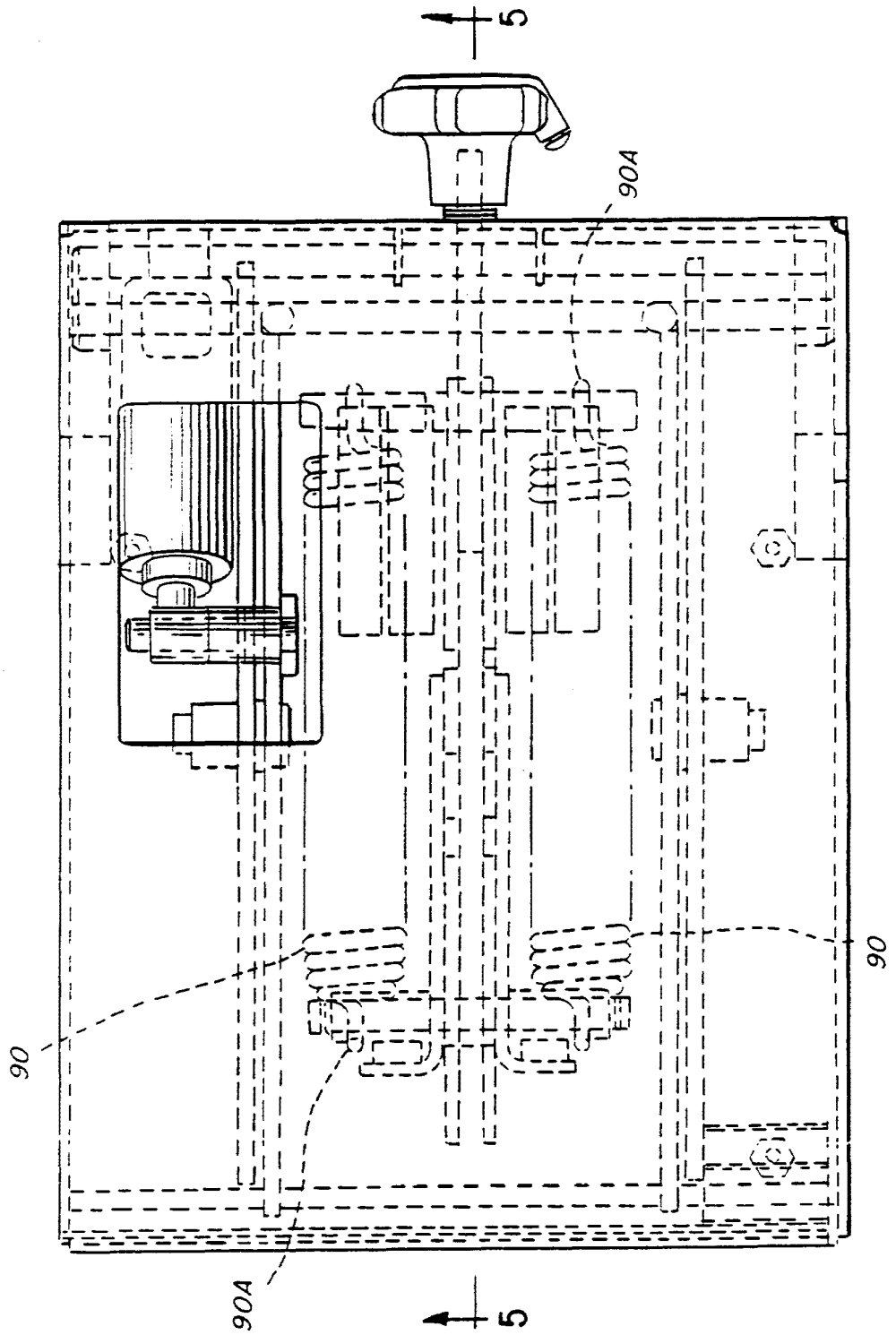


FIG. 5

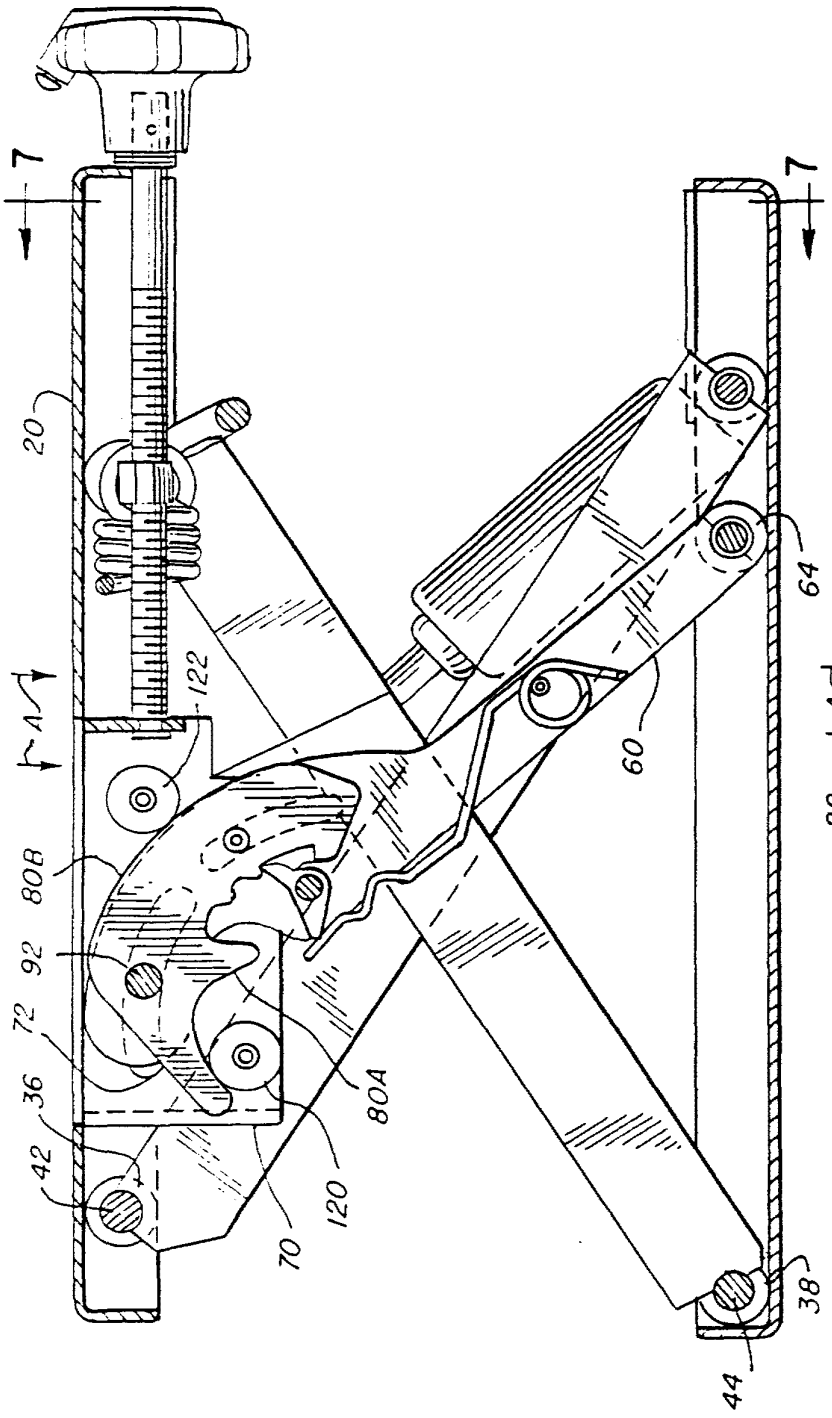
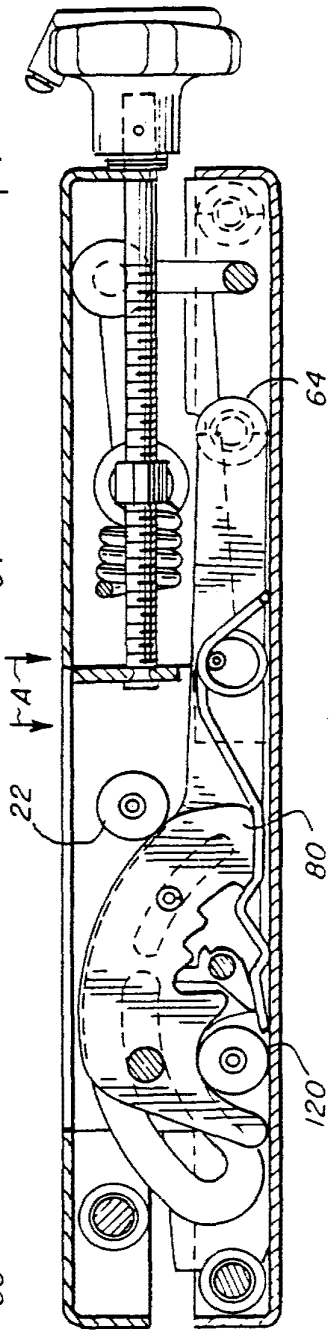


FIG. 6



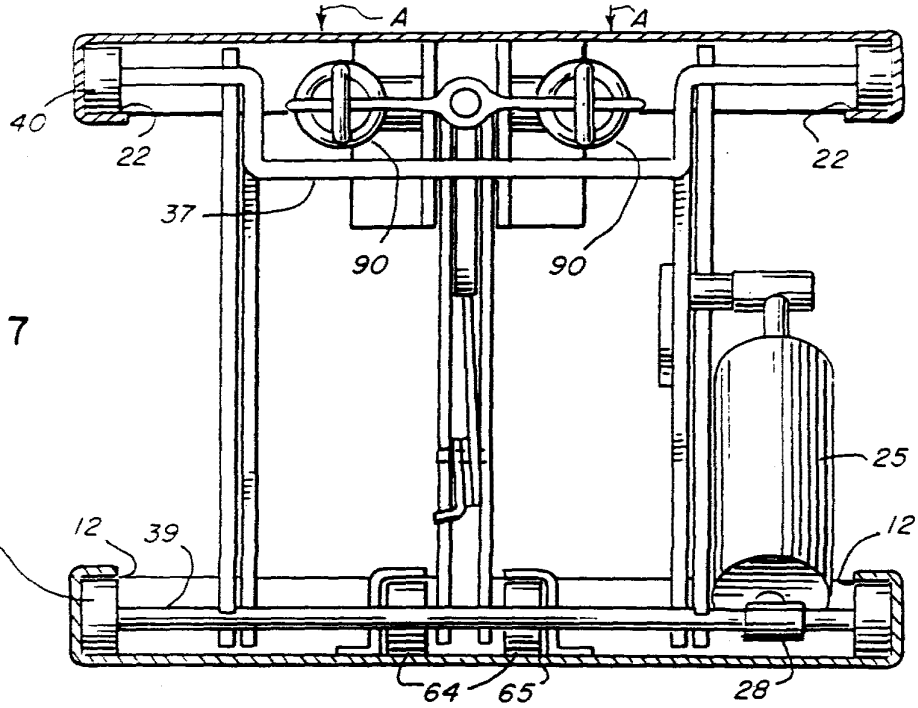

A
A
40
22
22
37
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90
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40
12
39
12
64
65
28

FIG. 7

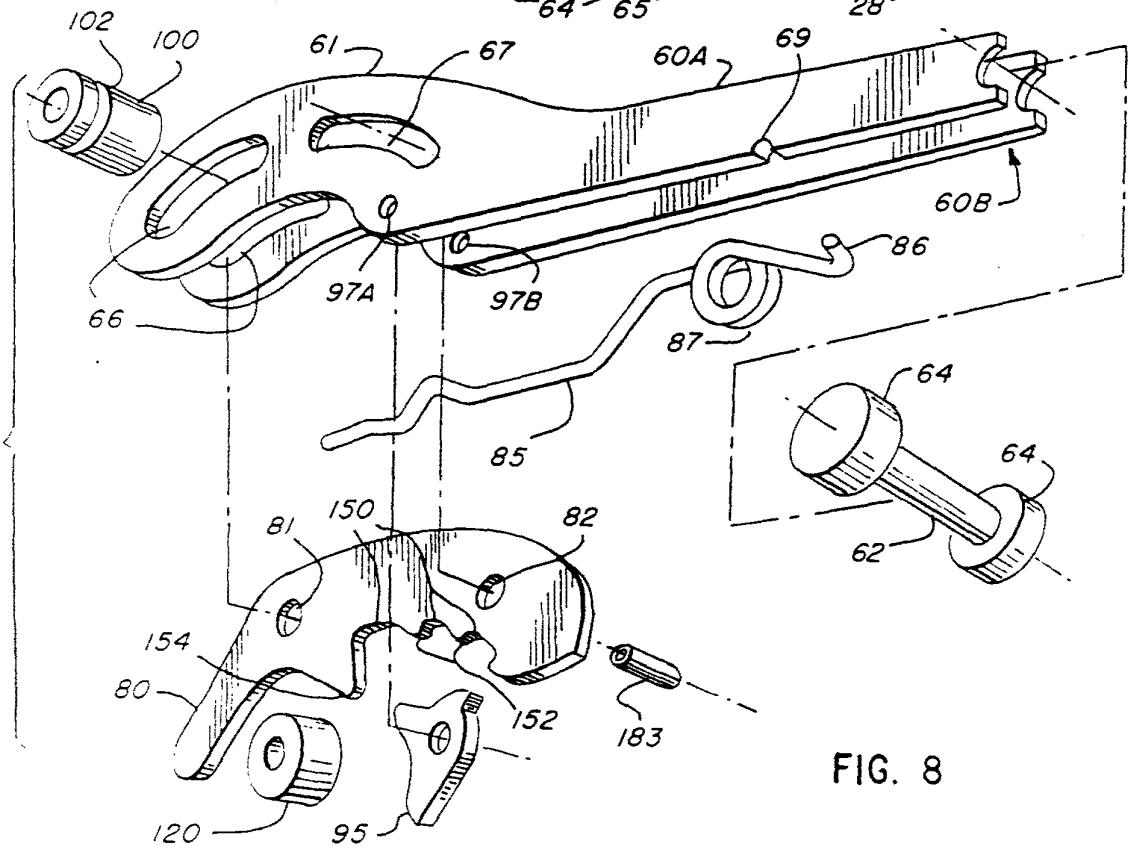

102
100
61
67
60A
69
60B
86
66
97A
97B
87
85
64
64
62
81
150
82
154
80
152
183
120
95

FIG. 8

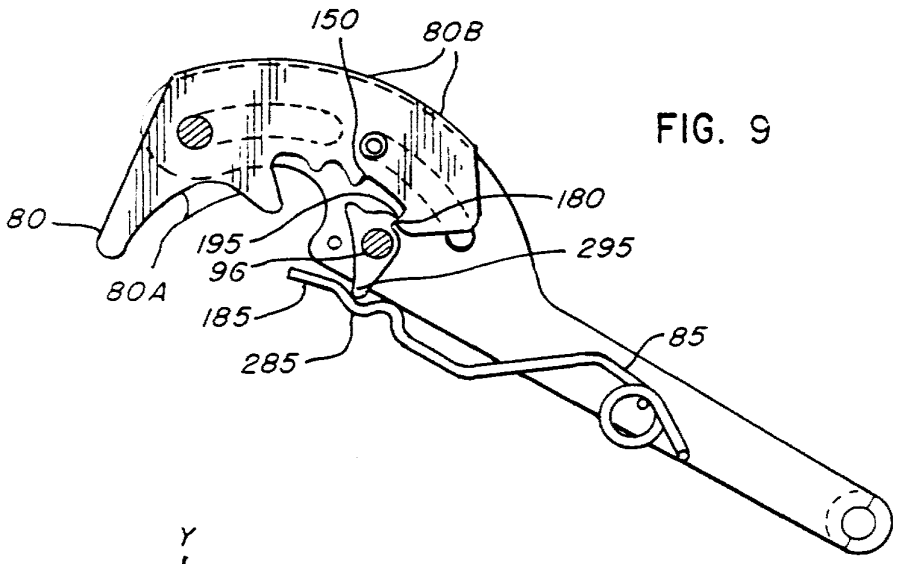


FIG. 9

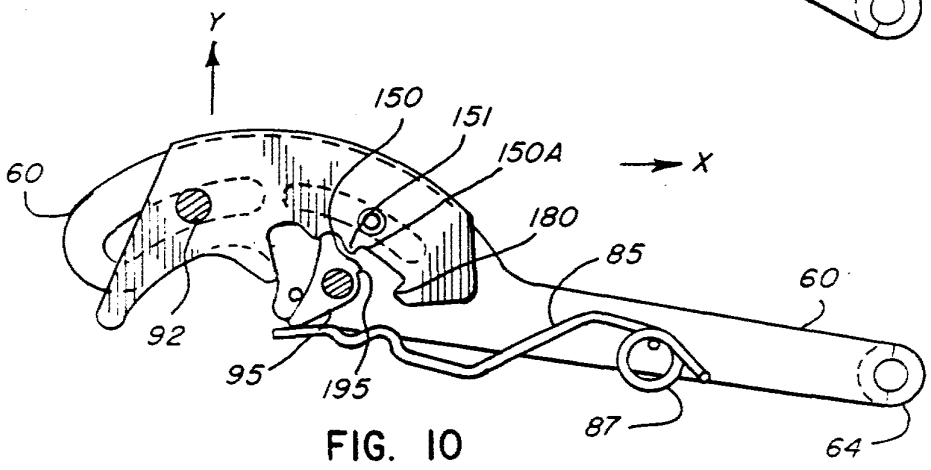


FIG. 10

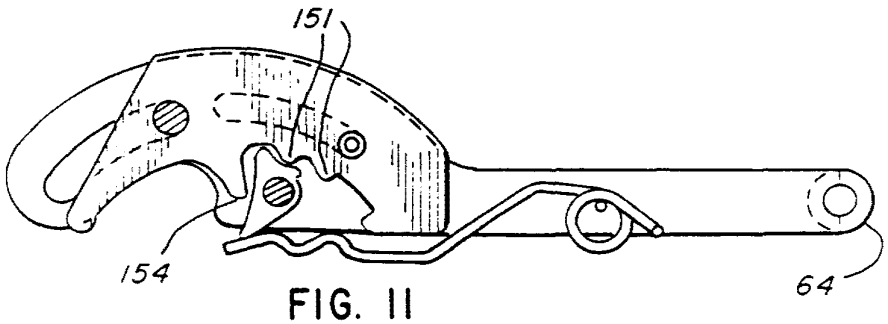


FIG. 11

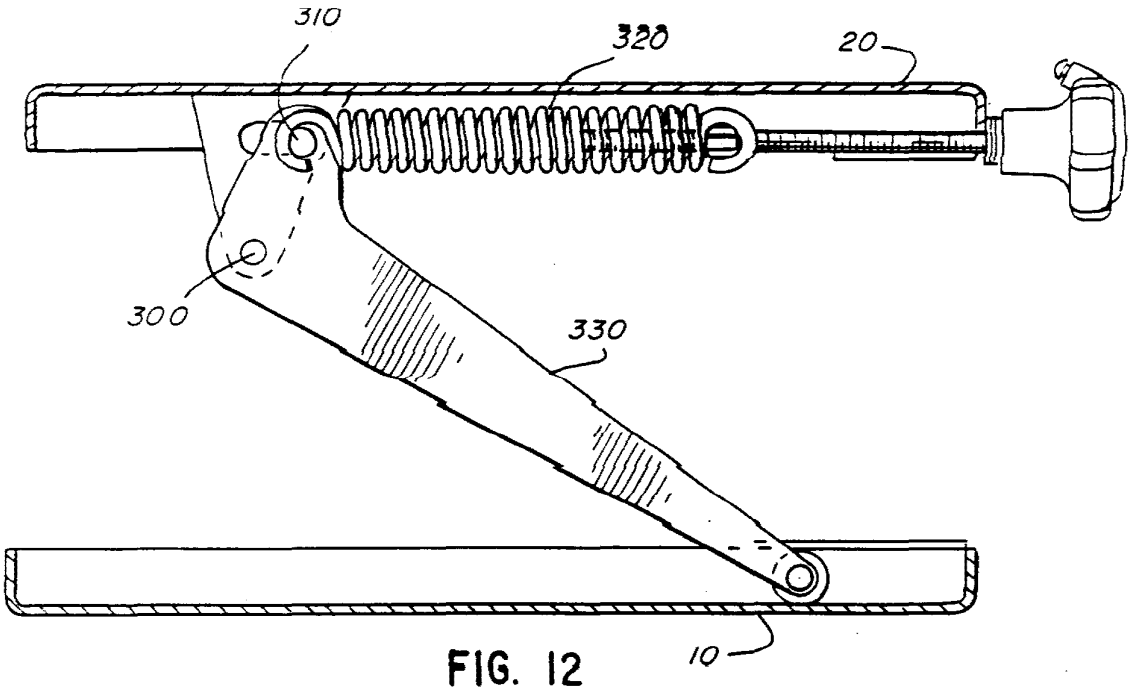


FIG. 12
Prior Art

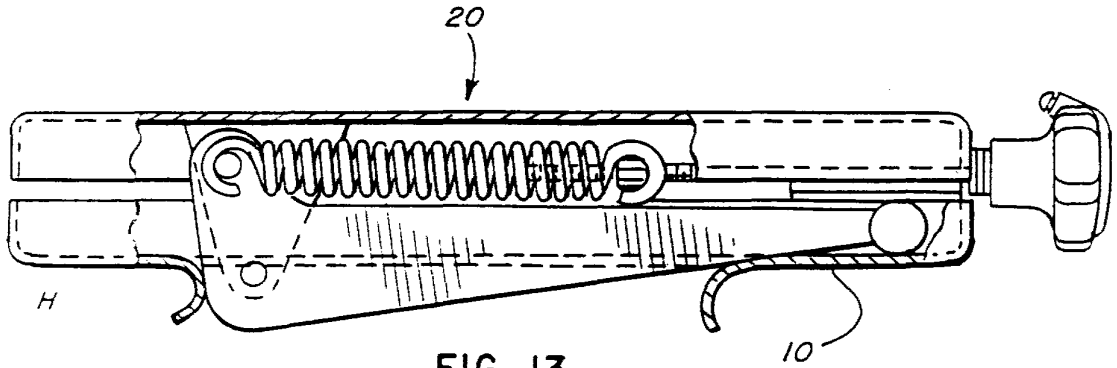


FIG. 13
Prior Art

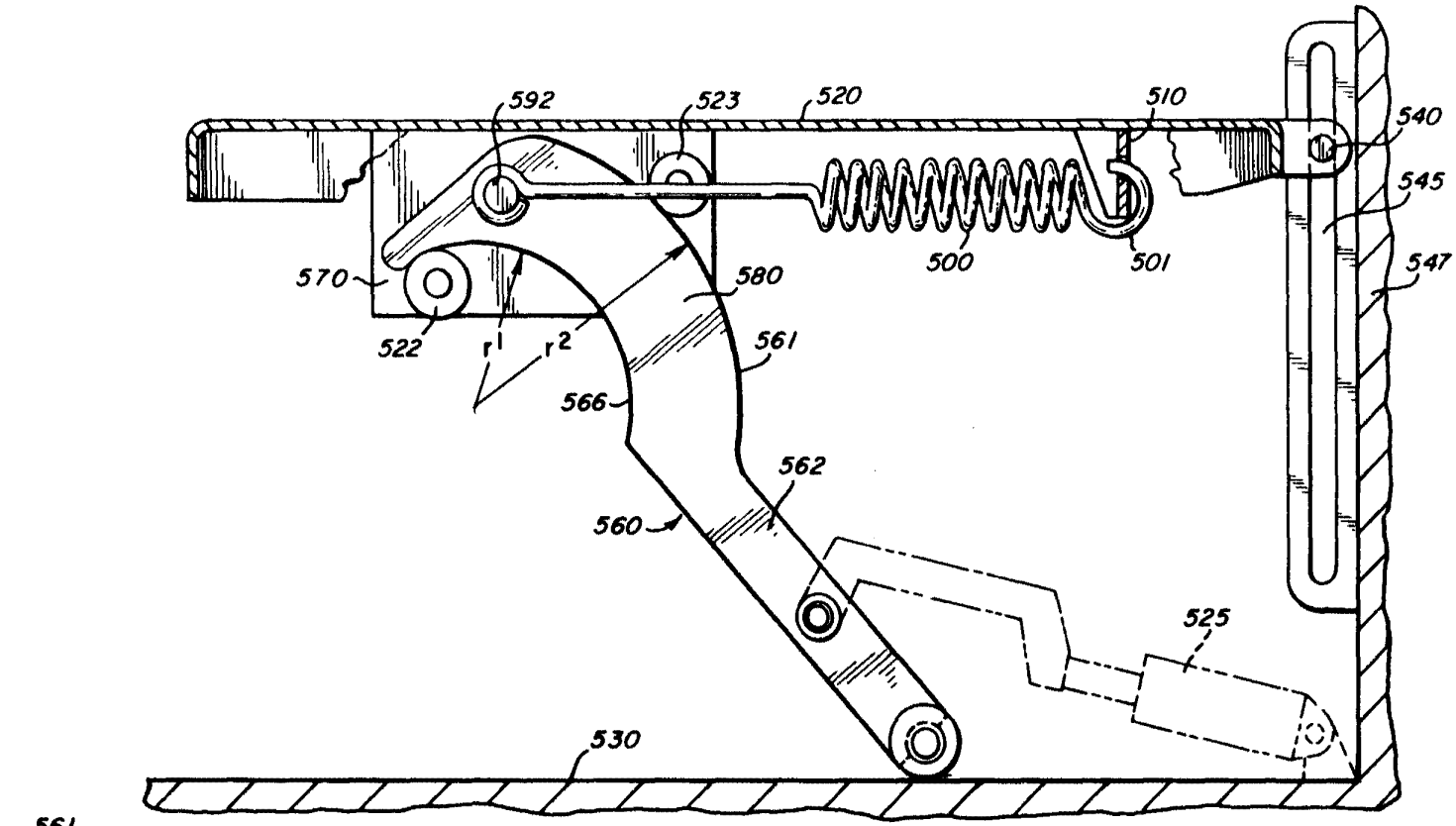

592
523
520
510
540
545
547
500
501
570
580
522
r1
r2
561
566
562
560
525
530

FIG. 15

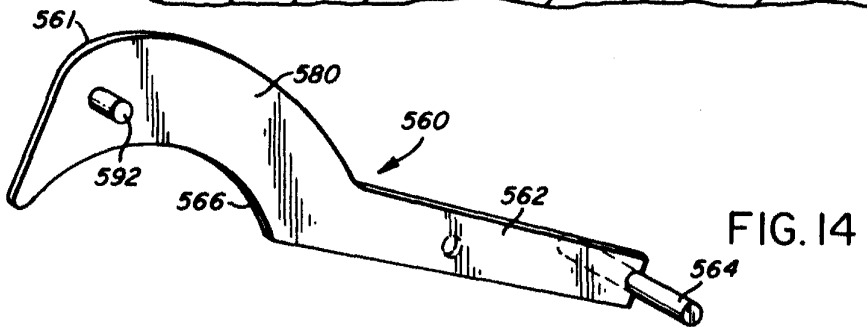

561
580
560
592
566
562
564

FIG. 14

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(19) AUSTRALIAN PATENT OFFICE

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A47B 11/00 (2006.01)

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Abstract:

An adjustable desk platform can include an upper platform defining a first substantially planar work surface and a lower platform defining a second substantially planar work surface. At least one set of pivot arms can connect the lower platform and the upper platform. The set of pivot arms can comprise a primary pivot arm and a secondary pivot arm, wherein the set of pivot arms is adapted to move the upper platform substantially in parallel with the lower platform between a fully raised position and a fully lowered position. A locking mechanism can be associated with the set of pivot arms. The locking mechanism can include: a plurality of perforations located in the primary pivot arm or the secondary pivot arm, a locking set fixed with respect to the upper platform or the lower platform, the locking set including at least one anchor adapted to selectively engage at least one of the plurality of perforations, and a handle connected to the anchor by a linkage. The handle can be adapted to selectively move the anchor into engagement with at least one of the plurality of perforations. Other embodiments and features are also discussed.

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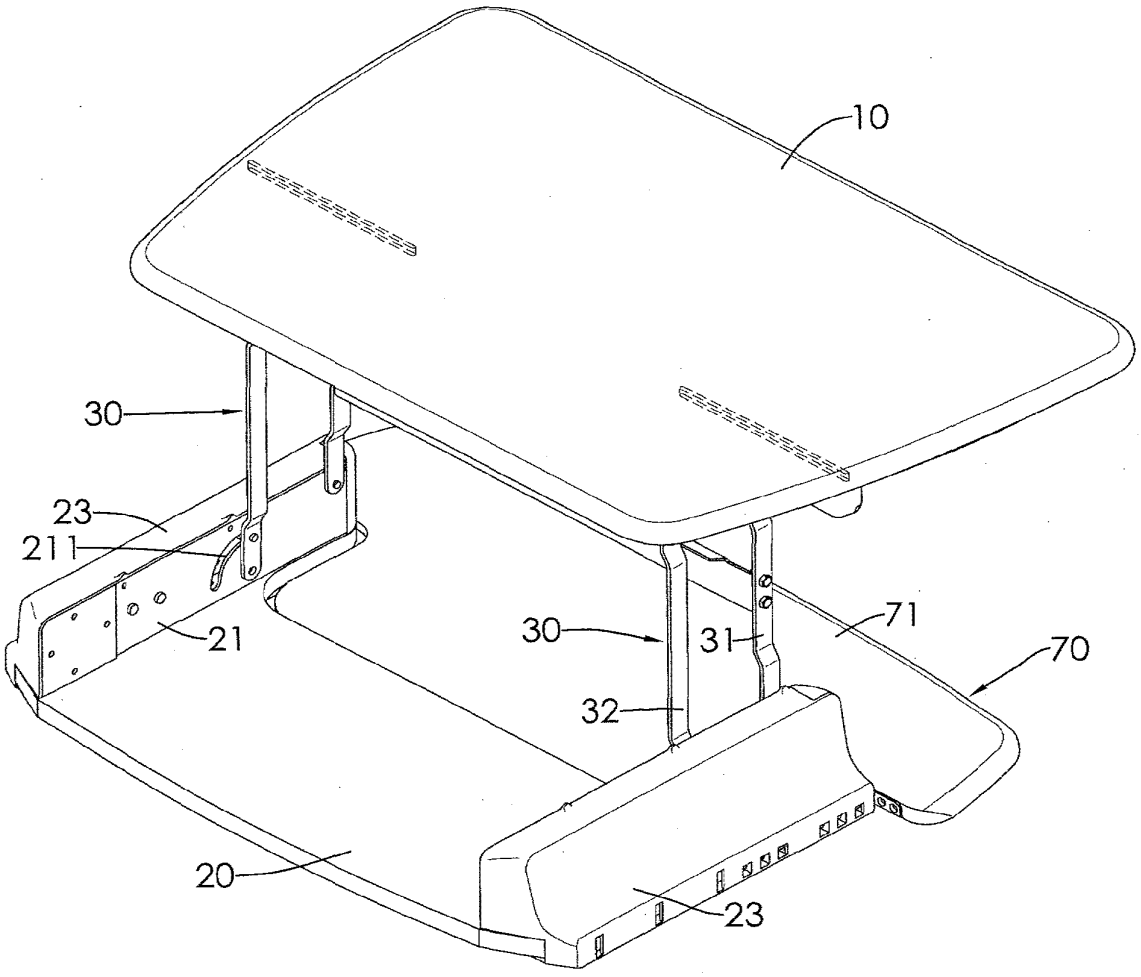


FIG. 1

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ADJUSTABLE DESK PLATFORM

Technical Field:

[0001] This application relates generally to ergonomic workplace environments, and more particularly, to an adjustable desk platform or desk.

Background:

[0002] Sitting for long periods of time during the work day is generally not good for one's health and wellness. Medical studies show that sitting increases the rate of all-cause mortality, especially from cardiovascular disease, diabetes and obesity, for example. People who sit for most of the day are 50 percent more likely to die of heart attacks. Even if you exercise, the longer you sit the greater the chances you will die. Sitting shuts down the circulation of the fat-absorbing enzyme lipase, while standing up engages muscles and promotes the distribution of lipase, which prompts the body to process fat and cholesterol, independent of the amount of time spent exercising.

[0003] There are desks available to be used while standing, and even desks adapted for use while a user is on a treadmill. However, standing for very long periods of time to work is more tiring, dramatically increases the risks of carotid atherosclerosis because of the additional load on the circulatory system, and increases the risks of varicose veins.

[0004] Taking regular breaks from sitting for prolonged periods of time can have several positive outcomes. For example, standing can provide more energy during the work day. In addition, because standing burns more calories than sitting, standing can

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also result in weight loss without changes in diet or exercise. It is also harder to become more tired or lose focus when standing.

[0005] Because regular breaks from sitting are beneficial, and because many people during the work day want to remain productive while taking breaks from sitting, and because everyone will sit and stand for different lengths of time at different times during the day, there exists a need to create a work environment that is ergonomic for someone standing as well as sitting, and allows the transition to be easy, quick, and simple.

SUMMARY:

[0006] According to an embodiment, an adjustable desk platform comprises: an upper platform defining a first substantially planar work surface; a lower platform defining a second substantially planar work surface; at least one set of pivot arms connecting the lower platform and the upper platform, the set of pivot arms comprising a primary pivot arm and a secondary pivot arm, wherein the set of pivot arms is adapted to move the upper platform substantially in parallel with the lower platform between a fully raised position and a fully lowered position; and a locking mechanism associated with the set of pivot arms, the locking mechanism comprising: a plurality of perforations located in the primary pivot arm or the secondary pivot arm, a locking set fixed with respect to the upper platform or the lower platform, the locking set including at least one anchor adapted to selectively engage at least one of the plurality of perforations, and a handle connected to the anchor by a linkage, the handle adapted to selectively move the anchor into

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engagement with at least one of the plurality of perforations.

[0007] According to another embodiment, an adjustable desk platform comprises: an upper platform defining a substantially planar work surface; a lower platform located beneath the upper platform; at least one set of pivot arms connecting the lower platform and the upper platform, the set of pivot arms comprising a primary pivot arm and a secondary pivot arm, wherein the set of pivot arms is adapted to move the upper platform substantially in parallel with the lower platform between a fully raised position and a fully lowered position; a locking mechanism associated with the set of pivot arms, the locking mechanism adapted to releasably lock the upper platform in the fully raised position and in the fully lowered position; and a keyboard tray suspended below the upper platform, the keyboard tray adapted to support a computer keyboard.

[0008] Other features and advantages will become apparent from the following description, taken in connection with the accompanying drawings, wherein, by way of illustration and example, embodiments of the invention are disclosed.

BRIEF DESCRIPTION OF THE DRAWINGS:

[0009] The features and advantages of the invention will be apparent from the following description, as illustrated in the accompanying drawings wherein like reference numbers generally indicate identical, functionally similar, and/or structurally similar elements.

[0010] Figure 1 is a perspective view of an embodiment of an adjustable desk platform.

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[0011] Figure 2 is another perspective view of the adjustable desk platform of Figure 1.

[0012] Figure 3 is a side view of the adjustable desk platform of Figure 1.

[0013] Figure 4 is front view of the adjustable desk platform of Figure 1.

[0014] Figure 5 is perspective view of parts of an embodiment of a locking mechanism of the adjustable desk platform of Figure 1.

[0015] Figure 6 is an exploded view of the locking mechanism of Figure 5.

[0016] Figure 7 is a perspective view of an embodiment of a biasing mechanism of the adjustable desk platform of Figure 1.

[0017] Figure 8 is a side view of an embodiment of the locking mechanism of the adjustable desk platform of Figure 1, showing the handle in the locked position.

[0018] Figure 9 is a side view of the locking mechanism of Figure 8 showing the handle in the un-locked position.

[0019] Figure 10 is a side view of the adjustable desk platform of Figure 1 showing an example of directional movement of the upper platform relative to the lower platform and the pivot arms.

[0020] Figure 11 is a side view of an embodiment of the biasing mechanism.

[0021] Figure 12 is a perspective view of an embodiment of the adjustable desk platform, showing the tray.

[0022] Figure 13 is a bottom view of an embodiment of the adjustable desk platform showing the tray and counter weights.

[0023] Figure 14 is a perspective view of an embodiment of the adjustable desk platform including a keyboard tray.

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[0024] Figure 15 is an enlarged, perspective view of the pivot arms of an embodiment of the adjustable desk platform.

[0025] Figure 16 is perspective view of an embodiment of the adjustable desk platform including legs.

[0026] Figure 17 is a partially exploded, perspective view of the adjustable desk platform with legs of Figure 16.

[0027] Figure 18 is a perspective view of another embodiment of the adjustable desk platform, shown in a fully lowered position.

[0028] Figure 19 is a perspective view of the adjustable desk platform of Figure 18, shown in a fully raised position.

[0029] Figure 20 is a side view of the adjustable desk platform of Figure 18, shown in the fully lowered position.

[0030] Figure 21 is a side view of the adjustable desk platform of Figure 18, shown in the fully raised position.

DETAILED DESCRIPTION:

[0031] Embodiments of the invention are discussed in detail below. In describing embodiments, specific terminology is employed for the sake of clarity. However, the invention is not intended to be limited to the specific terminology so selected. While specific embodiments are discussed, it should be understood that this is done for illustration purposes only. A person skilled in the relevant art will recognize that other components and configurations can be used without departing from the spirit and scope of the invention.

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[0032] Embodiments of the adjustable desk platform described herein can transition between a lower operating position and an upper operating position quickly, easily, and simply. This may be useful, for example, to provide height adjustability to conventional, fixed desktop workspaces. Alternatively, embodiments of the adjustable desk platform can include their own support legs.

[0033] Referring to Figures 1 to 4, the adjustable desk platform can generally include an upper platform 10, a lower platform 20, and left and right pivot arm sets 30, which can connect the upper platform 10 and lower platform 20. According to embodiments, the upper platform 10 and/or the lower platform 20 can include a substantially planar top surface that can serve as a working surface for the user, for example, to support reading materials, papers, computers, other electronic devices, and the like. The adjustable desk platform can include one or more locking mechanisms 40, for example, one associated with each of the left and right pivot arm sets 30. The adjustable desk platform can also include one or more biasing mechanisms 50 (see Figure 3), for example, each associated with the left and right pivot arm sets 30. The adjustable desk platform can also include a reinforcement member 60, visible in Figures 2 and 4.

[0034] Referring to Figure 2 and Figures 4 to 6, lower mounting brackets 11 can be located on upper platform 10, for example, secured thereto, or formed integrally therewith. As shown in the figures, two lower mounting brackets 11 can be secured to the underside of the upper platform 10 at opposite sides of the upper platform 10. As shown in Figures 2 to Figure 4, lower platform 20 is located below the upper platform 10, and the pivot arm sets selectively adjust the height of the upper platform 10 with

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respect the lower platform 20, for example, with the upper platform 10 and the lower platform 20 remaining substantially parallel to one another during movement.

[0035] Lower platform 20 can include two upper mounting brackets 21, for example, one located near each side of the lower platform 20. The upper mounting brackets can be formed integrally with the lower platform 20, or alternatively, secured thereto using fasteners or other means known in the art. Lower platform 20 can also include one or more counter weights 22, and a housing 23 near each upper mounting bracket 21.

[0036] Referring to Figures 1 and 2, the upper mounting brackets 21 can be located on the top surface of the lower platform 20, for example, at opposite sides thereof, and the lower mounting brackets 11 can be located on the bottom surface of the upper platform 10, for example, in registry with the upper mounting brackets 21. Each upper mounting bracket 21 can include an arc slot 211, shown in Figures 1 and 3. One of the housings 23 can be located adjacent the outer side of each of the upper mounting brackets 21. As shown in Figure 2, one or more counter weight(s) 22 can be located on the bottom surface of lower platform 20.

[0037] As shown in Figures 3 and 5, each pivot arm set 30 is connected to the respective lower mounting bracket 11 on the upper platform 10 and to the respective upper mounting bracket 21 on the lower platform 20. As shown, each pivot arm set 30 can include a main pivot arm 31 and secondary pivot arm 32. The pivot arms 31, 32 can be pivotably connected to the lower mounting bracket 11 at one end, and to upper mounting bracket 21 at the other end using, for example, rivets, fasteners, or other structures known in the art. The main pivot arm 31 and secondary pivot arm 32 can be connected to the lower mounting bracket 11 and upper mounting bracket 21 at different

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locations, as shown in the figures. The pivot arm sets 30 can be connected to the upper mounting bracket 21 at the opposite side of the respective housing 23. For example, the pivot arm sets 30 can connect to the interior side of the upper mounting brackets 21, while the housings 23 can connect to the exterior sides of the upper mounting brackets 21.

[0038] Referring to Figures 5 and 6, the upper end of each primary pivot arm 31 can include a locking part 311 including a plurality of perforations 3111. The plurality of perforations 3111 can include at least one perforation that is selectively movable into alignment with a hole 111 in the respective lower mounting bracket 11. Referring to Figures 3 and 7, each secondary pivot arm 32 can include a boss 321 that slides within the arc slot 211 of the respective upper mounting bracket 21.

[0039] Referring to Figures 2, 4, and 8, one or more locking sets 40 can be located on the bottom of the upper platform 10. For example, each locking set 40 can be fixed on the respective lower mounting bracket 11, however other locations are possible. Referring to Figure 6, each locking set 40 can include anchors 41. Each anchor 41 can selectively engage one of the perforations 3111 of locking part 311, and can also engage through the hole 111 of lower mounting bracket 11, thereby fixing the main pivot arm 31 in position with respect to the respective lower mounting bracket 11. Furthermore, as shown in Figures 5 and 8, each locking set 40 can include a handle 42 and a linkage mechanism 43.

[0040] Referring to Figures 5, 6, and 8, each linkage set 43 can include a first linkage 431, a second linkage 432, and a third linkage 433, which, according to an embodiment, are pivotably connected to one another in sequence. Each first linkage

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431 can be located underneath the bottom of the upper platform 10, and can have a pivot joint with handle 42. Each third linkage 433 can be connected with the respective anchor 41, for example, by rivets, pins, or other structures extending through the third linkage 433 and anchor(s) 41 as shown in Figures 9 and 10. Each locking set 40 can contain a spring 44, adapting piece 45, and housing 46. Each adapting piece 45 of locking set 40 can be secured on the bottom of upper platform 10, and can include a pivot joint with second linkage 432. One end of spring 44 can be connected with adapting piece 45 and the other end of spring 44 can be connected with second linkage 432 in proximity to the first linkage 431. Each locking set 40 can include a housing 46 that can cover at least the second linkage 432, third linkage 433, spring 44, adapting piece 45, and anchor 41. The housing 46 can be connected to the underside of the upper platform 10.

[0041] As shown in Figures 3 and 7, each biasing mechanism 50 can be located on lower platform 20, and can be connected with pivot arm sets 30 to assist the upper platform 10 in raising/lowering with respect to the lower platform 20. Each biasing mechanism 50 can include a spring 51, a support 52, a booster spring 53, and a pivot point 54. One side of spring 51 can be connected with the support 52 and the other side can form a pivot joint with the secondary arm 32, for example, by attaching to the boss 321. Each support 52 and booster spring 53 of biasing mechanism 50 can be connected with lower platform 20. Arc slot 211 can be selectively connected with the respective secondary pivot arm 32 on the other side of the respective upper mounting bracket 21. Pivot point 54 can be located against the bottom side of booster spring 53.

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Each biasing mechanism 50 can be located between the respective upper mounting bracket 21 and housing 23, thereby concealing the biasing mechanism 50.

[0042] As shown in Figure 4, reinforcement member 60 may extend between the left and right pivot arm sets 30. According to an embodiment, reinforcement member may include a supporting rod 61 and a separate reinforcement 62, however, other single-member and multi-member embodiments are possible. According to an embodiment, supporting rod 61 can be connected with the primary pivot arm 31 of each pivot arm set 30, and reinforcement 62 can be connected with the secondary pivot arm 32 of each pivot arm set 30. According to embodiments, the reinforcement member can fix the side-to-side distance between the pivot arms and add stability, avoiding side-to-side movement when lifting or lowering upper platform 10 from lower platform 20, and can make the adjustable platform operate smoothly.

[0043] When in use, the user can place the adjustable desk platform on to a desktop, and may place items on the upper platform 10 as desired, such as, without limitation, a computer, documents, desk lamps, instruments, and supplies. The user can adjust the height between the upper platform 10 and the lower platform 20 according to their working posture and/or other needs.

[0044] Figure 3 depicts the adjustable desk platform in a fully raised position. Referring to Figures 3, 8-10, and 12, in order to lower the adjustable desk platform, the user can pull handle 42, which in turn displaces the first linkage 431, second linkage 432, and third linkage 433. This can, in turn, retract the anchor 41 and cause the anchor to withdrawal from the perforation(s) 3111 of the primary pivot arm 31. As a result, the pivot arm 31 is released from a substantially fixed position, allowing primary

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pivot arm 31 and secondary pivot arm 32 to move, consequently allowing the upper platform 10 to move with respect to the lower platform 20. Accordingly, the distance between upper platform 10 and lower platform 20 can be reduced, for example, to the fully lowered position shown in Figure 11, or to some position between the fully raised position and the fully lowered position. This allows the distance between the upper platform 10 and lower platform 20 to be easily set and adjusted.

[0045] As shown In Figures 3 and 8-11, when the user moves the upper platform 10 and lower platform 20 to a desired height relative to each other, the user can release the handle(s) of locking set(s) 40. As a result, the retraction force of springs 44 of each locking set 40 can move the second linkage 432, causing first linkage 431 and third linkage 433 to move sequentially, thereby causing anchors 41 to lock through the hole 111 of the lower mounting bracket and the corresponding perforations 3111 on primary pivot arm 31. This, in turn, locks the position of the upper platform 20 relative to the lower platform 10.

[0046] As shown in Figures 3, 10, and 11, as the primary and secondary pivot arms 31, 32 pivot with respect to the respective upper mounting bracket 21, the boss 321 slides within arc slot 211 of the upper mounting bracket 21, and accordingly, stretches or relaxes the compression spring 51 of the corresponding biasing mechanism 50. Referring to Figure 11, since pivot point 54 leans against the bottom side of booster spring 53, when upper platform 10 and lower platform 20 are moved toward the fully lowered position, boss 321 can press laterally against the booster springs 53, thereby causing booster spring 53 to bend. Thus, in embodiments, the booster springs 53 can

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provide additional upward bias when the upper platform 10 is in or near the fully lowered position.

[0047] As shown in Figures 3, 8, 9, when the user desires to increase the distance between the lower platform 20 and the upper platform 10, the user can pull the handle(s) of the locking set(s) 40 to impact locking set 40, springs 44, and anchors 41, causing anchors 41 to retract from the perforation 3111 and hole 111, releasing the primary and secondary pivot arms 31, 32 so the spacing between the upper platform 10 and the lower platform 20 can be increased.

[0048] As shown in Figures 3, 10, and 11, lowering the upper platform 10 causes the pivot arm sets 30 to pivot with respect to the upper mounting brackets 21. The resultant rotation of the secondary pivot arms 32 causes the respective bosses 321 to slide within the respective arc slots 211, thereby stretching the respective compression springs 51 of the biasing mechanisms 50, providing a measure of resistance against lowering of the upper platform 10. When the distance between the upper platform 10 and the lower platform 20 is gradually increased from the fully lowered position, bosses 321 slowly pull away from the respective booster springs 53, and allows the booster springs 53 to retract to their natural, unbent state.

[0049] Increasing the weight on upper platform 10 (e.g., by placing an item on the upper platform 10) can increase the difficulty of raising the upper platform 10 from the lower platform 20. Due to the configuration of the biasing mechanism 50, booster spring 53, and pivot point 54, when upper platform 10 is raised from the lower platform 20, the elastic force of booster spring 53 and spring 51 can influence the boss 321 of each secondary pivot arm 32, causing secondary pivot arm 32 to generate an upward

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lifting force, reducing the amount of effort required from the user to raise the upper platform 10.

[0050] When lifting upper platform 10, the overall center of gravity of the adjustable desk platform can shift between lower platform 20 and upper platform 10, especially when various items are placed on top of upper platform 10. Because items located on the upper platform create additional weight, the overall center of gravity of the adjustable desk platform will quickly shift to the upper platform 10, and potentially make the adjustable desk platform unstable. Accordingly, the counterweight(s) 22 can increase the weight of lower platform 20, thereby helping to counterbalance the weight of the upper platform 10 when in the raised position and/or when weighted with items.

[0051] According to embodiments, the housings 23 of upper platform 10 and the housings 46 of locking set 40 can help protect the user's fingers or other foreign matter from being caught in the locking sets 40, the pivot arm sets 30, and/or inside of the biasing mechanisms 50. Housings 23 and housings 46 can also add to the aesthetic appearance of the adjustable desk platform.

[0052] Referring to Figures 1 and 2, the adjustable desk platform can include a keyboard tray 70. The keyboard tray 70 can be detachably connected with lower platform 20. Keyboard tray 70 includes a tray portion 71 and one or more releasable joint component(s) 72. According to an embodiment, two joint components 72 can be connected on opposed sides of tray portion 71. The joint components 72 can be slidably mounted on the lower platform 20. Additionally or alternatively, the joint components 72 can be drilled in the housing 23 of lower platform 20. The joint

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components are not limited to the embodiments show, and other connectors known in the art can be used as alternatives.

[0053] When desired, the keyboard tray 70 can be attached to lower platform 20, and items can be placed on it, such as a keyboard. According to embodiments, tray 70 can be located at an adjustable distance from the lower platform 20.

[0054] Referring to an alternative embodiment shown in Figure 14, the keyboard tray 70A can be attached to the bottom side of the upper platform 10. For example, a joint component 72A can connect the tray portion 71A to the underside of the lower platform 10. When in use, keyboard tray 70A may move up and down with upper platform 10, thereby making it more convenient to access items placed on keyboard tray 70, such as a keyboard.

[0055] Referring to Figure 15, the main pivot arm 31 and/or secondary pivot arm 32 can be cladded with a protector 80. According to an embodiment, the protector 80 is made with EVA foam (ethylene - vinyl acetate copolymer), however other materials are possible. Protector 80 can help prevent jammed fingers due to an operator reaching between pivot arm sets 30 and upper mounting brackets 21.

[0056] Referring to Figures 16 and 17, embodiments of the adjustable desk platform can include legs that support the adjustable desk platform above the ground. For example, the adjustable desk platform can include four legs 90 extending from its corners, as shown, however, more or less than four legs are possible. The legs 90 can be fixed in length, or alternatively, can be adjustable in length using structures known in the art. The legs 90 can allow the adjustable desk platform to be self-supported above the ground. Except for the provision of legs and the related structures, embodiments of

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the adjustable desk platform shown in Figures 16 and 17 can be substantially the same as described in connection with Figures 1-15.

[0057] Referring to Figure 17, the adjustable desk platform can include a frame member 91 that attaches, for example, to the upper mounting brackets 21, lower platform (not shown), or other part of the adjustable desk platform. For example, fasteners such as bolts or rivets, welding, bonding, or other attachment techniques can be used. The legs 90 can in turn be attached to the frame member 91, for example, using fasteners such as bolts or rivets, welding, bonding, or other attachment techniques. As shown in Figure 17, an embodiment can include end caps 92 that extend into open ends of the frame member 91, however, other configurations are possible. Referring back to Figure 16, embodiments can include a cover portion 93 that extends over and conceals all or a portion of the frame member 91, thereby improving the safety and/or appearance of the adjustable desk platform. Although not shown, lateral supports can extend between one more pairs of the legs 90.

[0058] Referring to Figures 18-21, another embodiment of the adjustable desk platform is shown. The embodiment of Figures 18-21 is substantially the same as shown and described in connection with Figures 1-15. For example, the adjustable desk platform of Figures 18-21 can include the same or similar pivot arm sets 30, locking set(s) 40, biasing mechanism(s) 50, reinforcement member(s) 60, counterweight, legs, and/or other features of previously-described embodiments. Accordingly, only additions or differences from previous embodiments are described below.

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[0059] Generally similar to the embodiment of Figure 14, the adjustable desk platform of Figures 18-21 can include a keyboard tray 70A suspended below the upper platform 10. The keyboard tray 70A can be adapted to support a computer keyboard, mouse, tablet computer, or other device. For example, the keyboard tray 70A can be substantially planar, and can have a size equal to, or greater than, a conventional computer keyboard. According to an embodiment, the surface area of the keyboard tray 70A is between about one half and about one quarter of the surface area of the upper platform. According to an embodiment, the surface area of the keyboard tray 70A is about one third of the surface area of the upper platform 10. In order to provide sufficient space for the keyboard tray 70A, according to embodiments, the pivot arm sets 30 can be lengthened as compared to embodiments without the keyboard tray, for example, to increase distance between the upper platform 10 and lower platform 20. For example, the pivot arms sets 30 may be increased lengthwise by between about 2" and about 5" as compared to embodiments without the tray, more specifically, by about 3" to about 4".

[0060] As best seen in Figures 18 and 19, the keyboard tray 70A can be generally "T"-shaped, in that it can define a relatively narrow portion 100 joined to a relatively wide portion 102 to define a "T" shape. The narrow portion 100 and wide portion 102 are shown separated by an imaginary dashed line in Figure 18 for illustration purposes only. The edge of the upper platform 10 adjacent the keyboard tray 70A can also define a recess 104, such as a generally "U" shaped recess. The width of the recess 104 can be the same or similar to the width of the narrow portion 100 of the keyboard tray 70A. As

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a result, the narrow portion 100 of the keyboard tray 70A can be positioned generally in registry with the recess 104, for example, for ergonomic reasons.

[0061] Referring to Figures 18 and 21, first and second support members 106, 108 can connect the keyboard tray 70A to the upper platform 10. According to embodiments, the first and second support members 106, 108 can be located adjacent opposite sides of the generally U-shaped recess 104. Additionally or alternatively, the first and second support members 106, 108 can be located adjacent opposite ends of the narrow portion 100 of the T-shaped keyboard tray 70A. According to this embodiment, the narrow portion 100 of the keyboard tray 70A can fit the keyboard, and the wide portion 102 of the keyboard tray 70A can provide additional support for the user's hands or wrists, however, other uses are possible. One of ordinary skill in the art will understand based on this disclosure that the upper platform 10 and keyboard tray 70A are not limited to the specific shapes and appearances shown in Figures 18-21.

[0062] Still referring to Figures 18 and 21, the support members 106, 108 can comprise metal brackets, such as stamped metal brackets, that are connected to the keyboard tray 70A and to the upper platform 10 on opposite ends, for example, using fasteners such as screws, nails, rivets, or bonding or other techniques known in the art. Alternatively, all or a part of the support members 106, 108 can be integral (e.g., monolithic) with the upper platform 10 and/or keyboard tray 70A. According to the embodiment shown, the support members 106, 108 can have cutouts, e.g., forming an X-shape, in order to decrease weight and material, however, other configurations are possible.

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[0063] The embodiments illustrated and discussed in this specification are intended only to teach those skilled in the art the best way known to the inventors to make and use the invention. Nothing in this specification should be considered as limiting the scope of the present invention. For example, the arrangement of features with respect to the upper platform and the lower platform, such as, e.g., the locking mechanism, can be reversed. All examples presented are representative and non-limiting. The above-described embodiments of the invention may be modified or varied, without departing from the invention, as appreciated by those skilled in the art in light of the above teachings. It is therefore to be understood that, within the scope of the claims and their equivalents, the invention may be practiced otherwise than as specifically described.

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THE CLAIMS:

1. An adjustable desk platform comprising:

an upper platform defining a first substantially planar work surface;

a lower platform defining a second substantially planar work surface;

at least one set of pivot arms connecting the lower platform and the upper platform, the set of pivot arms comprising a primary pivot arm and a secondary pivot arm, wherein the set of pivot arms is adapted to move the upper platform substantially in parallel with the lower platform between a fully raised position and a fully lowered position; and

a locking mechanism associated with the set of pivot arms, the locking mechanism comprising:

a plurality of perforations located in the primary pivot arm or the secondary pivot arm,

a locking set fixed with respect to the upper platform or the lower platform, the locking set including at least one anchor adapted to selectively engage at least one of the plurality of perforations, and

a handle connected to the anchor by a linkage, the handle adapted to selectively move the anchor into engagement with at least one of the plurality of perforations.

2. The adjustable desk platform of claim 1, further comprising:

an upper mounting bracket located on the upper platform; and

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a lower mounting bracket located on the lower platform, wherein the primary and secondary pivot arms interconnect the upper mounting bracket and the lower mounting bracket.

3. The adjustable desk platform of claim 2, wherein the anchor of the locking set is adapted to selectively extend through a hole in the upper mounting bracket or the lower mounting bracket in registry with at least one of the plurality of perforations.

4. The adjustable desk platform of claim 3, wherein the locking set is secured to an underside of the upper platform, and the plurality of perforations are located in the primary pivot arm.

5. The adjustable desk platform of claim 1, wherein the anchor is resiliently biased into engagement with at least one of the plurality of perforations.

6. The adjustable desk platform of claim 1, further comprising:

a boss located on the primary pivot arm or the secondary pivot arm, the boss adapted to move through an arcuate path as the upper platform moves between the fully raised position and the fully lowered position; and

a first spring fixed in position with respect to the upper platform or the lower platform, wherein movement of the upper platform toward the fully lowered position extends the first spring.

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7. The adjustable desk platform of claim 6, further comprising a second spring fixed in position with respect to the upper platform or the lower platform, wherein movement of the upper platform toward the fully lowered position causes the boss to bend the second spring.

8. The adjustable desk platform of claim 7, wherein the second spring is a cantilever spring.

9. The adjustable desk platform of claim 8, further comprising:

an upper mounting bracket located on the upper platform; and

a lower mounting bracket located on the lower platform, wherein the primary and secondary pivot arms interconnect the upper mounting bracket and the lower mounting bracket;

wherein:

the first spring extends between the boss and the upper mounting bracket or the lower mounting bracket; and

the second spring is secured to the upper mounting bracket or the lower mounting bracket.

10. The adjustable desk platform of claim 9, further comprising a pivot point located adjacent to the second spring, wherein the boss is adapted to bend the second spring about the pivot point.

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11. The adjustable desk platform of claim 1, wherein the lower platform defines a trailing edge and the upper platform defines a leading edge that moves laterally away from the trailing edge as the upper platform moves from the fully lowered position toward the fully raised position, the adjustable desk platform further comprising a counterweight located on the lower platform adjacent the trailing edge.

12. The adjustable desk platform of claim 1, further comprising legs extending below the lower platform.

13. An adjustable desk platform comprising:

an upper platform defining a substantially planar work surface;

a lower platform located beneath the upper platform;

at least one set of pivot arms connecting the lower platform and the upper platform, the set of pivot arms comprising a primary pivot arm and a secondary pivot arm, wherein the set of pivot arms is adapted to move the upper platform substantially in parallel with the lower platform between a fully raised position and a fully lowered position;

a locking mechanism associated with the set of pivot arms, the locking mechanism adapted to releasably lock the upper platform in the fully raised position and in the fully lowered position; and

a keyboard tray suspended below the upper platform, the keyboard tray adapted to support a computer keyboard.

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14. The adjustable desk platform of claim 13, wherein the keyboard tray defines a surface area that is less than a surface area of the upper platform.

15. The adjustable desk platform of claim 14, wherein the surface area of the keyboard tray is less than one half of the surface area of the upper platform.

16. The adjustable desk platform of claim 13, further comprising:

a first support member located proximate a first end of the keyboard tray; and

a second support member located proximate a second end of the keyboard tray;

wherein the first support member and the second support member connect the keyboard tray to the upper platform.

17. The adjustable desk platform of claim 16, wherein an edge of the upper platform defines a generally U-shaped recess, and the first support member and second support member are located proximate opposite sides of the generally U-shaped recess.

18. The adjustable desk platform of claim 16, wherein the first and second support members comprise metal brackets.

19. The adjustable desk platform of claim 13, wherein the keyboard tray is generally T-shaped.

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20. The adjustable desk platform of claim 13, wherein the lower platform defines a bottom surface without legs that is adapted to sit on an existing desk.

21. The adjustable desk platform of claim 13, wherein the substantially planar work surface is unobstructed.

22. The adjustable desk platform of claim 13, further comprising legs extending below the lower platform.

Dated 22nd day of August 2014

GEMMY INDUSTRIES CORPORATION

BY

FRASER OLD & SOHN

Patent Attorney for the Applicant

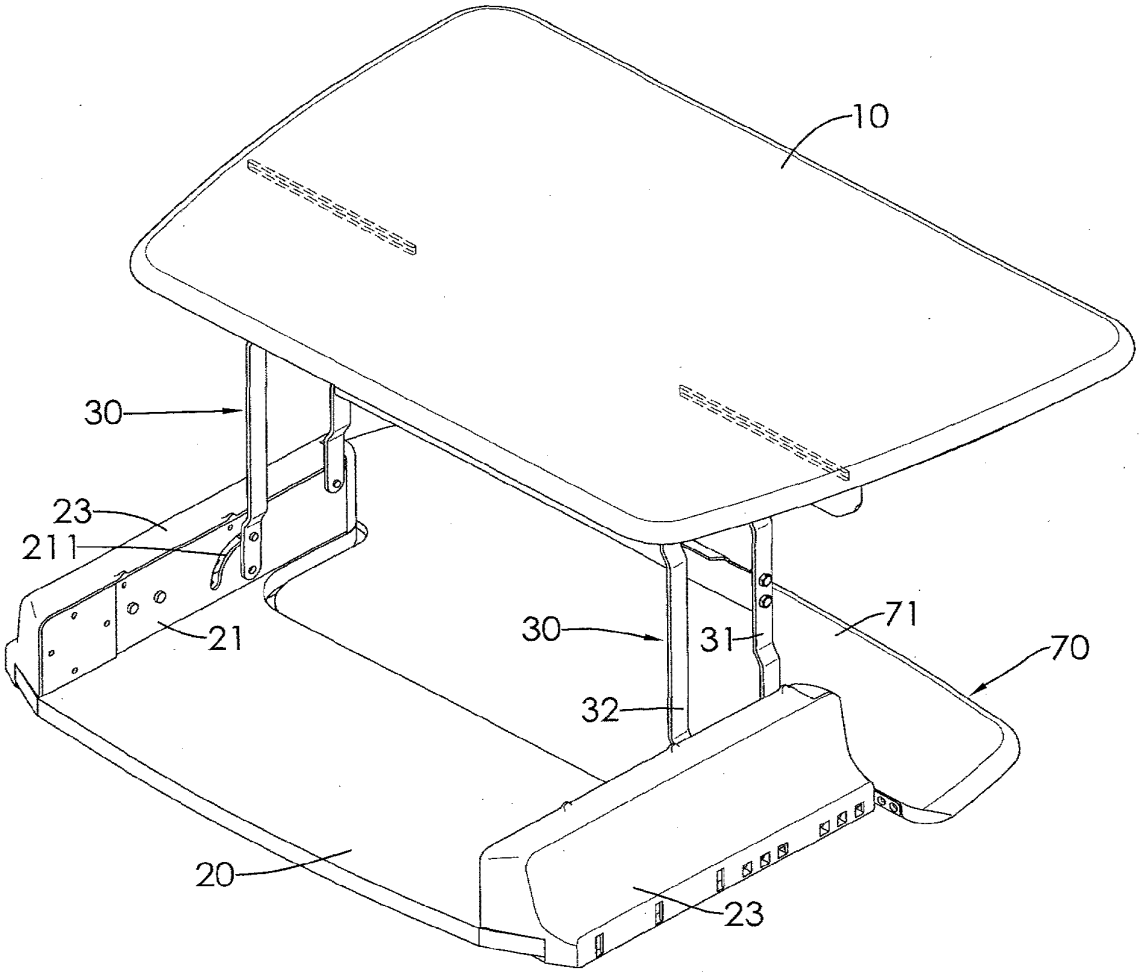


FIG. 1

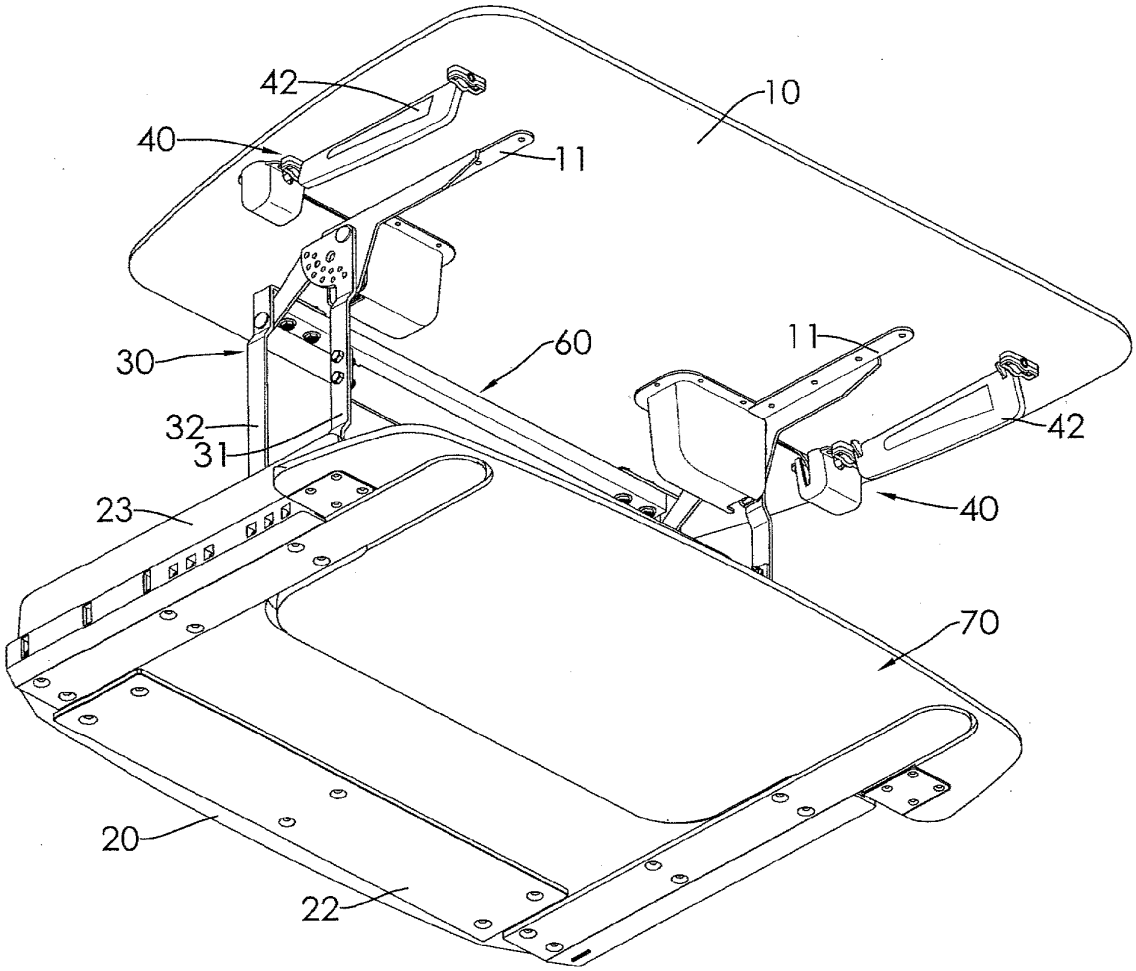


FIG. 2

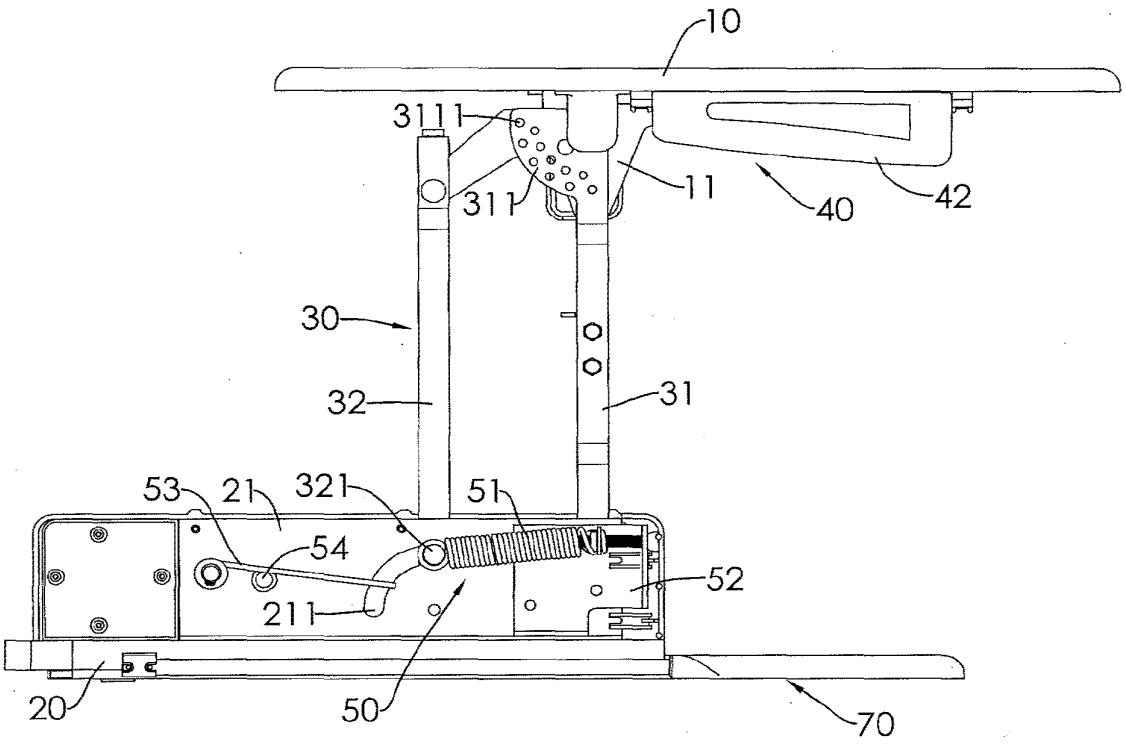


FIG. 3

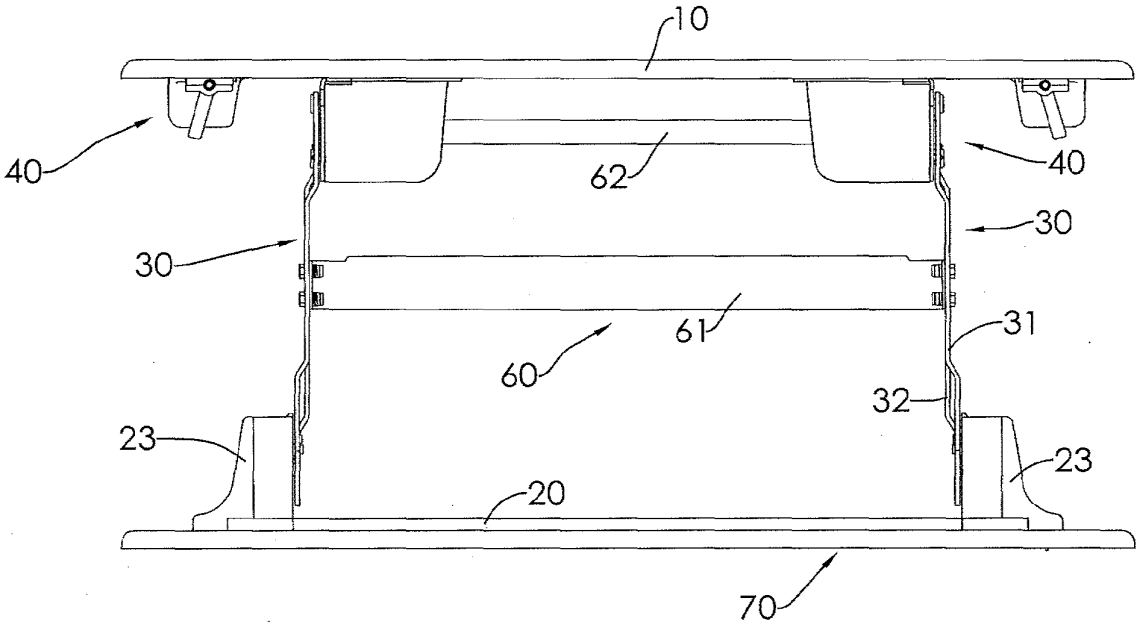


FIG. 4

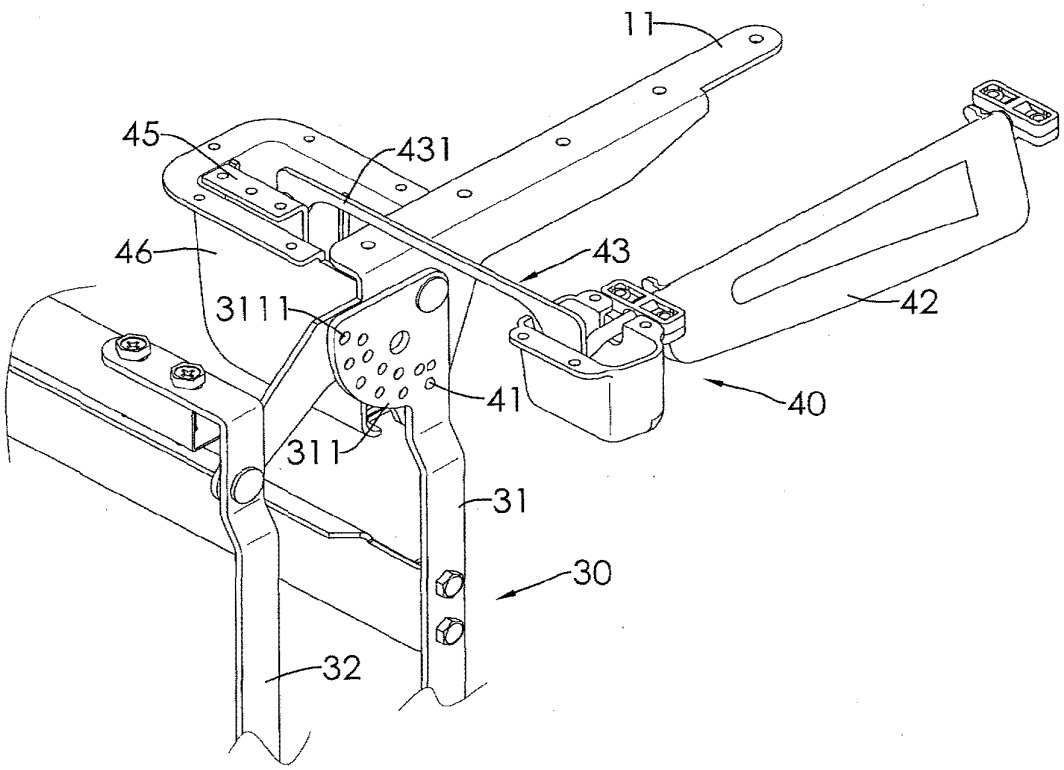


FIG. 5

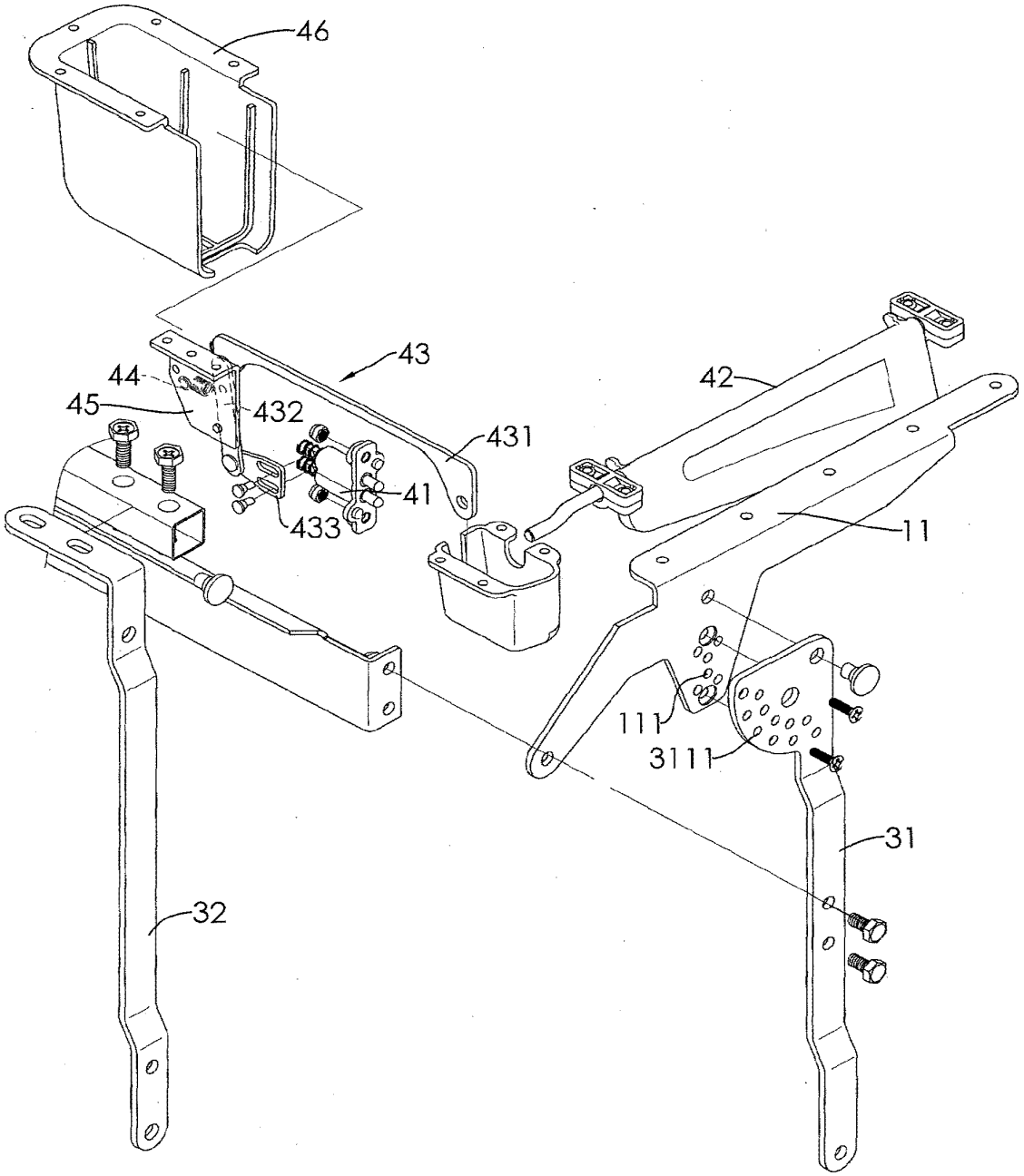


FIG. 6

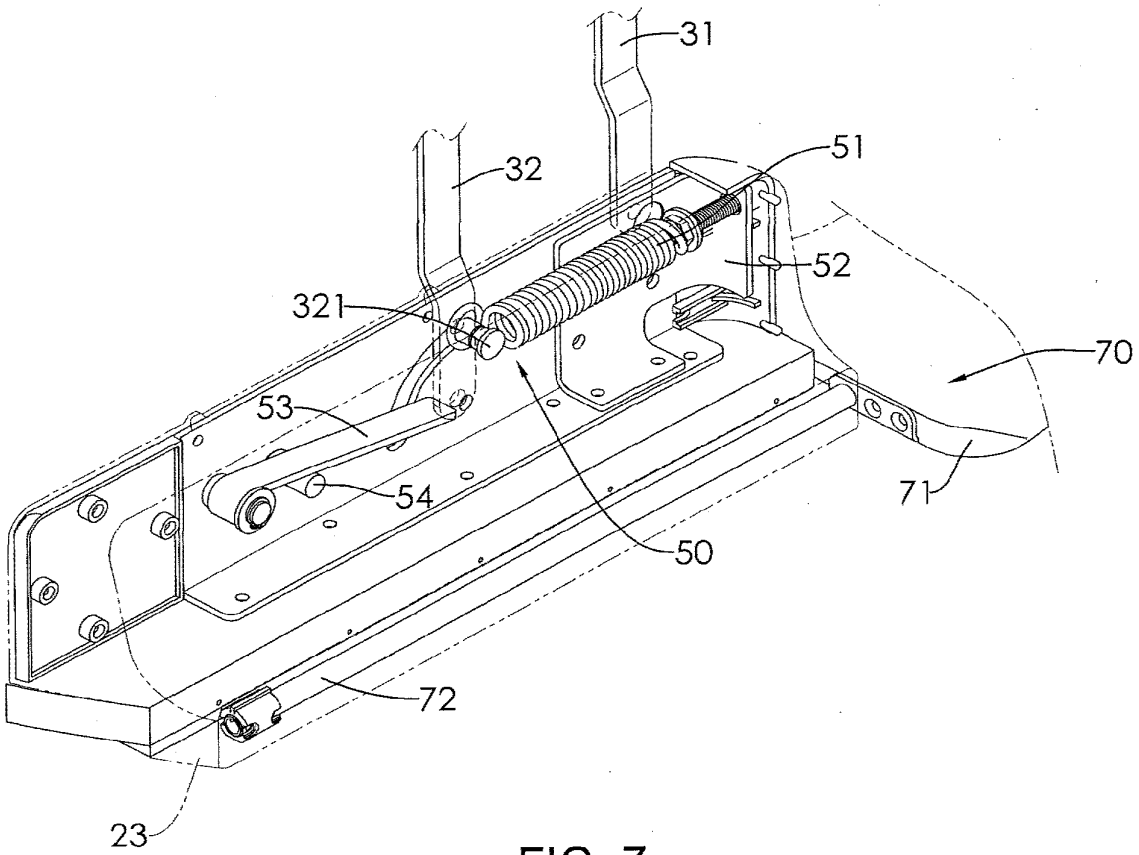


FIG. 7

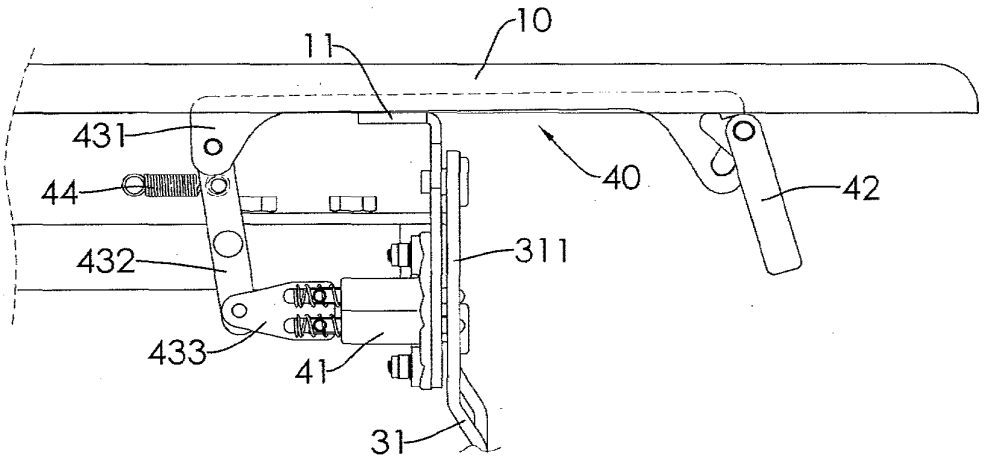


FIG. 8

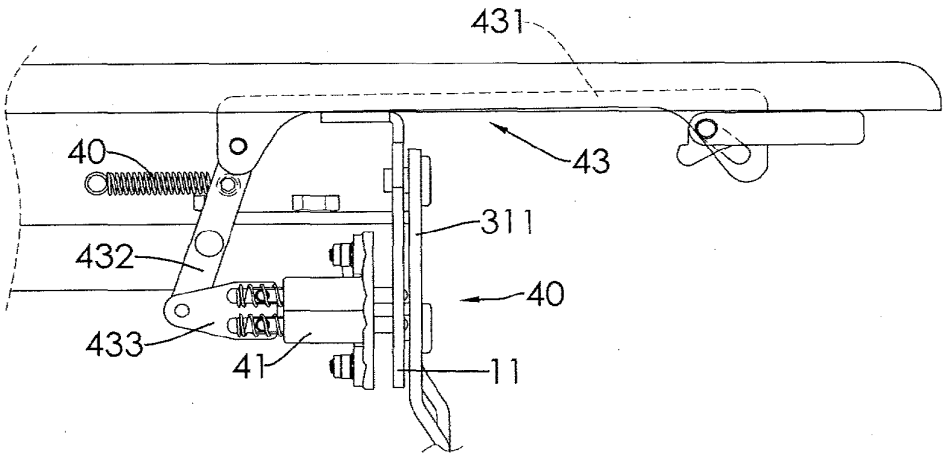


FIG. 9

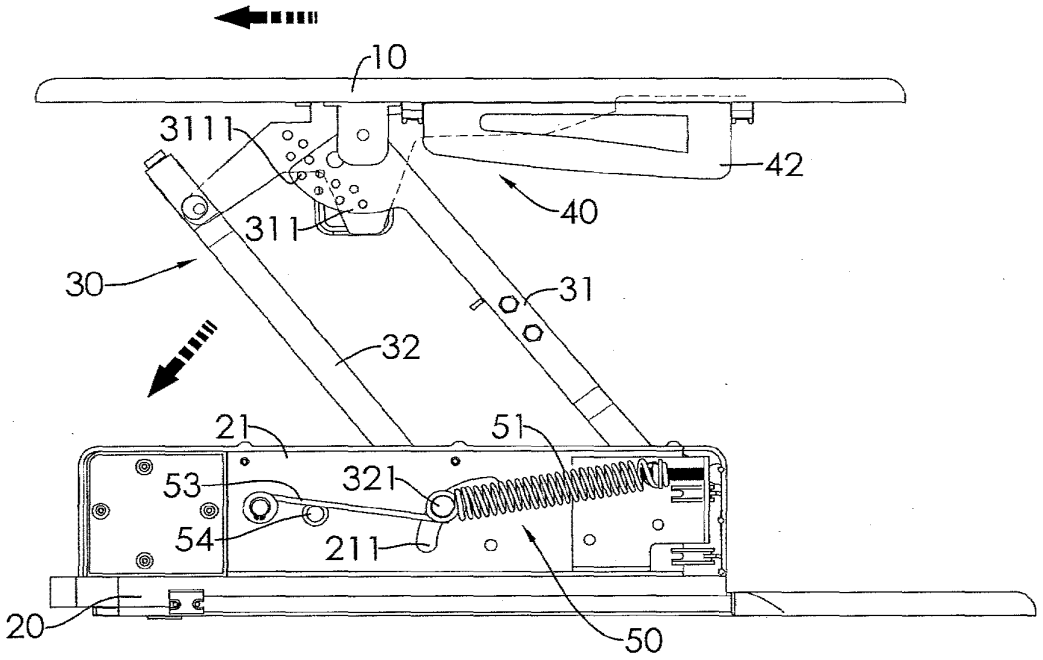


FIG. 10

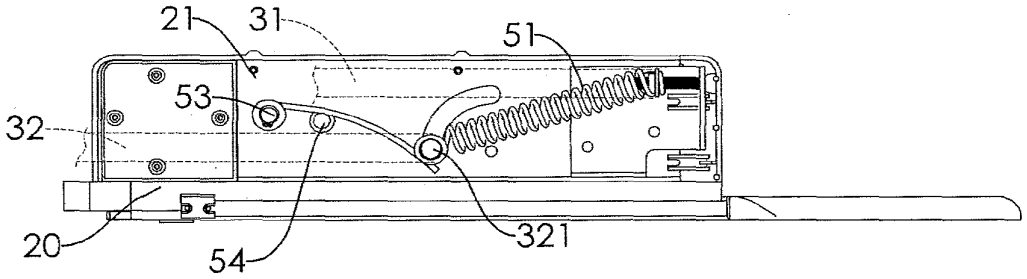


FIG. 11

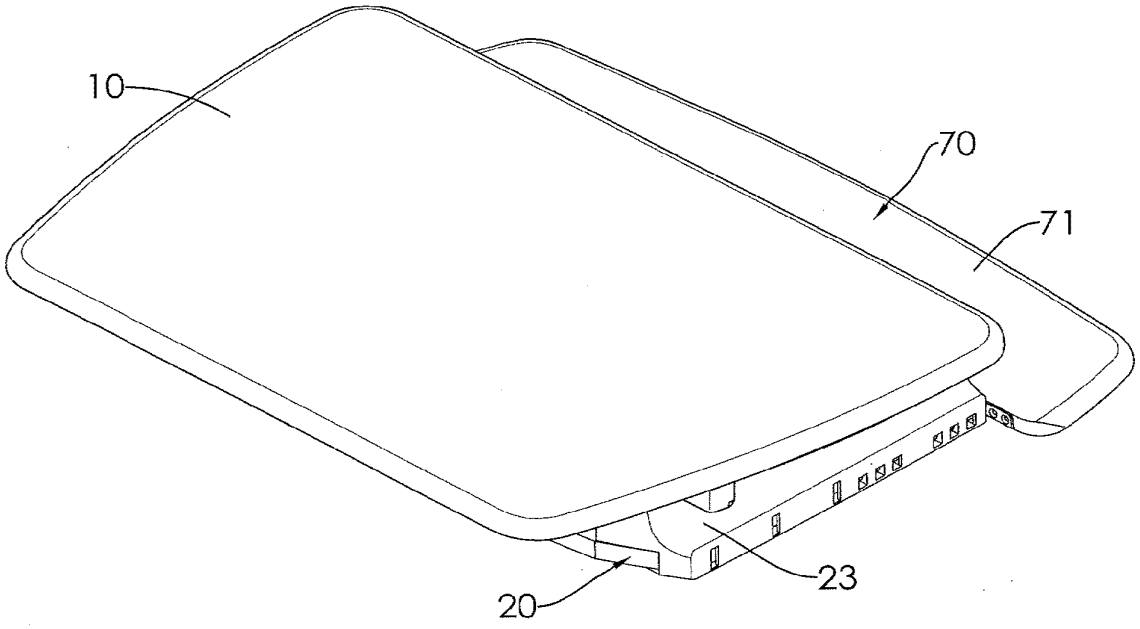


FIG. 12

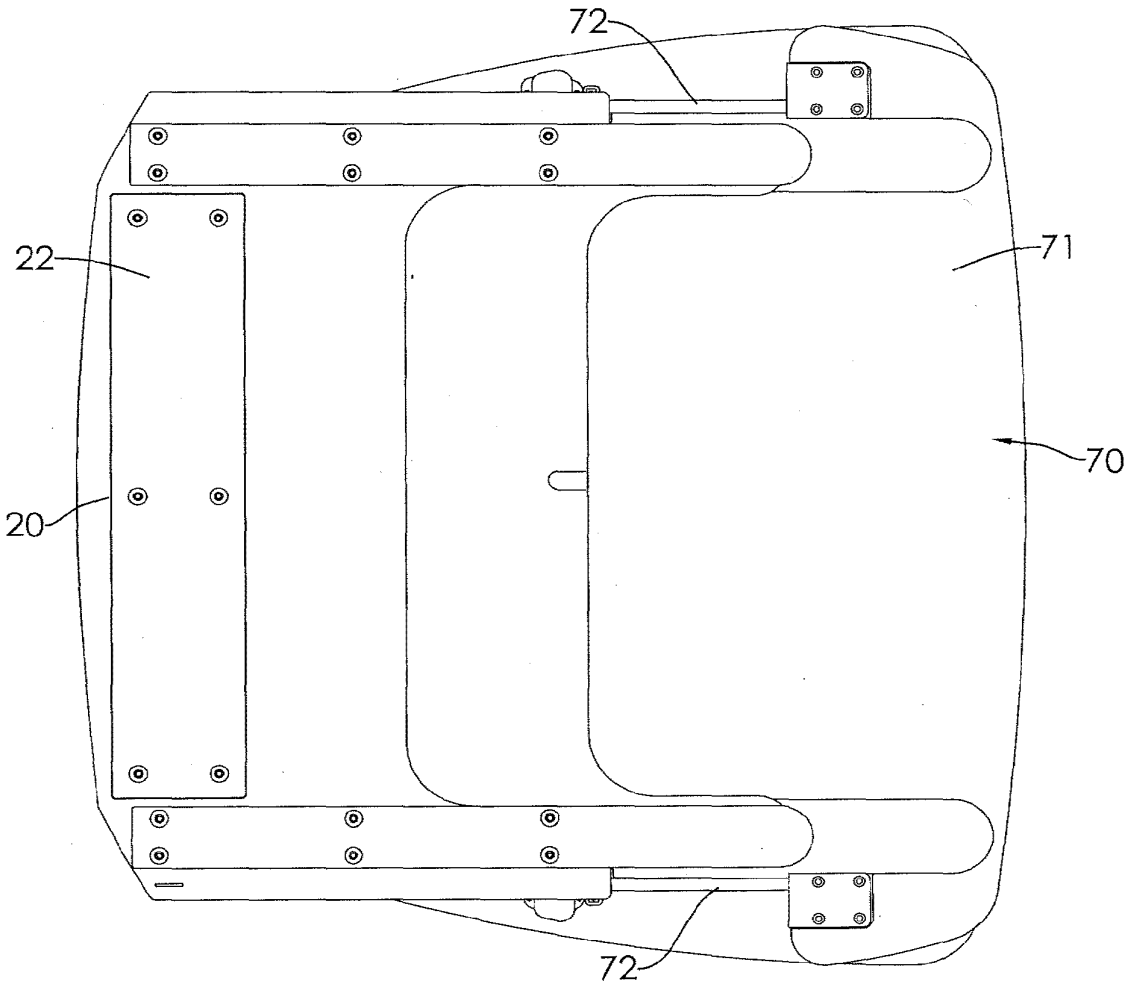


FIG. 13

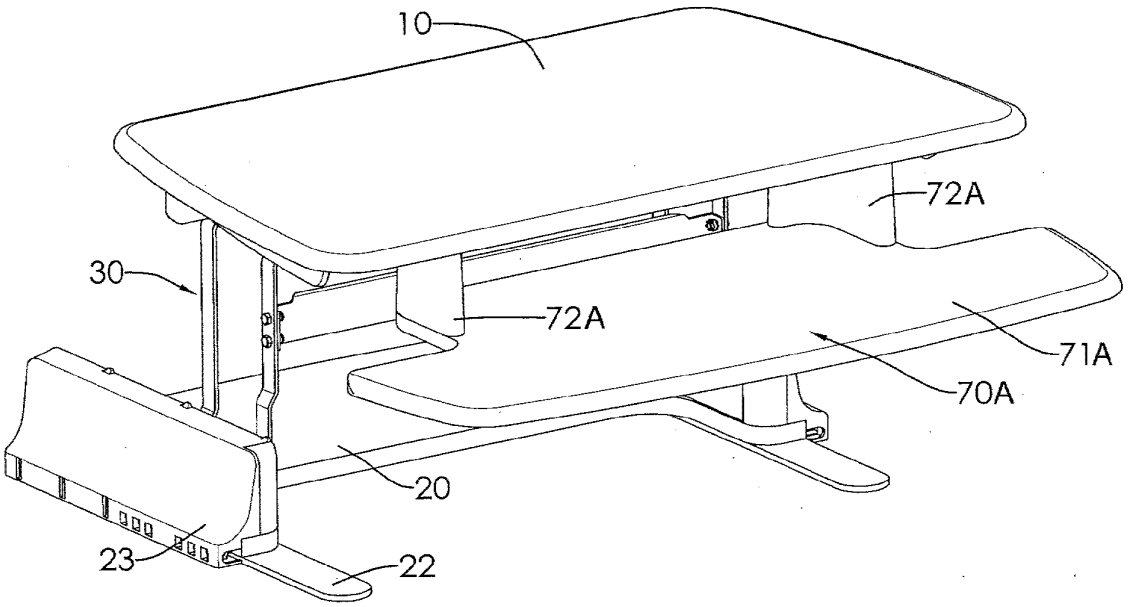


FIG. 14

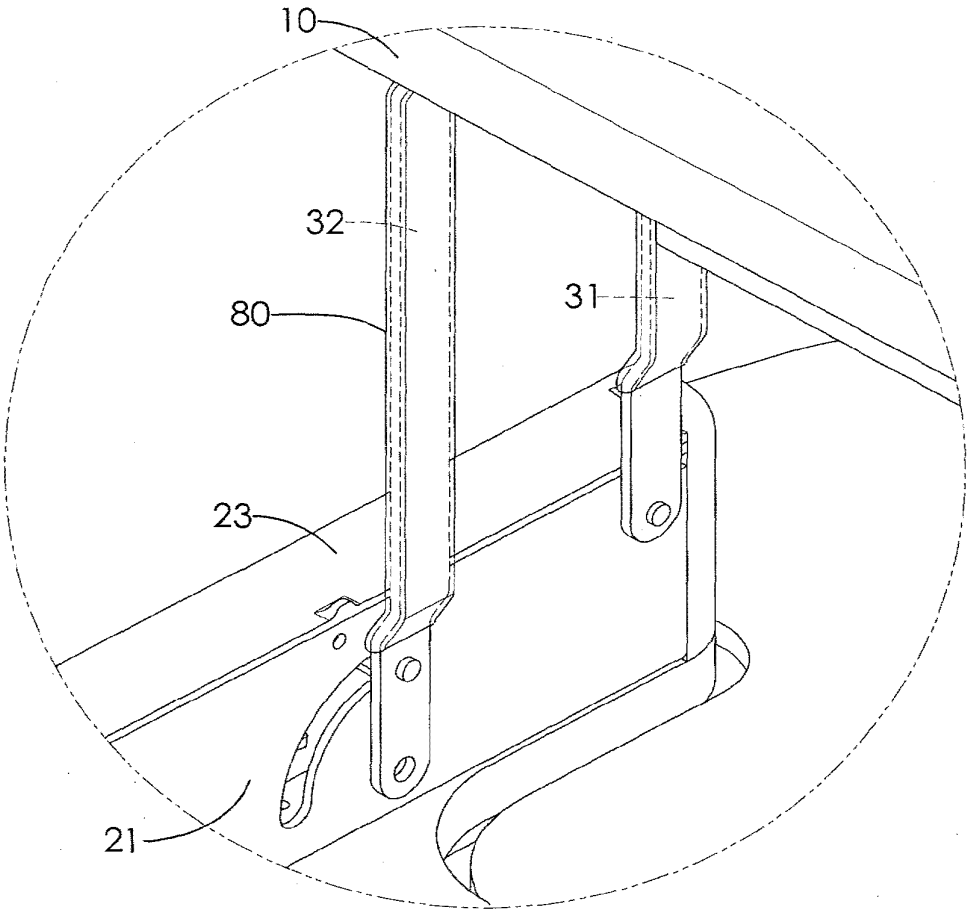


FIG. 15

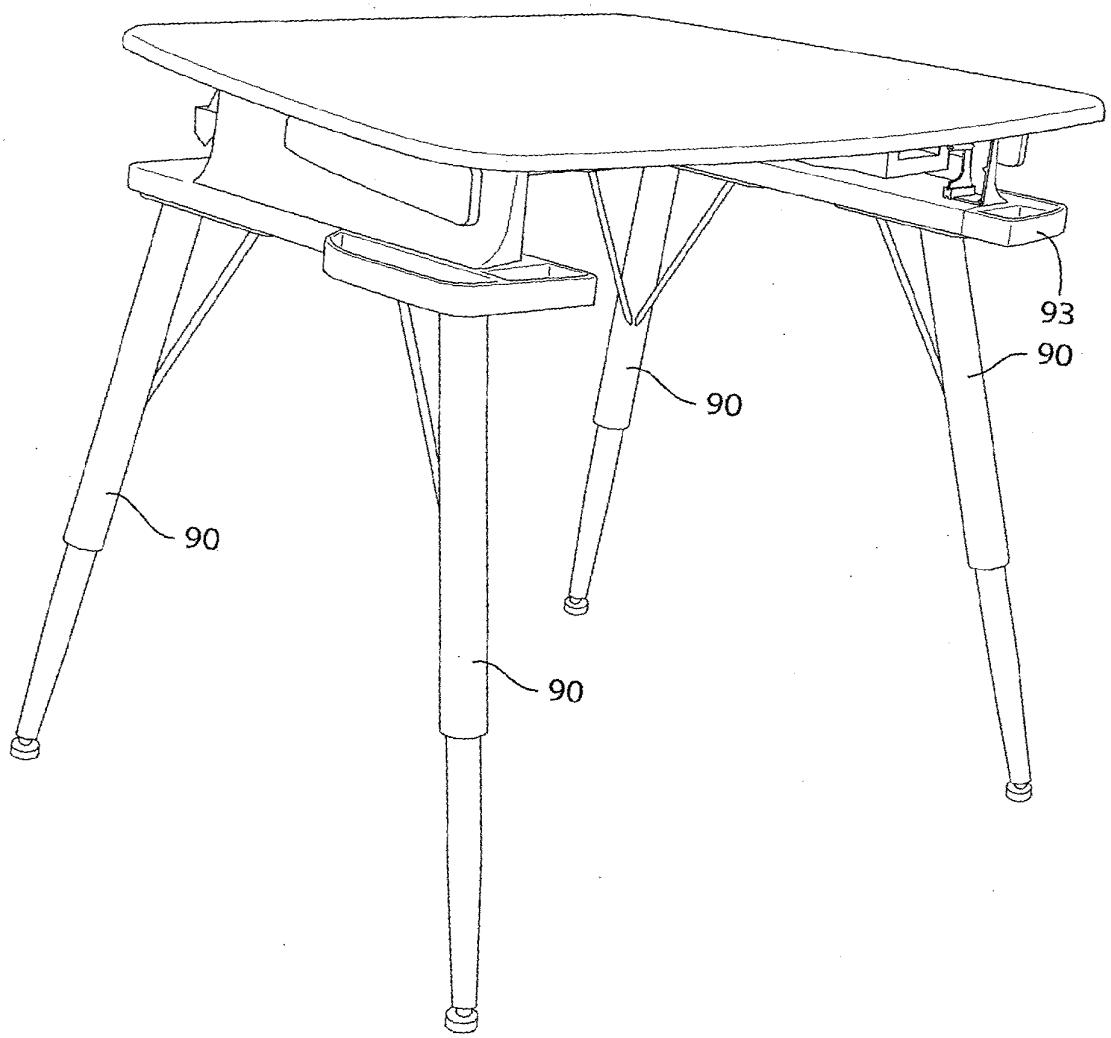


FIG. 16

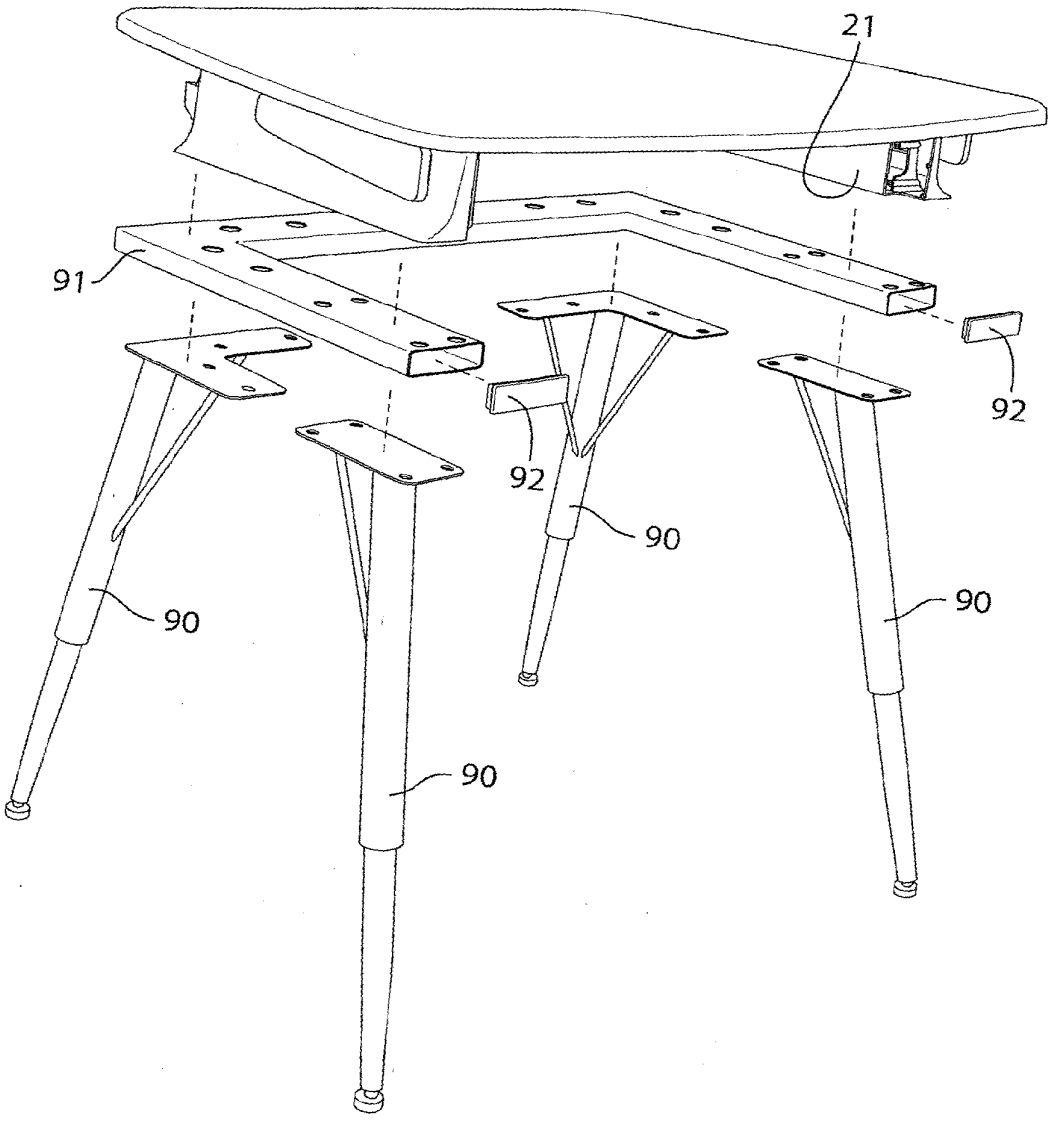


FIG. 17

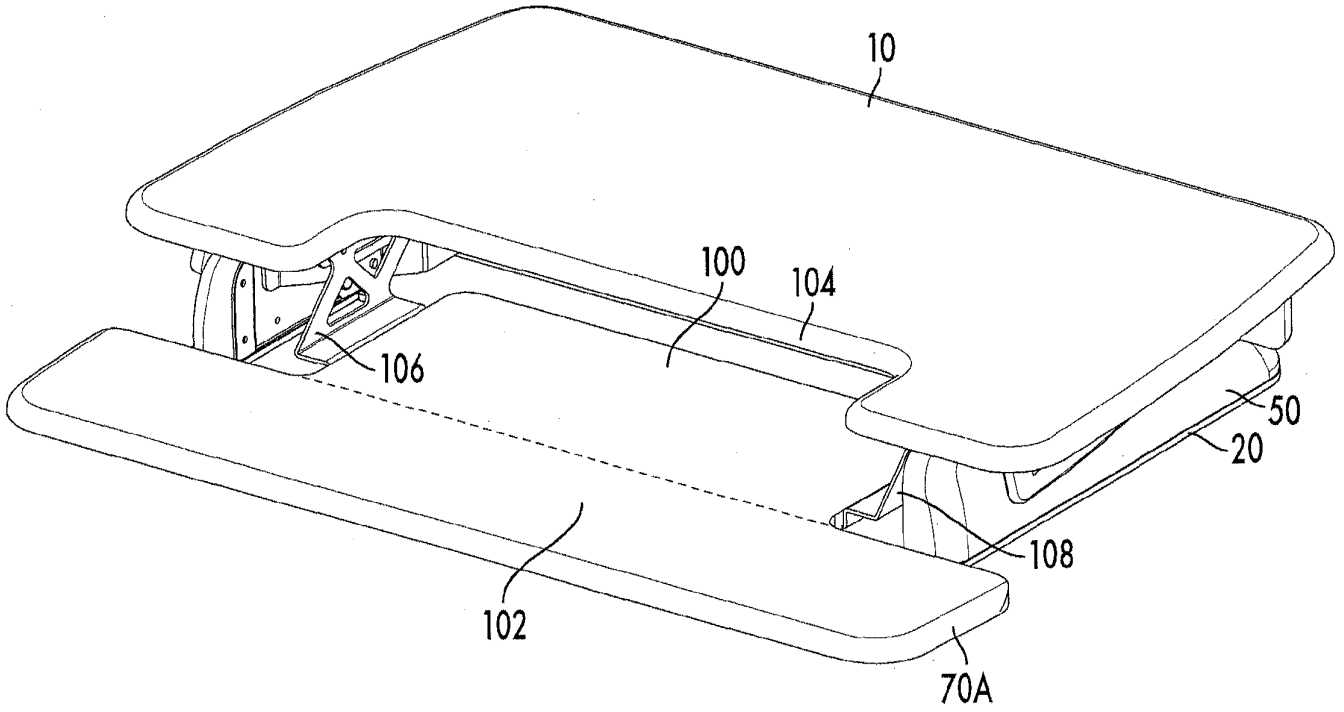


FIG. 18

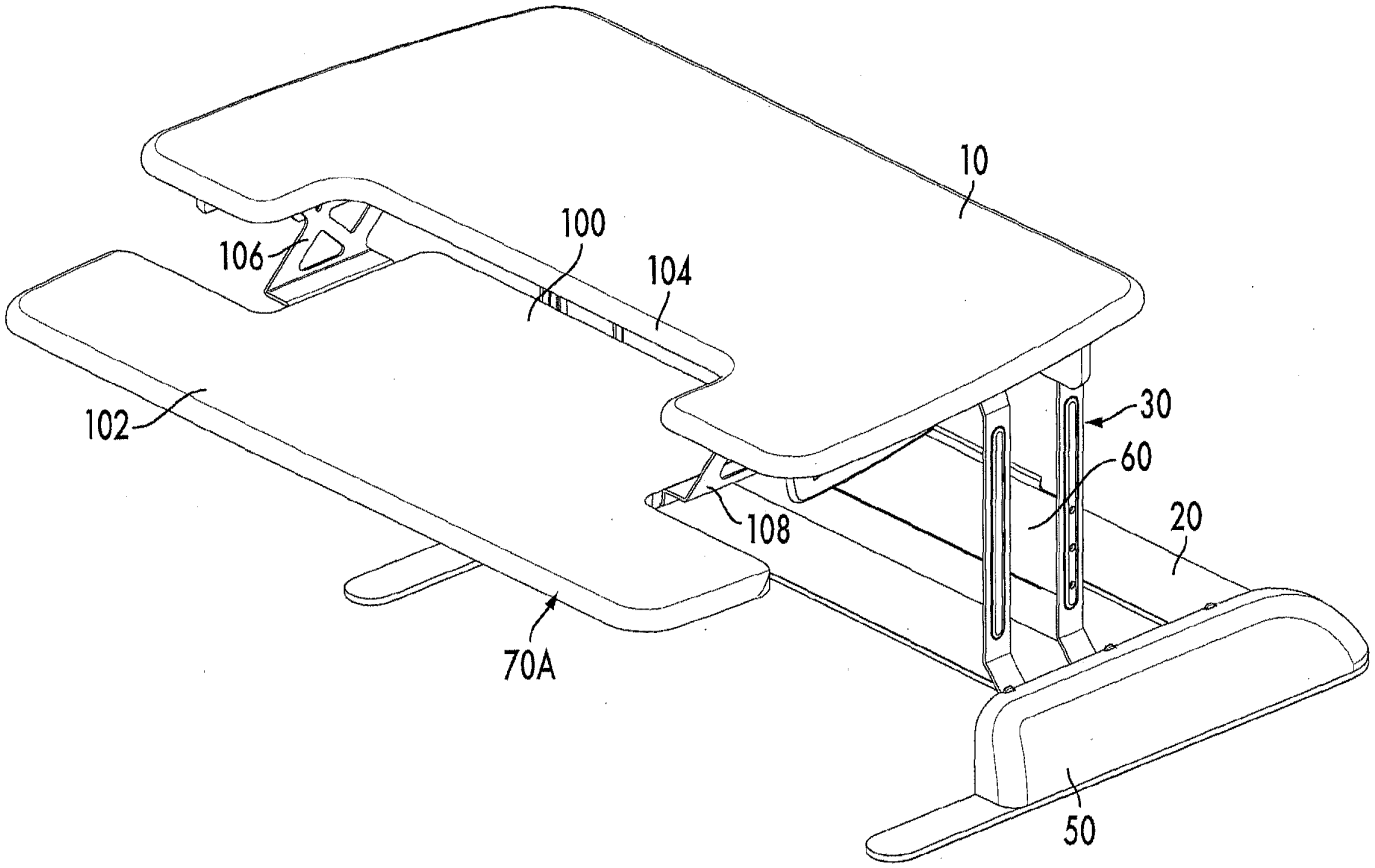


FIG. 19

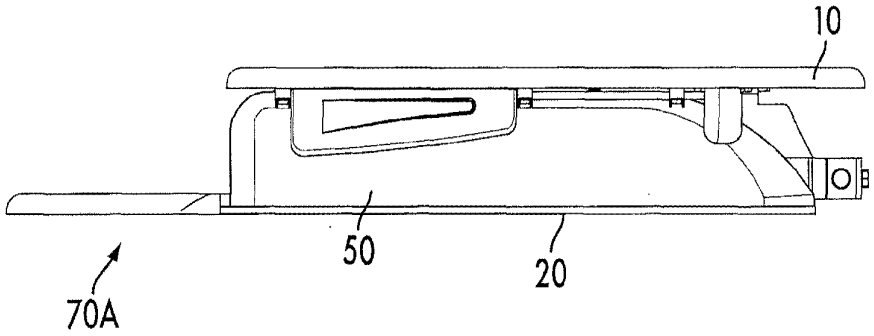


FIG. 20

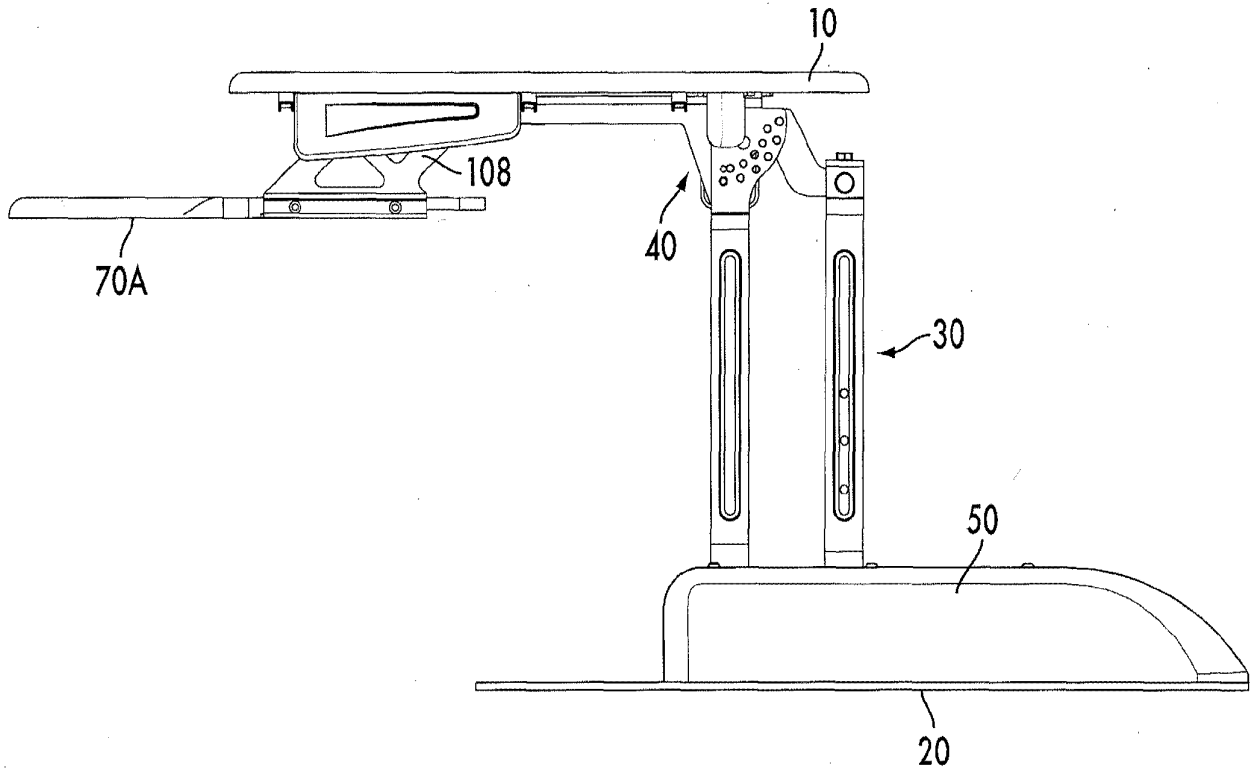


FIG. 21

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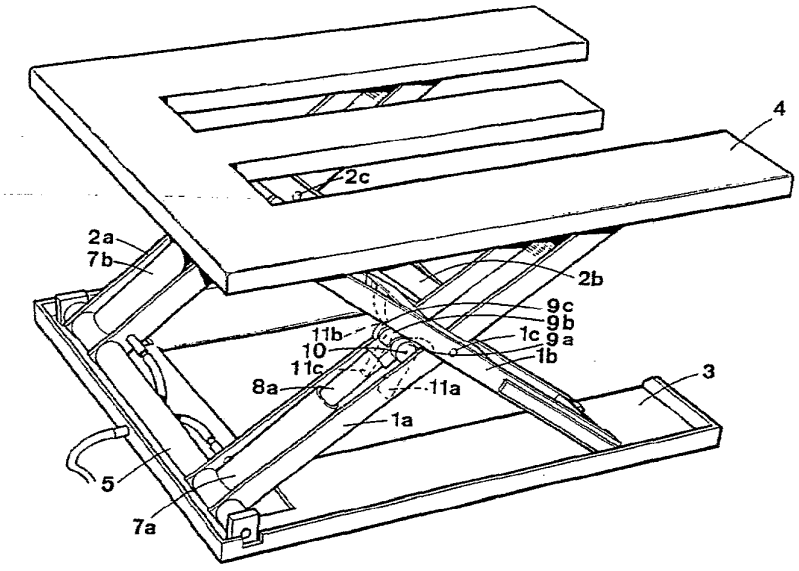
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(54) Title: ARRANGEMENT FOR A HYDRAULIC LIFTING TABLE



(57) Abstract

Arrangement for a hydraulic lifting table of the scissor type. This has two pairs of mutually attached scissor arms (1a, 1b; 2a, 2b), which at their ends are connected by means of pivots and rollers to a lower frame section (3) and an upper table section (4). The scissor arms (1a, 1b; 2a, 2b) are mutually and operatively connected to the pivotable connection (5) to the frame section (3). The lifting table comprises a power transmission arrangement (7, 8, 9, 11) for raising and lowering the table section (4). The invention is characterized in that the power transmission arrangement (7, 8, 9, 11) contains for each pair of scissor arms (1a, 1b; 2a, 2b) a hydraulic cylinder (7a; 7b) pivotally mounted at said connection (5). The piston rod (8a, 8b) of the cylinder is so arranged as to interact via rollers (9a, 9b, 9c) with guide curves (11a, 11b, 11c) arranged in conjunction with the common bearing shaft (1c, 2c) for the scissor arms (1a, 1b; 2a, 2b) and operatively connected to the respective scissor arm (1a, 1b; 2a, 2b).

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Arrangement for a hydraulic lifting table

The present invention relates to an arrangement for a hydraulic lifting table of the scissor type with two pairs of mutually attached scissor arms, which at their ends are connected by means of pivots and rollers to a lower frame section and an upper table section, and are mutually and operatively connected to the pivotable connection, comprising a power transmission arrangement for raising and lowering the table section.

In the case of those lifting tables which are intended to be used, for example in conjunction with a hand-operated truck or in vehicle workshops, for raising a vehicle to a comfortable working height for repair work to be carried out, it is of value for the lifting table to exhibit the minimum height possible. This is determined partly by the dimensions of the power transmission arrangement, since this must be enclosed by the table in its collapsed position, and partly by the mechanical construction of the table with regard to its intended carrying capacity and stability. On the other hand the lifting capacity of the table is determined by the maximum pressure available from the power transmission arrangement.

In a previously disclosed lifting table of the aforementioned kind, the power transmission arrangement is pivotally secured to the frame section and is so arranged, on the lifting table being raised, as to exert a separating effect on guide curves which, at the pivotal connection to the frame section, are operatively connected to it and to one of the scissor arms of each pair of scissor arms.

Since a turning moment is generated at one end of the respective scissor arm in this design, the scissor arm concerned must be designed to withstand the resulting stress along its whole length. This means that the lifting table, as a consequence of the dimensions of the scissor arm, is given a minimum height which is unacceptably large for many applications.

One object of the present invention is to make available a hydraulic lifting table in which the above-mentioned disadvantages have been eliminated, which is made possible by the combination of the following distinguishing features:

the power transmission arrangement contains for each pair of scissor arms a hydraulic cylinder pivotally mounted at said connection;

the piston rod of the hydraulic cylinder is so arranged as to interact during the whole of the raising and lowering movement of the lifting table via rollers with at least two guide curves arranged in conjunction with the common bearing shaft for the scissor arms and operatively connected to the respective scissor arm; and

the mutually and operatively connected scissor arms, which are pivotally connected to the frame section, consist of a beam of 'U'-section open towards the top, in which the appropriate power transmission arrangement is arranged.

The invention is described in more detail below with reference to the accompanying drawing, in which Fig. 1 is a perspective view illustrating an embodiment of a lifting table in accordance with the present invention. Fig. 2 illustrates a plan view from the side showing details of the interaction of the power transmission arrangement with the guide curves.

The designations 1a, 1b and 2a, 2b are used in Fig. 1 in respect of scissor arms connected together by means of shafts 1c, 2c for a hydraulic lifting table of the scissor type, which consists of a lower frame section 3 and an upper table section 4. The scissor arms 1a, 2a are mutually connected at their lower ends to a shaft 5 and are pivotally mounted about same relative to the frame section 3. The upper ends of the scissor arms 1b, 2b are pivotally mounted in the table section 4. The lower ends of the scissor arms 1b, 2b and the upper ends of the scissor arms 1a, 2a are executed with rollers 6, of which those at the upper end of the scissor arm 2a and at the lower end of the scissor

arm 2b are not shown in the drawing. The purpose of the rollers 6 is to facilitate the movement of the aforementioned ends of the scissor arms along the frame sections and table sections, 3 and 4.

Each of the scissor arms 1a and 2a consists of a beam of 'U'-section open towards the top, in which there is arranged, pivotally mounted on the shaft 5, a hydraulic cylinder 7a and 7b for raising and lowering of the table section 4. Each of the scissor arms 1b and 2b is manufactured from two flat steel profiles connected together at their respective ends by means of cross-pieces.

Since the power transmission from the cylinders 7a and 7b to the pairs of scissor arms 1a, 1b and 2a, 2b are executed in an identical fashion, only the power transmission belonging to the cylinder 7a is described below with reference to Fig. 2.

Three rollers 9a, 9b and 9c are arranged on a common shaft 10 at the outer end of the piston rod 8a of the hydraulic cylinder 7a. The roller 9b interacts with a guide curve 11b, which is operatively connected to the scissor arm 1b. The rollers 9a and 9c, which are arranged to either side of the roller 9b in order to achieve a symmetrical load distribution, interact with two guide curves 11a and 11c, which are operatively connected to the scissor arm 1a. The guide curves 11a and 11c constitute a linear gradient, and their primary function is to provide a moment arm, designated by 12 in Fig. 2, between the point of engagement of the roller 9b with the guide curve 11b and the common angle of pivoting 1c of the pair 1a, 1b of scissor arms.

The fact that the force necessary for lifting is divided between two hydraulic cylinders 7a, 7b enables these dimensions to be kept within limits such that the lifting table has a very small minimum height. A contribution to this is also made by the

characterizing feature of the invention, that is to say that the guide curves 11a, 11b and 11c against which the lifting force acts are arranged at the common support for the respective pair of scissor arms.

Patent Claim

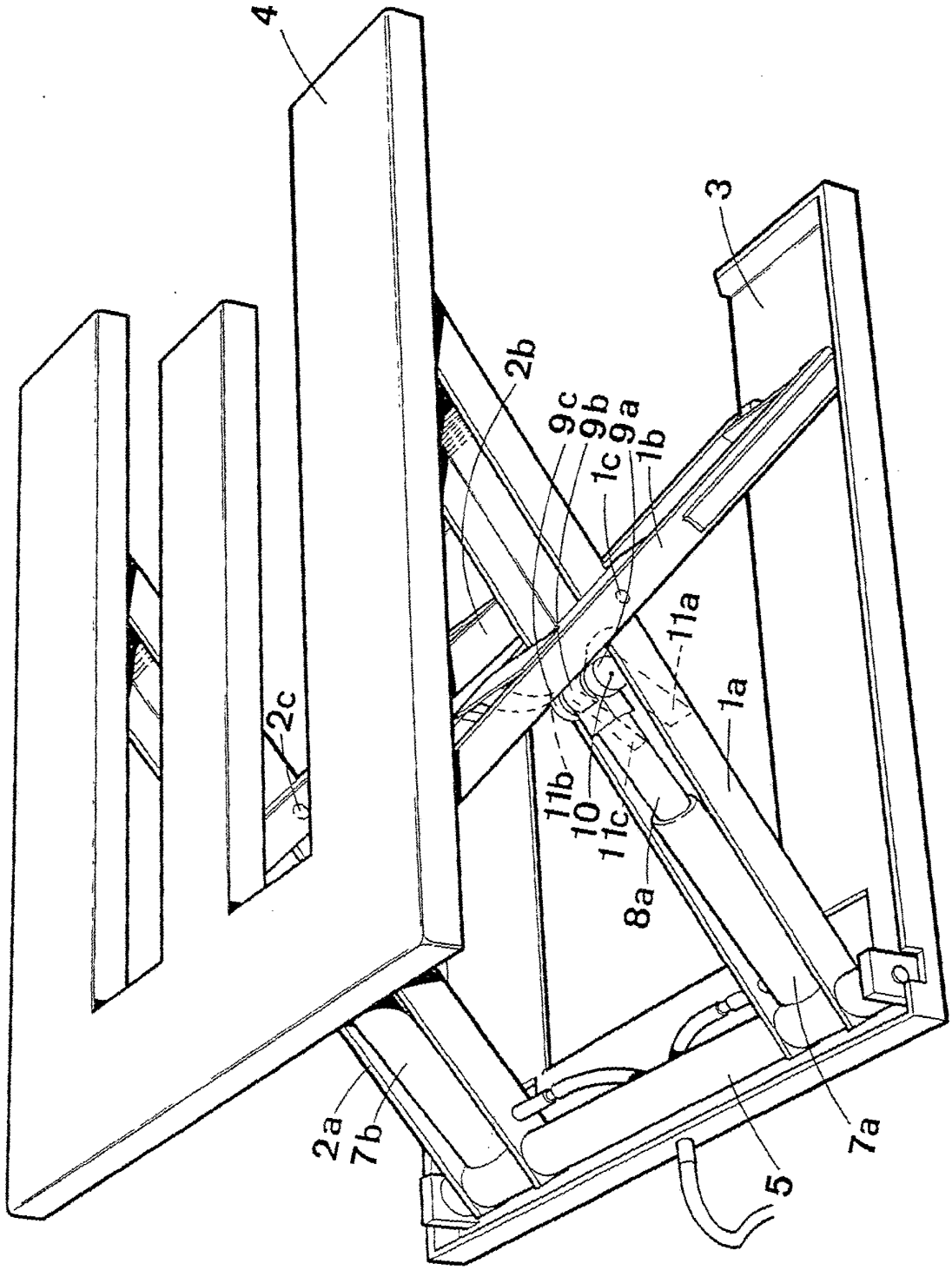
1. Arrangement for a hydraulic lifting table of the scissor type with two pairs of mutually attached scissor arms (1a, 1b; 2a, 2b), which at their ends are connected by means of pivots and rollers to a lower frame section (3) and an upper table section (4), and are mutually and operatively connected to the pivotable connection (5) to the frame section (3), comprising a power transmission arrangement (7, 8, 9, 11) for raising and lowering the table section (4), characterized by the combination of the following distinguishing features:
the power transmission arrangement (7, 8, 9, 11) contains for each pair of scissor arms (1a, 1b; 2a, 2b) a hydraulic cylinder (7a; 7b) pivotally mounted at said connection (5);
the piston rod (8a, 8b) of the hydraulic cylinder is so arranged as to interact during the whole of the raising and lowering movement of the lifting table via rollers (9a, 9b, 9c) with at least two guide curves (11a, 11b, 11c) arranged in conjunction with the common bearing shaft (1c, 2c) for the scissor arms (1a, 1b; 2a, 2b) and operatively connected to the respective scissor arm (1a, 1b; 2a, 2b);
the mutually and operatively connected scissor arms (1a, 2a), which are pivotally connected to the frame section (3), consist of a beam of 'U'—section open towards the top, in which the appropriate power transmission arrangement (7, 8, 9, 11) is arranged.

AMENDED CLAIMS
[received by the International bureau
on 30 May 1988 (30.05.88)
original claim 1 replaced by amended claims 1 and 2 (1 page)]

1. Arrangement for a hydraulic lifting table of the scissor type with two pairs of mutualy attached scissor arms (1a, 1b; 2a, 2b), which at their ends are connected by means of pivots and rollers to a lower frame section (3) and an upper table section (4), and are mutually and operatively connected to the pivotable connection (5) to the frame section (3), comprising a power transmission arrangement (7, 8, 9, 11) for raising and lowering the table section (4), c h a r a c t e r i z e d by the combination of the following distinguishing features:
the power transmission arrangement (7, 8, 9, 11) contains for each pair of scissor arms (1a, 1b; 2a, 2b) a hydraulic cylinder (7a; 7b) pivotally mounted at said connection (5);
the piston rod (8a, 8b) of the hydraulic cylinder is so arranged as to interact during the raising and lowering movement of the lifting table via rollers (9a, 9b, 9c) with at least two guide curves (11a, 11b, 11c) arranged in conjunction with the common bearing shaft (1c, 2c) for the scissor arms (1a, 1b; 2a, 2b) and operatively connected to the respective scissor arm (1a, 1b; 2a, 2b).

2. Arrangement according to Patent Claim 1, c h a r a c t e r i z e d in that the mutually and operatively connected scissor arms (1a, 2a), which are pivotally connected to the frame section (3), consist of a beam of U-section open towards the top, in which the appropriate power transmission arrangement (7, 8, 9, 11) is arranged.

FIG 1



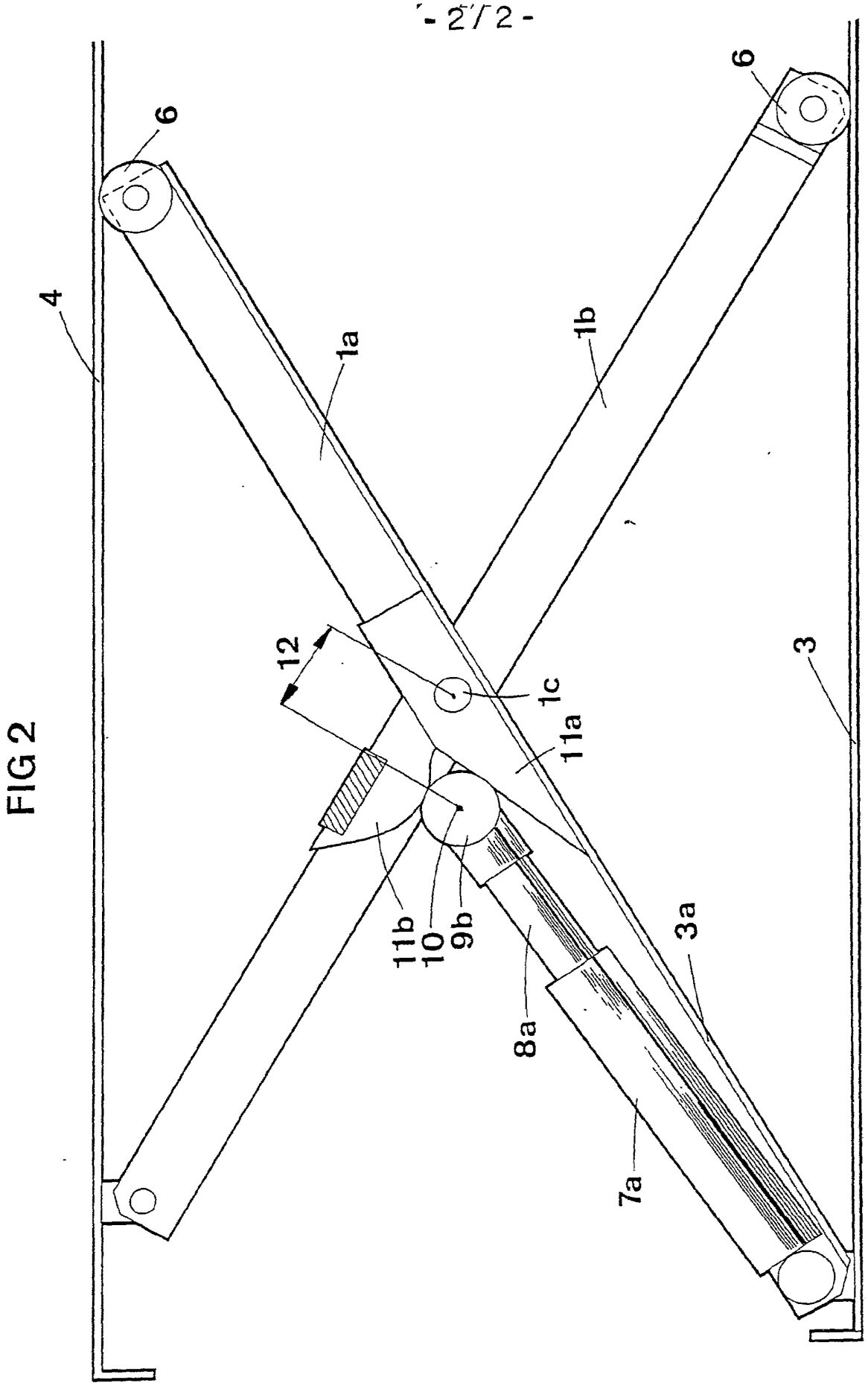


FIG 2

INTERNATIONAL SEARCH REPORT

International Application No PCT/SE88/00036

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) [6]

According to International Patent Classification (IPC) or to both National Classification and IPC 4

B 66 F 7/08

II. FIELDS SEARCHED

Minimum Documentation Searched [7]

Classification System	Classification Symbols
IPC 4	B 66 F 7/00, /06-/08, /28, 3/22, /25; E 04 G 1/22
US Cl	182: 69, 141, 148, 157, 158; 187: 8.71, 8. 72, 18; 254: 8, 9, 122

Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched [8]

SE, NO, DK, FI classes as above

III. DOCUMENTS CONSIDERED TO BE RELEVANT [9]

Category *	Citation of Document, [11] with indication, where appropriate, of the relevant passages [12]	Relevant to Claim No. [13]
A	DE, A, 1 756 270 (ANTON F KATT) 12 March 1970	
A	US, A, 2 862 689 (P W DALRYMPLE et al) 2 December 1958	
A	SE, B, 450 486 (TORBJÖRN EDMO AB) 1 March 1985	
A	US, A, 4 534 544 (HEIDE) 13 August 1985	
A	US, A, 2 937 852 (J E CLARKE) 24 May 1960	
P	SE, A, 8602983-2 (PER-OLOF SEHLSTEDT) 5 January 1988	

* Special categories of cited documents: [10]

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

IV. CERTIFICATION

Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report
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International Searching Authority	**Signature of Authorized Officer**
Swedish Patent Office	Mariana Hedman

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(12)实用新型专利

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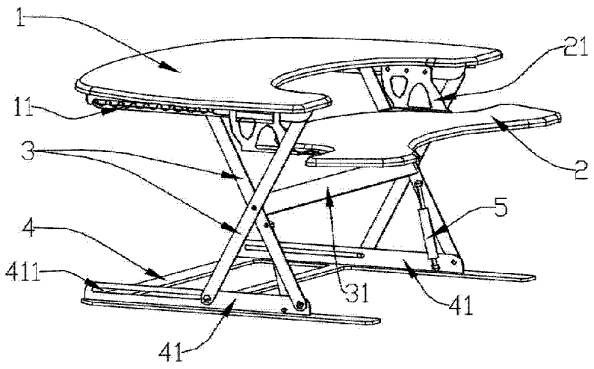
权利要求书1页 说明书2页 附图3页

(54)实用新型名称

一种可升降桌子

(57)摘要

一种可升降桌子，包括桌面与用于支持所述桌面的支撑机构，所述支撑机构包括与地面接触的底座，所述底座上设有交叉型升降机构，所述交叉型升降机构上端与桌面相连；还包括用于控制所述交叉型升降机构升降的升降气缸；还包括用于限定所述交叉型升降机构的限位机构。本实用新型具有以下有益效果：1）本实用新型通过升降气缸控制桌面的升降，避免了人工手动升降，省力省时，灵活方便；2）本实用新型的交叉型升降机构结构简单，组件加工要求低。



CN 204541230 U

1. 一种可升降桌子，包括桌面（1）与用于支持所述桌面（1）的支撑机构，其特征在于，所述支撑机构包括与地面接触的底座（4），所述底座（4）上设有交叉型升降机构，所述交叉型升降机构上端与桌面（1）相连；还包括用于控制所述交叉型升降机构升降的升降气缸（5）；还包括用于限定所述交叉型升降机构的限位机构。

2. 根据权利要求 1 所述的一种可升降桌子，其特征在于，所述交叉型升降机构包括交叉配合的至少两条连杆（3），所述每条连杆（3）的一端固定、另一端活动。

3. 根据权利要求 2 所述的一种可升降桌子，其特征在于，所述限位机构为设于所述桌面（1）下沿的若干个卡槽或卡孔（11），所述底座（4）设有滑槽（411），所述一条连杆（3）的活动端卡在卡槽或卡孔（11）中，另一条连杆（3）的活动端可沿滑槽（411）滑动。

4. 根据权利要求 1 至 3 任一项所述的一种可升降桌子，其特征在于，还包括第二桌面（2），所述第二桌面（2）通过固定件（21）固定于所述桌面（1）下方。

一种可升降桌子

技术领域

[0001] 本实用新型属于办公家具领域，具体涉及一种可灵活的升降的桌子。

背景技术

[0002] 桌子是常用的一种家具，在普通家庭及办公领域中广泛使用，目前，人们对桌子的要求也在越来越高，希望在保留桌子传统的功能的同时，在便携性上做出改进。同时，不同身高的人对桌子的高度要求也不一样，传统中固定高度的桌子有一定的使用局限性，不能适应不同人的使用需求，因此也希望在桌子高度可调功能上做出改进。

[0003] 现有的一些改进型的桌子，具有可调节高度的功能，但往往在实现方式上比较费力，比如需要人手动抬升桌面，十分麻烦。

实用新型内容

[0004] 针对现有技术中的不足，本实用新型提供了一种可升降的桌子，能灵活、方便的调节桌面高低，操作方便。

[0005] 本实用新型通过以下技术方案实现：

[0006] 一种可升降桌子，包括桌面与用于支持所述桌面的支撑机构，所述支撑机构包括与地面接触的底座，所述底座上设有交叉型升降机构，所述交叉型升降机构上端与桌面相连；还包括用于控制所述交叉型升降机构升降的升降气缸；还包括用于限定所述交叉型升降机构的限位机构。

[0007] 本实用新型的可升降桌子，可在升降气缸的作用下快速方便的进行桌面的升降操作。观察现有技术中的一些可升降桌子，大多数需要手动升降，十分麻烦费力，且一些可升降桌子的在升降过程中桌面并不是垂直升降，而是桌面会有一定程度的前移或后移，这使得需要额外的空间来满足桌子的升降，比较不方便。本实用新型中的限位机构能用来固定不同高度的桌面，满足不同使用人员的需求，此外，本实用新型中的升降气缸初始启动不需附加外力，利用角度位移差增强力度。

[0008] 作为优选，所述交叉型升降机构包括交叉配合的至少两条连杆，所述每条连杆的一端固定、另一端活动。该结构能方便的实现交叉型升降机构的升降，且升降时端每条连杆的活动端平移，实现桌面的垂直升降。

[0009] 作为优选，所述限位机构为设于所述桌面下沿的若干个卡槽或卡孔，所述底座设有滑槽，所述一条连杆的活动端卡在卡槽或卡孔中，另一条连杆的活动端可沿滑槽滑动。具体的，连杆的活动端可以直接或间接的卡在卡槽或卡孔中、在滑槽中滑动，该结构能使升降过程中的连杆更加稳定，不易脱出，且能方便的固定不同高度的桌面。

[0010] 作为优选，所述的一种可升降桌子还包括第二桌面，所述第二桌面通过固定件固定于所述桌面下方。第二桌面可用于放置键盘等，使得本实用新型的可升降桌子整体作为一个电脑桌使用，满足大部分家庭的需求。

[0011] 与现有技术相比，本实用新型具有以下有益效果：1）本实用新型通过升降气缸控

制桌面的升降，避免了人工手动升降，省力省时，灵活方便；2）本实用新型的交叉型升降机构结构简单，组件加工要求低。

附图说明

[0012] 图 1 为本实用新型的正视图。

[0013] 图 2 为本实用新型的侧视图。

[0014] 图 3 为本实用新型的立体图。

具体实施方式

[0015] 下面结合附图与具体实施方式，对本实用新型做进一步描述。

[0016] 见图 1 至图 3，一种可升降桌子，包括桌面 1 与用于支持所述桌面 1 的支撑机构，所述支撑机构包括与地面接触的底座 4，所述底座 4 上设有交叉型升降机构，所述交叉型升降机构上端与桌面 1 相连；本实用新型中，所述交叉型升降机构为两组交叉配合的两条连杆 3，这两组连杆 3 之间通过固定杆 31 固定在一起，所述每条连杆 3 的一端固定、另一端活动。

[0017] 本实用新型中，还包括用于控制所述交叉型升降机构升降的升降气缸 5，升降气缸 5 有两个，分别控制每组连杆 3，这些升降气缸 5 的一端连接在底座 4 上，另一端连接在其中一条连杆 3 上。

[0018] 本实用新型中，还包括用于限定所述交叉型升降机构的限位机构，所述限位机构为设于所述桌面 1 下沿的若干个卡槽或卡孔 11；同时，所述底座 4 设有固定片 41，该固定片 41 上设有滑槽 411。

[0019] 本实用新型中，一组连杆中，一条连杆 3 的活动端通过卡扣机构卡在卡槽或卡孔 11 中、固定端转动连接在固定片 41；另一条连杆 3 的活动端通过滑动机构可在滑槽 411 滑动、固定端转动连接在桌面 1 下沿。

[0020] 本实用新型的桌子中，还包括第二桌面 2，所述第二桌面 2 通过固定件 21 固定于所述桌面 1 下方。

[0021] 本实用新型的可升降桌子使用时，先使卡扣机构脱离卡槽或卡孔 11，接着在升降气缸 5 的作用下，推动连杆 3 升起使得桌面 1 升起，当升到合适高度时，通过卡扣机构卡在卡槽或卡孔 11 中，完成限定操作，使桌面 1 固定，可以使用。需要收拢时，将卡扣机构脱离卡槽或卡孔 11，稍用力将桌面 1 下压，使桌子收拢，方便携带。

[0022] 本实用新型的保护范围包括但不限于以上实施方式，本实用新型的保护范围以权利要求书为准，任何对本技术做出的本领域的技术人员容易想到的替换、变形、改进均落入本实用新型的保护范围。

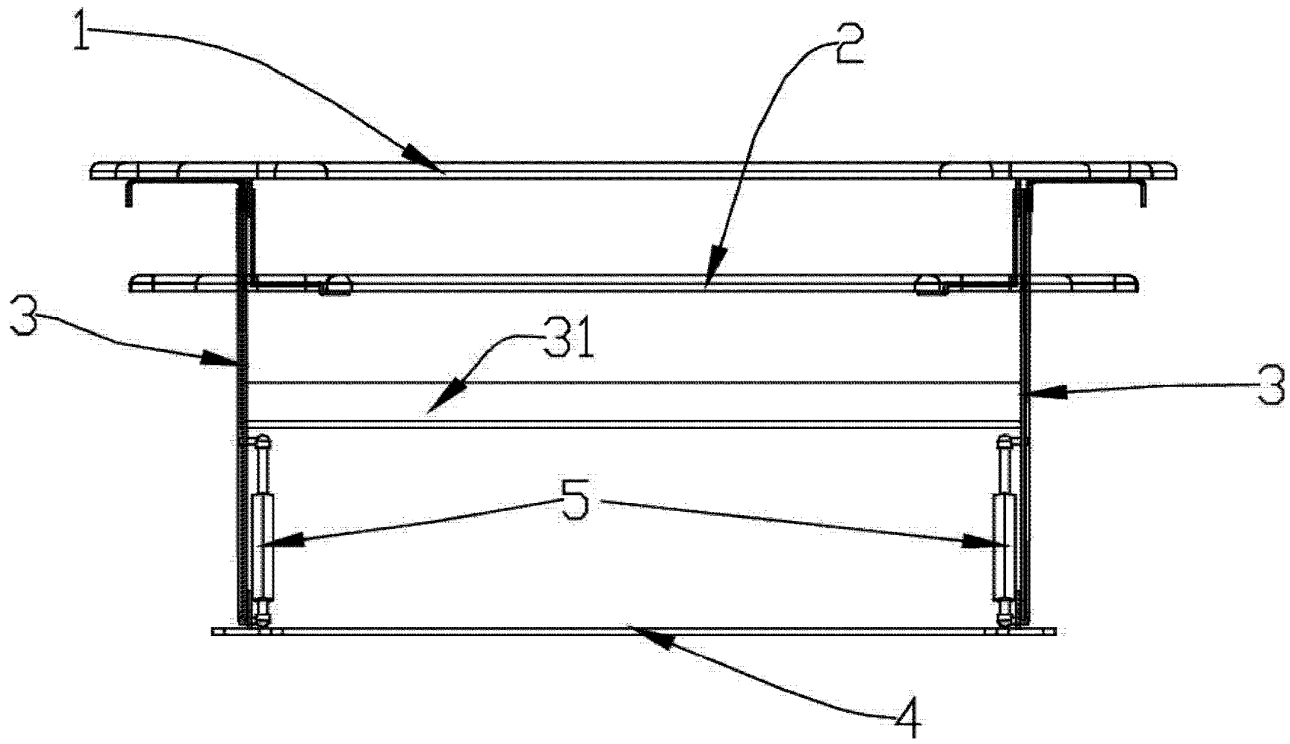


图 1

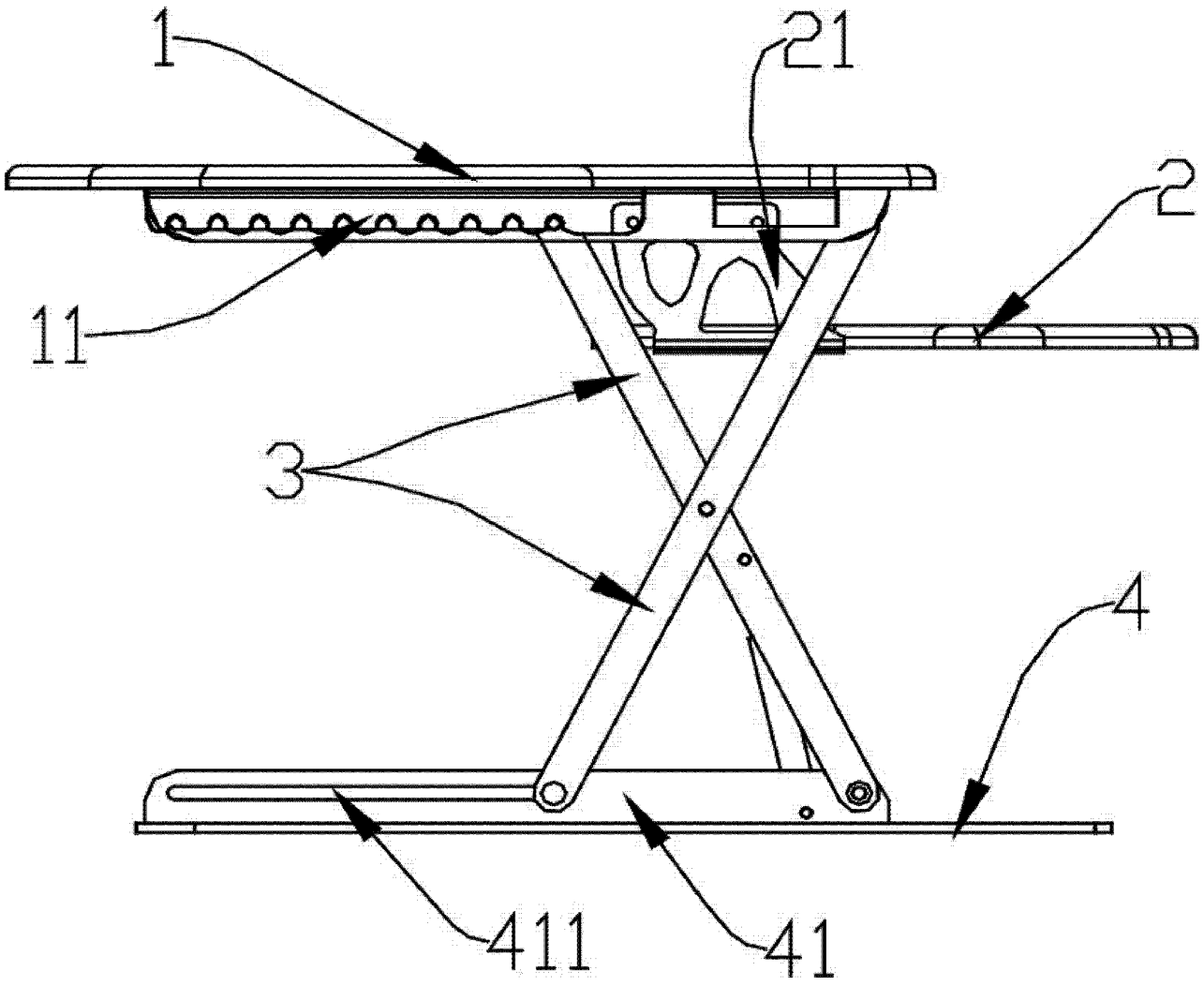


图 2

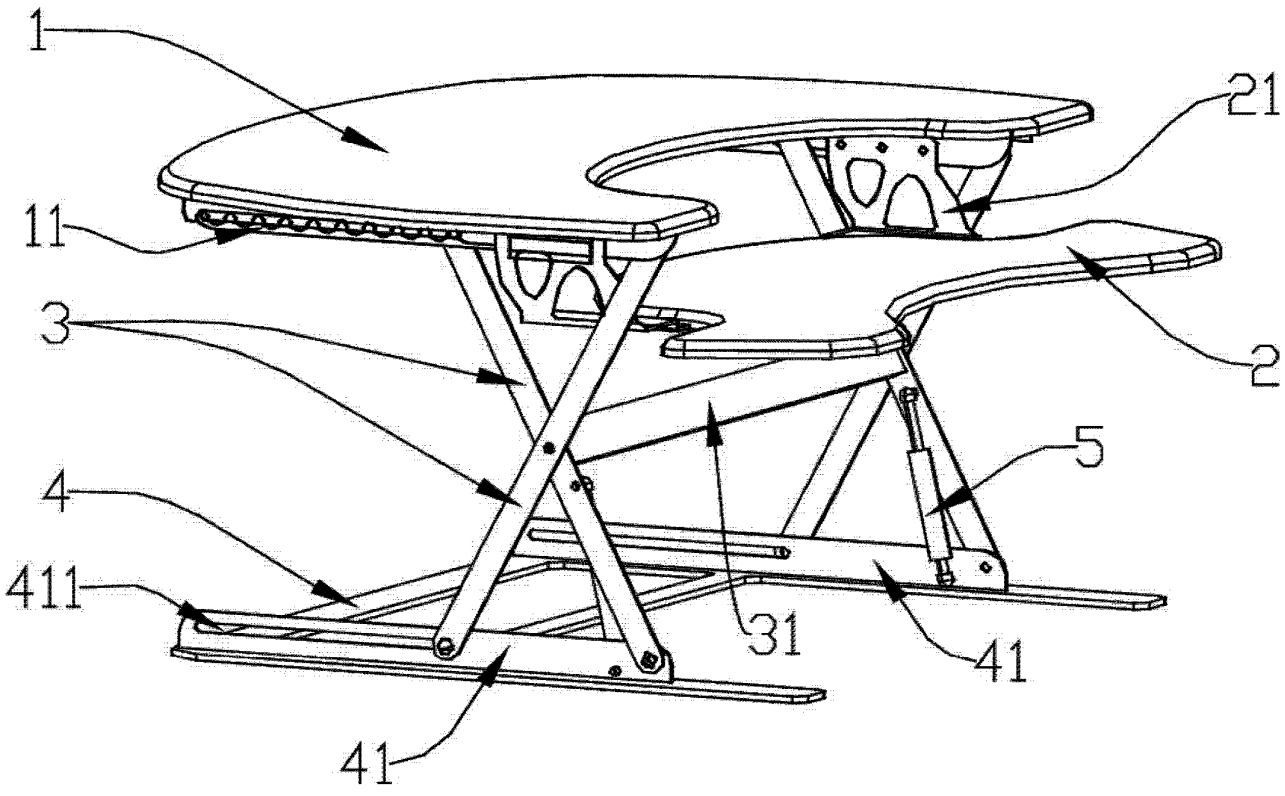


图 3

Electronic Acknowledgement Receipt

EFS ID:	47887156
Application Number:	17493830
International Application Number:	
Confirmation Number:	4682
Title of Invention:	DESKTOP WORKSPACE THAT ADJUSTS VERTICALLY
First Named Inventor/Applicant Name:	Nathan Mark Poniatowski
Customer Number:	155431
Filer:	Daniel Thomas Lund
Filer Authorized By:	
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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	CORRECTED_20230424_10010 01US13.pdf	1290221 8cdd6d730d4e332f484358e6c2e60e20729 bda91	no	9

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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[Continued on next page]

(54) Title: HEIGHT ADJUSTABLE STAND UP DESK

(57) Abstract: An adjustable stand up desk includes a desk top; a desk base; leg assembly coupled to the desk top and the desk base; and an assisted lift mechanism. The assisted lift mechanism includes a gas spring coupled to the desk top and the leg assembly that assists in lifting and damping a first portion of travel of the desk top, and a spring device external to and in concentric alignment with the gas spring and sized and positioned to dampen a fall and assist a lift during a second portion of travel of the desk top.

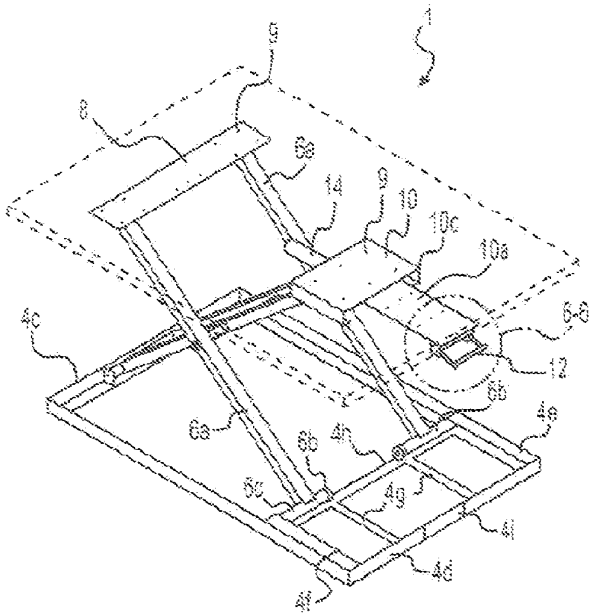


FIG. 3

WO 2016/187212 A1

SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

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HEIGHT ADJUSTABLE STAND UP DESK

RELATED APPLICATIONS

[0001] This application claims benefit of U.S. Patent Application No. 15/090,915 , filed April 05, 2016 entitled "HEIGHT ADJUSTABLE STAND UP DESK," now pending, which claims the benefit of U.S. Provisional Patent Application No. 62/163,670, filed May 19, 2015, now pending, entitled "An Adjustable Stand Up Desk Utilizing a Scissor-Lift System," which is hereby incorporated by reference.

BACKGROUND

[0002] Sitting for long periods of time negatively impacts quality of life for many people. Poor posture and existing back injuries can make sitting painful. Recent studies have shown that sitting most of the day decreases human lifespan by two to three years.

[0003] The majority of standing desks require the customer to replace their current desk. Many customers are unwilling or unable to do this, especially if they work in a cubicle where removing the desk is not an option.

[0004] Existing desktop stand up desks do not offer a sufficient range of height adjustment to be ergonomic for the majority of the population, and several are not adjustable.

[0005] Existing standing desks also are prohibitively expensive for most of the population, leaving the health benefits of standing out of reach.

SUMMARY

[0006] An adjustable stand up desk includes a desk top; a desk base; a leg assembly coupled to the desk top and the desk base; and an assisted lift mechanism. The assisted lift mechanism includes a gas spring coupled to the desk top and the leg assembly that assists in lifting and damping a first portion of travel of the desk top, and a spring device external to and in concentric alignment with the gas spring and sized and positioned to dampen a fall and assist a lift of a second portion of travel of the desk top.

[0007] In an embodiment, the gas spring is triggered utilizing a pivotable handle. The force of the gas spring lifts the desk top to a desired height and dampens the fall of the desk top to an intermediate height or to a fully stowed, planar position.

[0008] In an embodiment, the adjustable stand up desk incorporates a secondary spring mechanism, which rides on the piston rod of the gas spring so as to control the drop and assist the lift of the desk top during a portion of its travel between an extended position and the fully stowed, planar position. The adjustable stand up desk also may include a removable limit bar that limits full collapse of the adjustable stand up desk.

DESCRIPTION OF THE DRAWINGS

[0009] Figure 1 shows a right side isometric view of an example stand up desk.

[0010] Figure 2 shows a right side isometric view of the stand up desk with the desk top shown in phantom.

[0011] Figure 3 shows a left side isometric view of the stand up desk with the desk top shown in phantom.

[0012] Figure 4 shows a top view of the desk shown in Figure 2 without the desk top.

[0013] Figure 5 shows cross-sectional view 5-5 from Figure 4.

[0014] Figure 6 shows cross-sectional view 6-6 from Figure 3.

[0015] Figure 7 shows a front view of a frame of the stand up desk of Figure 1.

[0016] Figure 8 shows cross-sectional view 8-8 from Figure 7.

[0017] Figure 9 shows a bottom view of the frame of Figure 7.

[0018] Figure 10 shows a side view of the frame of Figure 7.

[0019] Figure 11 shows cross-sectional view 11-11 from Figure 5.

[0020] Figure 12 shows cross-sectional view 12-12 from Figure 9.

[0021] Figure 13 shows an isometric view of another example stand-up desk.

DETAILED DESCRIPTION

[0022] Figures 1 and 2 show an adjustable stand up desk 1 having a vertically-movable desk top 2, a base 4, a leg assembly, and a lift assist system. In an embodiment, the leg assembly is a scissor lift system that includes a pair of first beams 5a and a pair of second beams 6a, which pivot relative to each other thus forming an x when the desk 1 is in a raised position. The first beams 5a and the second beams 6a are hinged through a pivot rod 16 that passes through both beam pairs, as seen in Figure 8. Spacers 18 ride on the pivot rod 16 and the spacers 18 keep the first beams 5a, 5b and the second beams 6a, 6b separated and parallel.

[0023] Referring to Figures 2, 3, and 4, the base 4 is a rectangular frame that includes four L-shaped beams 4a-4d. As seen in Figures 2 and 8, one end of the first beams 5a pivotally connects to L-shaped beam 4c of the base 4. The other ends of the first beams 5a are pivotable and slidable relative to a first anchor plate 10. The ends of the second beams 6a are pivotally anchored to a second anchor plate 8. The other ends of the second beams 6a are pivotable and slidable relative to the base 4.

[0024] It is envisioned that the first anchor plate 10 and the second anchor plate 8 are fixed to the desk top 2. As shown in Figure 2, the L-shaped beams 4a, 4b face each other. Each of the L-shaped beams 4a, 4b respectively contain a capping plate 4e, 4f that extends a portion of the L-shaped beam and extends perpendicular to the L-shaped

beams thus forming a U-shaped rail. The U-shaped rails face each other. The second beams 6a are slidable and pivotally relative to the U-shaped rails. As shown in Figure 3, each of the second beams 6a include a hub 6b that in turn holds a pair of wheels 6c that rotate freely. One of the wheels 6c rides inside the U-shaped rails while the other wheel 6c rides on a flat strip 4g. The flat strips 4g are connected to L-shaped beam 4d and a brace 4h that extends between the L-shaped beams 4a, 4b to provide structural stability to the strips 4g.

[0025] As shown in Figures 2 and 3, the first anchor plate 10 includes a pair of L-shaped beams 10b, 10c at one end that face each other and together with the anchor plate 10 form a pair of channels in which the first beams 5a slide and rotate relative to the L-shaped beams 10b, 10c. A lift assist shown in this embodiment includes an adjustable push-in gas spring 14 that is rotatably anchored to the ends of the first beams 5a as seen in Figure 12. A pair of pins 14a projects opposite from the gas spring 14 and each pin 14a is fitted through holes 5d at the ends of the first beams 5a, and the pins 14a rotate freely in the holes 5d. At the ends of each of the pins 14a is a rotatable wheel 5c, as seen in Figures 10 and 12. As shown in Figures 4 and 12, both first beams 5a are connected through a cylindrical brace 5b, which hingedly connects to the L-shaped beam 4c and keeps both first beams 5a parallel to each

other. The gas spring 14 eventually slides relative to the L-shaped beams 10a, 10b along with the first beams 5a.

[0026] As shown in Figures 3, 9, and 11, the first anchor plate 10 further includes an extension 10a holding a pivotable handle 12 that triggers the adjustable push-in gas spring 14. The adjustable push-in gas spring 14 is of a common configuration and need not be detailed herein. The operation of the gas spring 14 is triggered when a rod 14c is pushed in relative to an outer hollow rod 14b. The hollow rod 14b is fixed to a vertical wall 10f using a pair of threaded nuts 14d. As shown in Figure 6, the handle 12 includes a hinge rod 12c that rotates relative to a pair of parallel plates 10e. The handle 12 includes a pair of cantilever rods 12b that extends perpendicular to the hinge rod 12c. A U-shaped bar 12a bridges between the cantilever rods 12b so as to let a user pivot the handle 12. At bottom ends of the parallel plates 10e, a pair of stops 10d extend perpendicular to the parallel plates 10e and face each other. The stops 10d prevent the cantilever rods 12b from dropping and keep the handle 12 at the same location after deactivation. As shown in Figure 11, the hinge rod 12c includes a trigger plate 12d that extends from the hinge rod 12c so as to push the rod 14c of the gas spring 14.

[0027] Figure 11 further shows a spring mechanism 14e that in one aspect retards or dampens a portion of the drop of the desk top 2 and in

another aspect assists extension of the desk's legs, i.e., beams 5a, 5b, 6a, and 6b and hence a lift of the desk top 2. The spring mechanism 14e is in concentric arrangement with the rod 14c of the gas spring 14 and is sized and positioned as shown in Figure 11 such that when the desk top 2 approaches the fully stowed position in the base 4, an end surface of gas spring cylinder 14f engages or contacts the spring mechanism the drop of the desk top 2 to a fully stowed, planar position. The spring mechanism 14e can be designed to any desired spring constant. The spring mechanism 14e may be free to slide along a length of the rod 14c. Alternately, the spring mechanism 14e may be fixed to the frame 4. In Figure 11, the spring mechanism 14e is seen to be sized such that the desk top 2 initially is held short of the fully stowed, planar position by the force of the spring mechanism 14e until the spring mechanism 14e is compressed. As can be seen in Figure 11, the spring mechanism 14e engages the gas cylinder 14f during a second portion of travel of the desk top 2 toward the fully stowed, planar position and the second portion is approximately 25 percent of the total travel of the desk top 2 from the fully raised position to the fully stowed, planar position. Because the spring mechanism 14e is placed in concentric arrangement with the rod 14c, and because the spring mechanism 14e is shorter than the stroke of the rod 14c, the weight of the desk top 2 may be sufficient to overcome the spring force and to fully stow the desk top 2 in the base 4. Alternately, a user may exert a

further force on the desk top 2 to completely stow the desk top 2 in the base 4. The force needed for storage charges the spring mechanism 14e. Then, when the user operates handle 12 to trigger the gas spring 14, the spring mechanism 14e initially lifts the desk top 2 by providing an initial upward force that pushes against the engaged, end surface of the gas cylinder 14f, which in turn creates an initial force to lift the desk top 2 and/or to assist the user in raising the desk top 2. In the embodiment shown in Figures 1 - 12, the desk 1 may be raised from a fully stowed, planar position where the desk top 2 is approximately 2 inches in height to a fully raised position of approximately 16 inches in height. When the desk top 2 is lowered to the fully stowed, planar position, the spring mechanism 14e begins dampening the fall of the desk top 2 at approximately 4 inches from the fully stowed, planar position. From the desk top fully stowed, planar position, the spring mechanism 14e provides an initial lifting force until the gas spring 14 provides an effective lifting force.

[0028] As seen in Figure 3, the L-shaped beam 4d includes a notch 4i to clear the gas spring 14, the vertical wall 10f, and the parallel plates 10e as the desk 1 is collapsed. The first anchor plate 10 and the second anchor plate 8 contain a series of fastener holes 9 to allow the plates 8, 10 to be fixed to the desk top 2 using screws, not shown, or

any known fastener. The wheels 5c, 6c may be fastened with screws, bolts, rivets, or any other known fastener to make the wheels rotatable.

[0029] Figure 13 shows another embodiment of a stand up desk. In Figure 13, stand up desk 100 is seen to be similar in most respects to the stand up desk 1 of Figure 1. However, the stand up desk 100 includes a cross bar 106 that passes through a pair of loops 102 fixed to the second pair of beams 6a so as to prevent the tabletop 2 from collapsing fully. With the cross bar 106 withdrawn from the loops 102, the desk top 2 can collapse into the base 4 to a planar configuration for ease of storage and shipping.

[0030] While Figure 1 shows the stand up desk 1 by itself, it should be noted that the desk 1 may be set on top of an ordinary desk or similar structure. The stand up desk 1 is shown with a unitary desk top 2 that provides a single surface that may be used for writing and supporting equipment, for example. In this configuration, the stand up desk 1 may hold a computer screen and a keyboard, for example, and a user then may raise the computer screen and keyboard to a desired height thereby making an ergonomic environment. While sized to fit on an ordinary desk, the stand up desk 1 can be sized to any desired dimension. It is envisioned that the first beams 5a and the second beams 6a are tubular in configuration but may be made of any other shape. Further, while the desk top 2 shown is rectangular, other shapes can be envisioned such as circular, triangular, or any other odd shape. The base 4 may be made of metal or any other suitable material, and the desk top 2 can

be made of any material, including wood or materials similar to those of any common desk.

[0031] In the desk embodiments shown in Figures 1 and 13, the leg assembly operates in cooperation with base 4. In another embodiment, a height-adjustable desk may operate without a base, and beams 5a of the leg assembly may terminate, for example, in rubber stops or wheels while wheels at the terminus of the beams 6a then may roll across a surface on which the desk 1 rests, such as a floor, desktop, or tabletop.

We claim:

1. An adjustable stand up desk, comprising:

a vertically-movable desk top;

a desk base;

a leg assembly coupled to the vertically-movable desk top and the desk base; and

an assisted lift mechanism, comprising:

a gas spring coupled to the vertically-movable desk top and the leg assembly that assists in lifting and damping a first portion of travel of the vertically-movable desk top, and

a spring device external to and in concentric alignment with the gas spring and sized and positioned to dampen a fall and assist a lift of a second portion of travel of the vertically-movable desk top.

2. The desk of claim 1, wherein the gas spring comprises:

a gas cylinder; and

a gas push in rod, wherein the spring device is positioned and has a length such that the spring device is engaged when the vertically-movable desk top is within approximately 25 percent of a desk top stowed, planar position.

3. The desk of claim 2, wherein the spring device is free to move along a length of the push in rod.

4. The desk of claim 2, wherein the spring device is fixed at one end.

5. The desk of claim 1, wherein the spring device is a coil spring.

6. The desk of claim 1, further comprising a removable safety bar positioned to stop a fall of the vertically-movable desk top.

7. The desk of claim 1, wherein the leg assembly comprises a scissor lift assembly.

8. A height-adjustable desk, comprising:

a desk top;

a desk base;

a scissors-lift leg assembly slidably and pivotably coupled to the desk top and the desk base;

a first mechanism for extending the leg assembly from a stowed position to one of a plurality of extended positions and returning the an extended position to a stowed position, comprising:

a differential pressure gas spring assembly, and

a pivotable handle that actuates the gas spring assembly, and

a second mechanism external to and in cooperation with the gas spring assembly that dampens a fall of the desk top to the stowed position and assists a lift of the desk top to the extended position; and

a safety mechanism that limits the fall of the desk top to the stowed position.

9. The desk of claim 8, wherein the gas spring assembly comprises:

a gas cylinder;

a differential pressure piston installed within the gas cylinder; and

a push in rod in connection with the piston, and wherein the second mechanism is in concentric free communication with the push in rod such that the second mechanism exerts a damping force on the gas cylinder during only the final 25 percent of the fall of the desk top.

10. The desk of claim 9, wherein the second mechanism comprises a coil spring.

11. The desk of claim 8, wherein the safety mechanism comprises:

loops affixed to two legs of the leg assembly; and

a removable bar inserted through the loops.

12. The desk of claim 8, wherein the desk top comprises a unitary surface.

13. A portable, height-adjustable stand up desk, comprising:

a desk top;

a desk base;

a leg assembly slidably and pivotably coupled to the desk top and the desk base;

a desk top lift mechanism for extending the leg assembly from a fully stowed, planar position to one of a plurality of extended positions and returning the leg assembly from an extended position to the fully stowed, planar position, comprising:

a differential pressure gas spring assembly,

a pivotable handle that actuates the gas spring assembly, and

a spring mechanism external to and in cooperation with the gas spring assembly that dampens a fall of the desk top to the stowed position and assists a lift of the desk top to the extended position.

14. The desk of claim 13, further comprising a safety mechanism that limits the fall of the desk top to the stowed position.

15. The desk of claim 13, wherein the gas spring comprises:

a gas cylinder; and

a push in rod, wherein the spring mechanism has a length such that the spring mechanism is engaged when the desk top is within

approximately 25 percent of the desk top fully stowed, planar position.

16. The desk of claim 15, wherein the spring device is free to move along a length of the push in rod.

17. The desk of claim 13, wherein the leg assembly comprises a scissor lift assembly.

18. A portable desk having a height-adjustable desk top, comprising:

an extendible leg assembly coupled to the desk top; and

a lift mechanism that extends the leg assembly from a fully stowed, planar position to one of a plurality of extended positions and returns the leg assembly from an extended position to the fully stowed, planar position, comprising:

a differential pressure gas spring assembly,

a handle that actuates the gas spring assembly, and

a spring mechanism external to and in cooperation with the gas spring assembly that dampens a fall of the desk top to the fully stowed, planar position and assists a lift of the desk top to the extended position.

19. The portable desk of claim 18, further comprising a desk base, wherein the extendible leg assembly is coupled to the desk base.

20. The portable desk of claim 18, wherein the gas spring assembly comprises:

a gas cylinder; and

a push in rod, wherein the spring mechanism is positioned and has a length such that the spring mechanism is engaged when the desk top is within approximately 25 percent of the fully stowed, planar position.

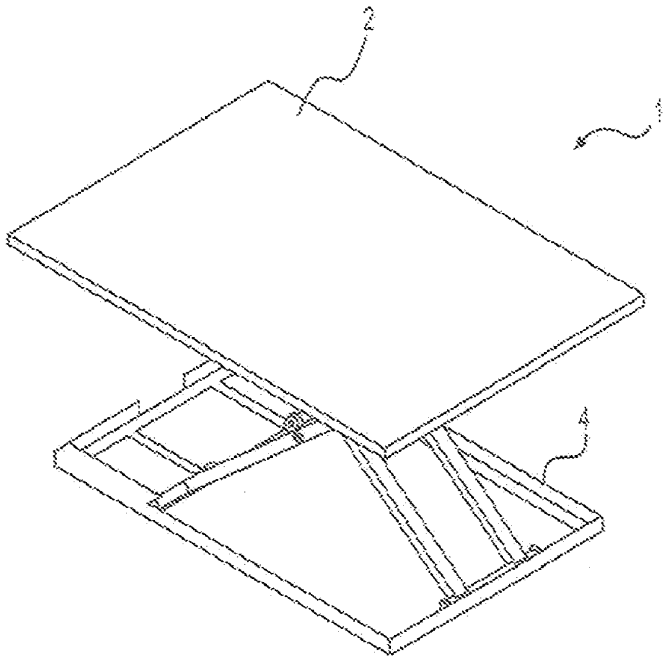


FIG. 1

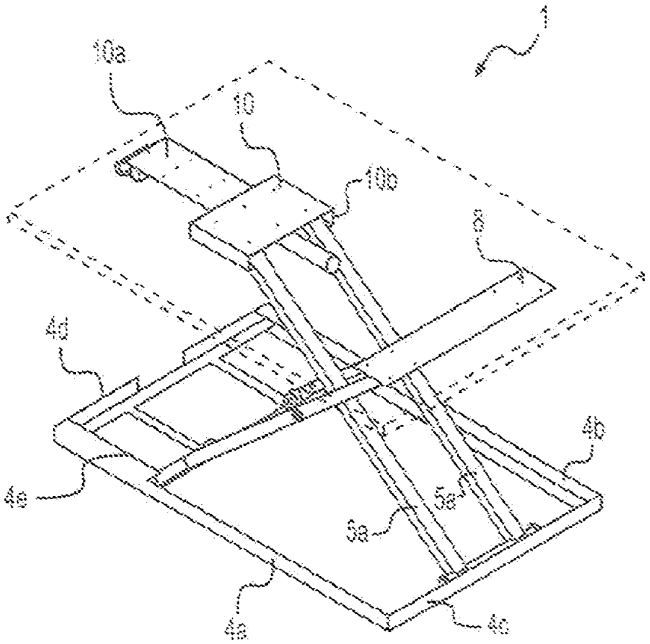


FIG. 2

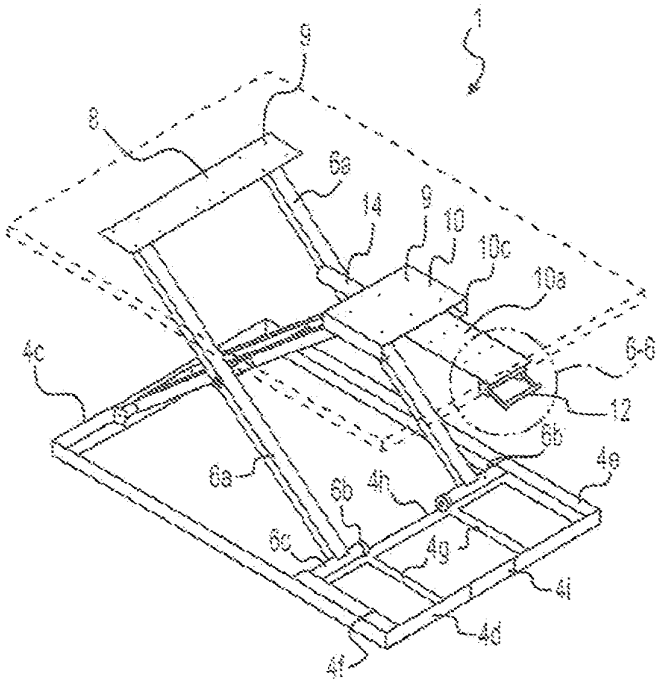

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6e
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FIG. 3

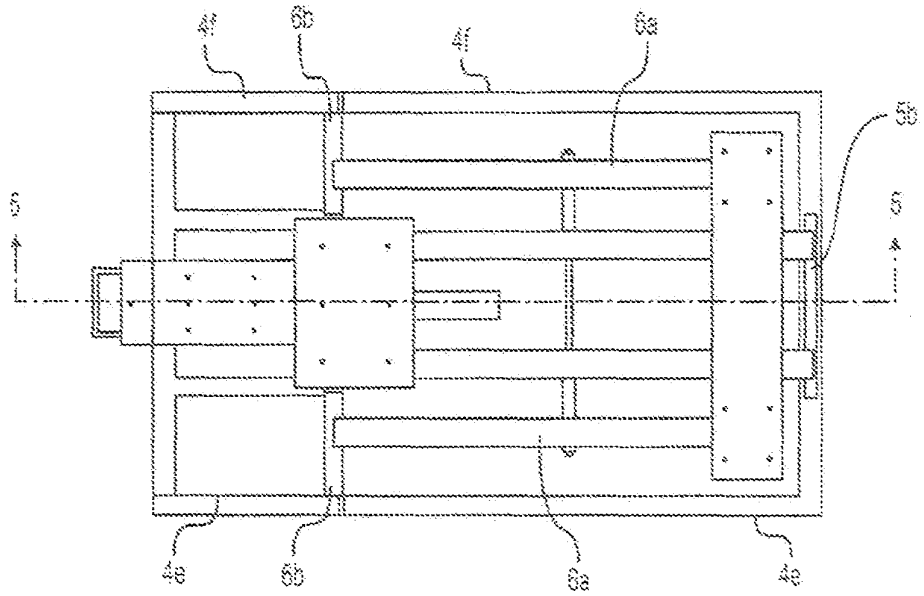

4f
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FIG. 4

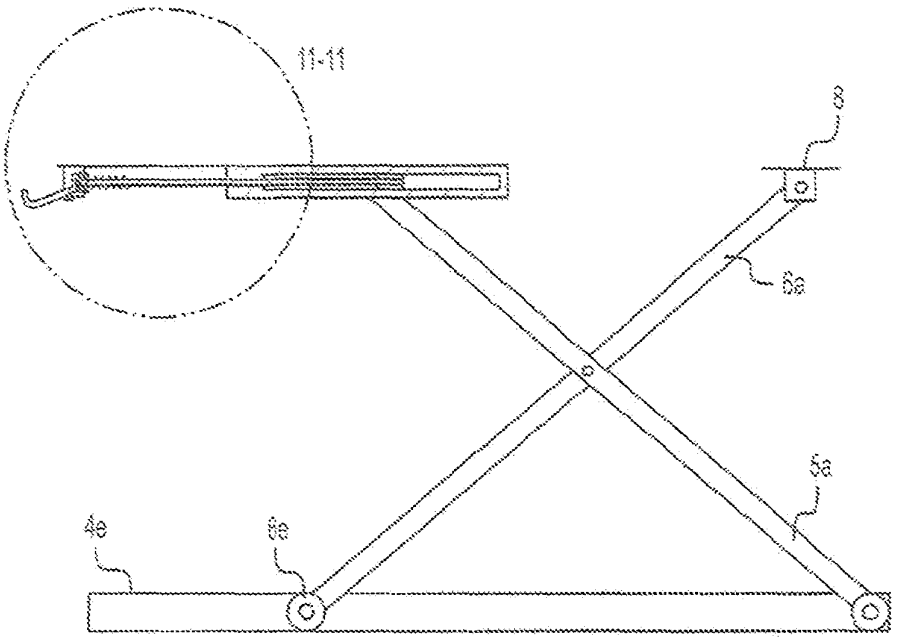


FIG. 5

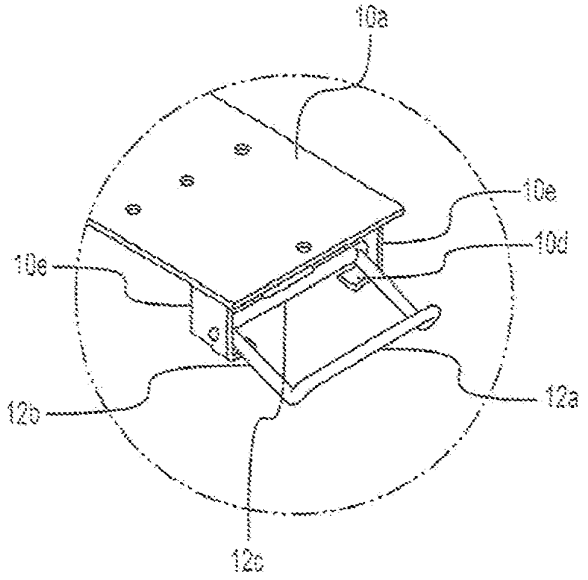


FIG. 6

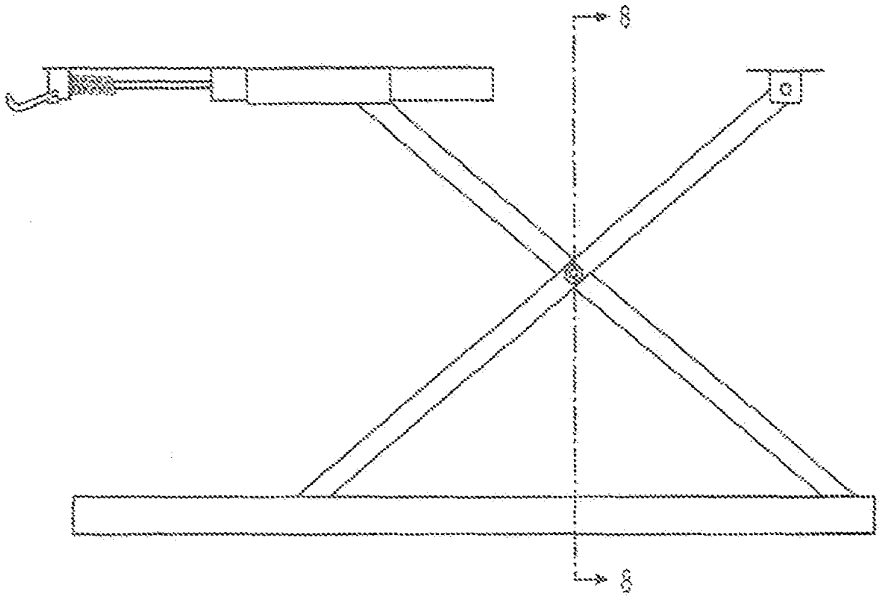


FIG. 7

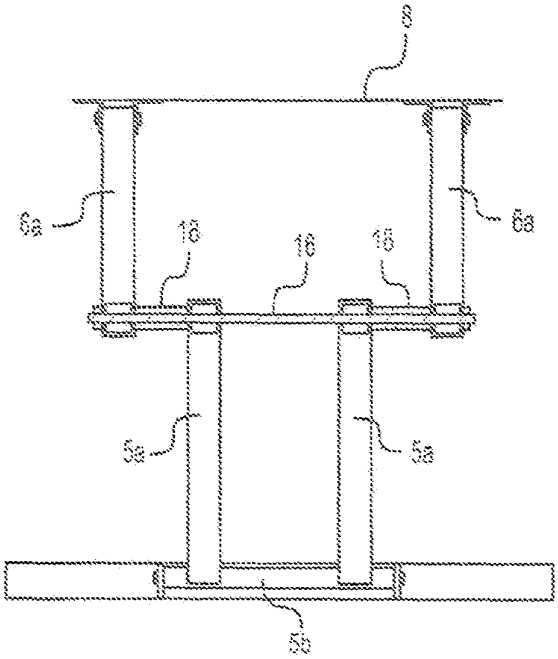


FIG. 8

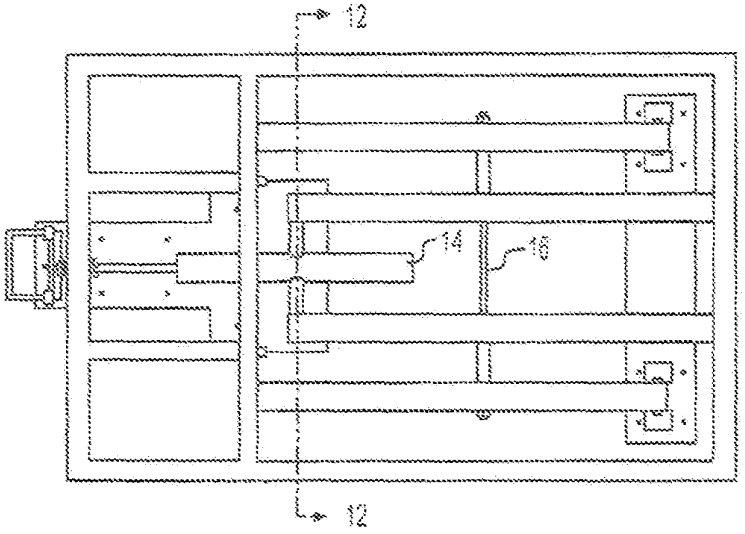


FIG. 9

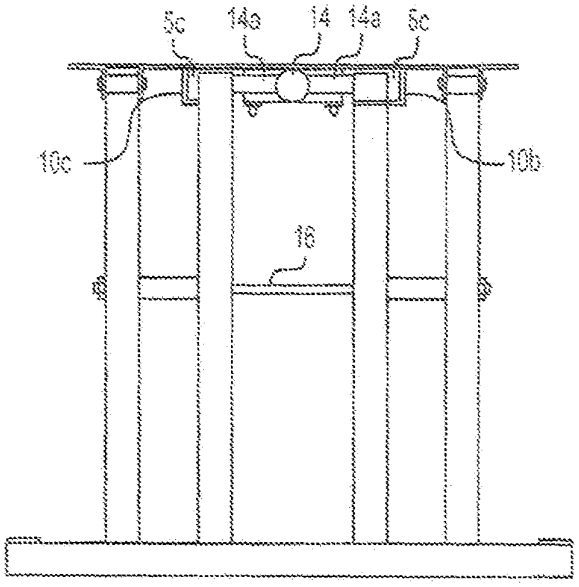


FIG. 10

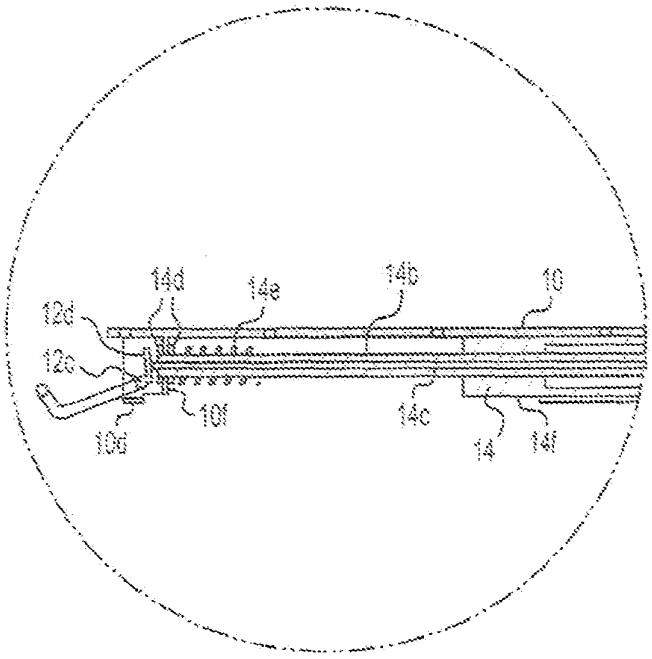


FIG. 11

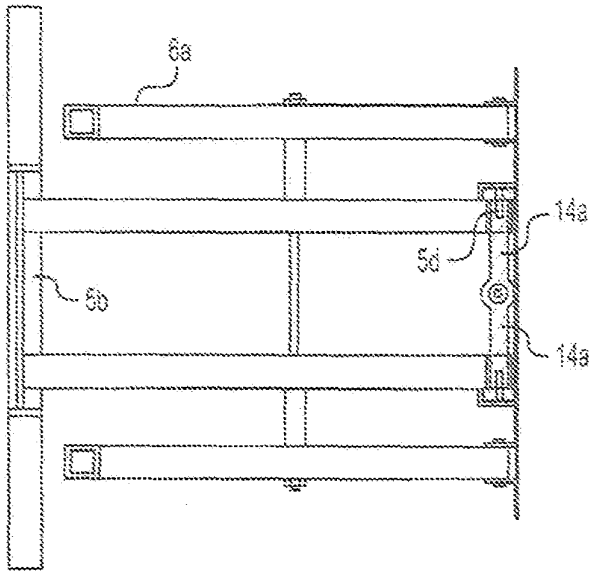


FIG. 12

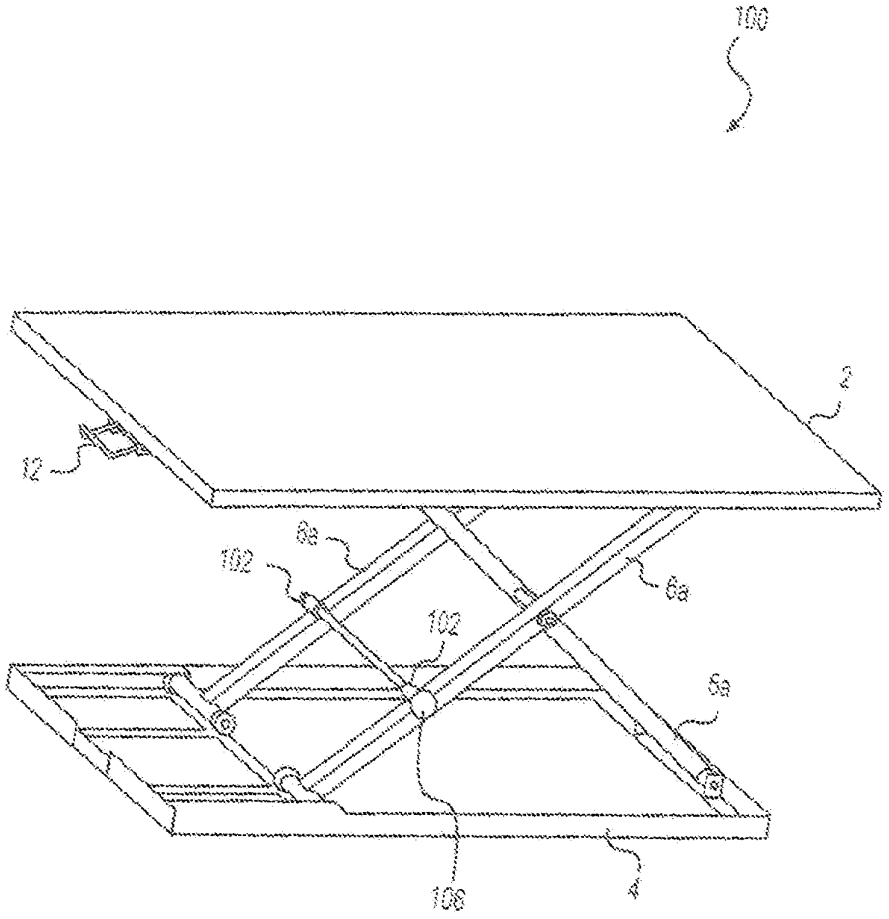


FIG. 13

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 16/32900

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - A47B 21/02 (2016.01)
CPC - A47B 21/02
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC (8): A47B 21/02 (2016.01)
CPC: A47B 21/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
IPC (8): A61G7/012, A47B17/02, A47B3/00, A47B21/03, B66F7/06, F16M11/38, B60G15/10, B60G15/14, B60G17/044 (2016.01)
CPC: A47B 41/02, A47B 17/02, A47B 21/0073, A47B 9/16, A47C19/045, B66F7/065, A47B 2023/049, A47B 39/02 ---See Extra Sheet---

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PatBase; Google Web; Google Patents;
Search Terms Used: Adjust*, alter*, adapt*, align*, tilt, extend, height*, lift*, desk, top, surface, davenport, stand, workspace, x-link*, scissor, X-lift, gas, spring, concentric, coextensive, coaxial, center*, coil, safe*, stop, lock, block, bar, crossbar ---See Extra Sheet---

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y -- A	US 2005/0167548 A1 (Benden et al.) 04 August 2005 (04.08.2005), entire document, especially fig. 4; para [0002]; para [0038-39]; para [0044]; para [0052]	1-7 --- 8-20
Y -- A	DE 4240834 A1 (Stabilus GmbH) 09 June 1994 (09.06.1994), entire document, especially fig.1-2; page 2 of translation, para [2-4]; page 4 of translation, para [3])	1-7 --- 8-20
A	US 5,823,120 A (Holmquist) 20 October 1998 (20.10.1998), entire document, especially fig. 1; col. 2, ln 25-29	8-20
A	US 5,273,132 A (Sasaki et al.) 28 December 1993 (28.12.1993), entire document, especially fig. 10; col. 5, ln 49-64	11
A	US 2015/0008072 A1 (Knox et al.) 08 January 2015 (08.01.2015), entire document	1-20

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
15 July 2016 (15.07.2016)	30 AUG 2016

Name and mailing address of the ISA/US	Authorized officer:
Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-8300	Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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INTERNATIONAL SEARCH REPORT

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PCT/US 16/32900

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

CPC (conti.): A47B 2230/0011, A47B 2200/0084, F16M 11/38, F16M 2200/061, A47B2200/0041, A47B9/00, B60G11/27, F16F 15/06, F16F 9/0472, B60G 17/044, B60G15/10, B60G 15/14, B60G17/08
(keyword limited; terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

Search Terms Used (conti.): pole, shaft, post, beam, computer, laptop, desktop, monitor, shock absorb*, damp*, gas spring, coil spring, slide*, move, translat*, rod

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A61G 13/06(2006.01)

(56)对比文件
JP 2005348983 A,2005.12.22, 全文.
JP 6-72698 A,1994.03.15, 全文.
CN 101001797 A,2007.07.18, 全文.

审查员 李欣

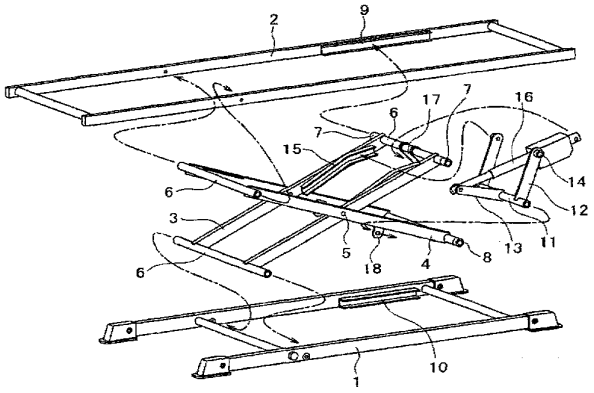
权利要求书1页 说明书5页 附图6页

(54)发明名称

X连杆式升降机构

(57)摘要

现有X连杆式升降机构中，由于在使升降构架下降后的状态下，升降驱动用元件会占用较大面积，因而导致难于配置其他功能的机构元件。另外，在直动促动器的拉伸方向的动作中使升降构架上升的构成中，直动促动器损坏时升降构架就会落下来，因此存在危险。本发明构成一种X连杆式升降机构，在基部构架(1)和升降构架(2)之间具有构成X连杆机构的第一连杆(3)和第二连杆(4)的升降机构中，在可转动地设置在第二连杆的另一端侧的驱动部件(11)上设有提升臂(12)和驱动臂(13)，将引导设在提升臂的端部的移动部件(14)的导向部件(15)沿长度方向设在第一连杆的另一端侧，在第一连杆的另一端侧和驱动臂之间设有直动促动器(16)，由此解决上述课题。



CN 101711220 B

1. 一种 X 连杆式升降机构，其特征在于，在基部构架和升降构架之间连结第一连杆和第二连杆，在所述第一连杆和所述第二连杆的连结部可转动地进行构造，将第一连杆和第二连杆的一端分别可转动地固定在所述基部构架和所述升降构架上，同时，将引导设在所述第一连杆和第二连杆的另一端的移动部件的导向部件分别设在所述升降构架和所述基部构架上，在所述第二连杆的另一端侧可转动地设有驱动部件，在该驱动部件上设有提升臂和驱动臂，并且，将引导设在所述提升臂的端部的移动部件的导向部件沿长度方向设在所述第一连杆的另一端侧，在所述第一连杆的另一端侧和所述驱动臂之间设有直动促动器。

2. 一种 X 连杆式升降机构，其特征在于，在基部构架和升降构架之间连结第一连杆和第二连杆，在所述第一连杆和所述第二连杆的连结部可转动地进行构造，将第一连杆和第二连杆的一端分别可转动地固定在所述基部构架和所述升降构架上，同时，将引导设在所述第一连杆和第二连杆的另一端的移动部件的导向部件分别设在所述升降构架和所述基部构架上，在所述第二连杆的另一端侧可转动地设有驱动部件，在该驱动部件上设有提升臂、驱动臂和联动臂，并且，将引导设在所述提升臂的端部的移动部件的导向部件沿长度方向设在所述第一连杆的另一端侧，在所述第一连杆的另一端侧和所述驱动臂之间设有直动促动器，并且，在所述第一连杆的一端侧可转动地设有联动部件，在该联动部件上设有提升臂和联动臂，将引导在设置于所述联动部件的所述提升臂的前端设置的移动部件的导向部件，设在所述第二连杆的一端侧，并且，在设于所述联动部件的所述联动臂和设在所述驱动部件的所述联动臂之间设有联动连杆。

3. 如权利要求 1 或 2 所述的 X 连杆式升降机构，其特征在于，设置在第一连杆的另一端侧的导向部件将导向路径构成为向上侧凸起的形状。

4. 如权利要求 1 或 2 所述的 X 连杆式升降机构，其特征在于，设于驱动部件的提升臂和驱动臂为双臂曲柄状的配置。

X 连杆式升降机构

技术领域

[0001] 本发明涉及一种 X 连杆式升降机构，其用于医院使用、家庭护理使用、设施使用、普通使用等的床、诊断台或升降平台等。

背景技术

[0002] 例如在床、升降平台中，作为用于使升降构架相对基部构架进行升降的机构，大多采用使用了平行连杆机构的平行连杆式升降机构或使用了 X 连杆机构的 X 连杆式升降机构，本发明涉及后者的升降机构。

[0003] 作为 X 连杆式升降机构的现有例子，例如，在专利文献 1、专利文献 2 中，将构成 X 连杆机构的第一连杆和第二连杆的一端分别可转动地固定在基部构架和升降构架上，同时将设在另一端的移动部件分别卡合在设于升降构架和基部构架的导向部件，其中，将设在连接于第二连杆的另一端侧的动作连杆的前端的移动部件，卡合在设于第一连杆另一端侧的导向部件，在第一连杆的一端侧和移动部件之间设有直动促动器。因此，在该升降机构中，升降构架在直动促动器的缩短方向，即，拉伸方向的动作中上升。

[0004] 另外，作为其他现有例子，在专利文献 3 中，对于和专利文献 1、2 同样的构成，第二连杆的另一端侧设有驱动轴，将设于驱动轴上的提升臂的前端的移动部件卡合在设于第一连杆的另一端侧的导向部件上，同时，在设于上述驱动轴上的驱动臂和第二连杆的一端侧之间设有直动促动器。因此在该升降机构中，升降构架在直动促动器的伸长方向的动作中上升。

[0005] 在这种现有的 X 连杆式升降机构中，直动促动器越过第一连杆和第二连杆的连接部而设置在连杆的一端侧和另一端侧之间。专利文献 1 ：日本特开平 8-217392 号公报 ；专利文献 2 ：日本特开 2002-320651 号公报 ；专利文献 3 ：日本特开 2005-348983 号公报。

[0006] 在如上所述的现有的 X 连杆式升降机构中存在以下所述的问题。1、由于直动促动器越过第一连杆和第二连杆的连接部设置在连杆的一端侧和另一端侧之间，在已使升降构架下降的状态下，因为直动促动器、提升臂等的升降驱动用的元件会占用构架内的广大面积，致使配置其他功能的机构元件存在困难。尤其是，为了同时实现在最大下降状态的升降构架成为尽可能的低位置、和长行程化，即在最大上升状态的升降构架成为尽可能的高位置，在升降驱动用的元件已经大型化的情况下，困难性更为明显。2、在直动促动器的拉伸方向的动作中使升降构架上升的构成中，在假如直动促动器损坏的情况下，会导致升降构架落下来，因此存在危险。本发明的目的在于解决这样的问题。

发明内容

[0007] 为了解决上述课题，本发明提出一种 X 连杆式升降机构，在基部构架和升降构架之间连结有第一连杆和第二连杆，且在其连结部可转动地构成，将第一连杆和第二连杆的一端分别可转动地固定在所述基部构架和所述升降构架上，同时，在所述升降构架和所述基部构架上，分别设有引导设在所述第一连杆和第二连杆的另一端的移动部件的导向部

件，在所述第二连杆的另一端侧可转动地设有驱动部件，在该驱动部件上设有提升臂和驱动臂，并且，在所述第一连杆的另一端侧，沿长度方向设有引导设在所述提升臂的端部的移动部件的导向部件，在所述第一连杆的另一端侧和所述驱动臂之间设有直动促动器。

[0008] 另外，本发明提出一种 X 连杆式升降机构，在基部构架和升降构架之间连结有第一连杆和第二连杆，且在其连结部可转动地构成，将第一连杆和第二连杆的一端分别可转动地固定在所述基部构架和所述升降构架上，并且，在所述升降构架和所述基部构架上，分别设有引导设在所述第一连杆和第二连杆的另一端的移动部件的导向部件，所述第二连杆的另一端侧可转动地设有驱动部件，在该驱动部件上设有提升臂、驱动臂和联动臂，同时，在所述第一连杆的另一端侧，在长度方向上设有引导设在所述提升臂的端部的移动部件的导向部件，在所述第一连杆另一端侧和所述驱动臂之间设有直动促动器，并且，在所述第一连杆的一端侧可转动地设有联动部件，在该联动部件上设有提升臂和联动臂，在所述第二连杆的一端侧，设有引导设在该提升臂的前端的移动部件的导向部件，并且，在设于所述联动部件上的所述联动臂和设在所述驱动部件上的所述联动臂之间设有联动连杆。

[0009] 另外，本发明中提出一种 X 连杆式升降机构，在以上的构成的基础上，设置在第一连杆的另一端侧的导向部件为将导向路径向上侧凸起形状的构造。

[0010] 另外，本发明提出一种 X 连杆式升降机构，在以上的构成的基础上，设置在驱动部件上的提升臂和驱动臂为双臂曲柄状的配置。

[0011] 本发明第一方面，由于在第一连杆和第二连杆的另一端侧都构成有由设有提升臂和驱动臂的驱动部件和直动促动器构成的升降驱动用元件，因此，升降构架以悬臂梁式的支承状态被支承，可以在第一连杆和第二连杆的一端侧构成升降驱动用元件不占用的空间。因而，可在该空间内配置其他功能的结构元件等，布局的自由度高。

[0012] 本发明第二方面，在升降构架处于低位置时，由突设于联动部件上的提升臂支承第二连杆的一端侧，因而升降构架以简支梁式的支承状态被支承，所以即使在升降构架上的载荷大的情况下也能够防止其弯曲。

[0013] 另外，由于本发明第一及第二方面均为升降构架在直动促动器的伸长方向的动作中上升的构造，所以直动促动器的损坏状态为弯曲变形，能够防止在损坏的情况下升降构架落下来。

[0014] 本发明第三方面，升降构架处于低位置时，可以增大设于驱动部件上的提升臂的移动部件产生的力的方向和其抵接的导向部件的壁面的切线方向所成的角度，能够防止在直动促动器上施加过大的载荷。尤其是，通过制成将导向路径向上侧凸起形状的构成，能够实现施加于直动促动器上的载荷的均匀化。

[0015] 本发明第四方面，由于可以将直动促动器布置在由设于驱动部件上的提升臂的端部和驱动臂的端部及驱动部件的转动轴所形成的区域内，因此，可以使升降构架位于更低的位置，从而能够同时实现使在最大下降的状态的升降构架位于尽可能低的位置、和长行程化，即，使在最大上升状态的升降构架位于尽可能高的位置。

附图说明

[0016] 图 1 是表示本发明实施方式的图，是表示整体结构的扩散图；图 2 是表示本发明实施方式的图，是示意性侧面图；图 3 是表示本发明实施方式的图，是示意性平面图；图 4 是

在和图 2 不同的局面下表示的示意性侧面图；图 5 是在和以上的图不同的局面下表示的示意性侧面图；图 6 是表示本发明的其他实施方式的图，是表示整体结构的扩散图；图 7 是表示本发明的其他实施方式的图，是示意性主要部位侧面图；图 8 是在和图 7 不同的局面下表示的示意性主要部位侧面图；图 9 是在和以上的图不同的局面下表示的示意性主要部位侧面图；图 10 是在和以上的图不同的局面下表示的示意性主要部位侧面图；图 11 是表示本发明的驱动机构部分的其他的实施方式的立体图。符号说明

[0017] 1 基部构架 2 升降构架 3 第一连杆 4 第二连杆 5 连结部 6 连结杠体 7、8、14 滚轴（移动部件）9、10、15 导向部件 11 驱动部件 12 提升臂 13 驱动臂 16 直动促动器 17、18 支承臂 19 构架 20 连结杠体 21 延长部分 22 联动臂 23 联动部件 24 提升臂 25 联动臂 26 滚轴（移动部件）27 导向部件（带板状部件）28 联动连杆

具体实施方式

[0018] 以下，参照图 1 ～图 11 说明本发明的 X 连杆式升降机构的实施方式。首先，图 1 ～图 5 是表示第一实施方式的图，符号 1 为基部构架，2 为升降构架。该升降构架 2 在构成本发明的升降机构的物品为床时，是指支承底部的床支架等，而在物品为升降平台时是指工作台等。在基部构架 1 和升降构架 2 之间连结第一连杆 3 和第二连杆 4，在其连结部 5 可转动地构成。第一连杆 3 和第二连杆 4 在宽度方向上构成一对，由连结杠体 6 结合为一体。

[0019] 另外，第一连杆 3 和第二连杆 4 的一端可转动地分别固定在基部构架 1 和升降构架 2 上，并且，在升降构架 2 和基部构架 1 上分别设有导向部件 9、10，该导向部件 9、10 引导设于上述第一连杆 3 和第二连杆 4 各自的另一端的移动部件、在该情况下为滚轴 7、8。在该实施方式中，导向部件 9、10 为使槽形部件朝向横方向的构成。

[0020] 另外，在第二连杆 4 的另一端可转动地设有驱动部件 11，在其上设有提升臂 12 和驱动臂 13，并且，在上述第一连杆 3 的另一端，沿长度方向设置导向部件 15，该导向部件 15 引导设在提升臂 12 的顶端的移动部件、在该情况下为滚轴 14，而且在第一连杆 3 的另一端侧和驱动臂 13 之间设有直动促动器 16。符号 17 表示为了可转动地支承直动促动器 16 的基部侧而设于第一连杆 3 的另一端侧的连结杠体 6 上的支承臂。

[0021] 另外，图 1 所示的驱动部件 11 是可转动地固定在设于第二连杆 4 的另一端侧的支承臂 18 上的杠体，不过，作为该驱动部件 11，也可以如图 11 所示为构架状的构成。即，在该实施方式中，驱动部件的构成为，将三角形状的构架 19 并置，同时，用连结杠体 20 将它们进行连结，将一侧的连结杠体 20 的延长部分 21 可转动地固定在上述支承臂 18 上，在这种构成中，能够构成耐负荷性高的坚固的驱动部件 11。

[0022] 然后，如上所述设在第一连杆 3 的另一端侧、引导提升臂 12 的端部的滚轴 14 的导向部件 15 为将其导向路径向上侧凸起形状的构造，如后面所述，利用该构造能够提高升降构架 2 的低位置的载荷性能。

[0023] 另外，由与以上的附图对应的说明可知，在本发明中，所谓一端侧或另一端侧，是指从第一连杆 3、第二连杆 4 的一端或另一端到连结部 5 的部位。

[0024] 在以上的构成中，如图 2 所示，在升降构架 2 处于高位置的状态下，当直动促动器 16 不断缩短时，移动部件 14 一边将第一连杆 3 的导向部件 15 逐渐向另一端侧方向移动，同时，提升臂 12 相对第二连杆 4 支承来自第一连杆 3 的载荷，构成这种 X 连杆机构的第一连

杆 3 和第二连杆 4，如图 4 所示使升降构架 2 下降，如图 5 所示致使升降构架 2 下降到最低位置。

[0025] 另一方面，使直动促动器 16 从图 5 所示的升降机构 2 的最低位置逐渐伸长时，可以通过与上述动作相反的动作致使升降构架 2 上升到图 2 所示的位置。

[0026] 这样，在本发明中，由于升降构架 2 为在直动促动器 16 的伸长方向的动作中上升的构成，因此直动促动器 16 的损坏状态为弯曲变形，能够防止在直动促动器 16 损坏中升降构架 2 落下来。

[0027] 另外，在本发明中，如图所示，由于在第一连杆 3 和第二连杆 4 的另一端侧都构成由设有提升臂 12 和驱动臂 13 的驱动部件 11 和直动促动器 16 构成的升降驱动用元件，因此，升降构架 2 以悬臂梁支承状态被支承，从而如图 3 所示，可在第一连杆 3 和第二连杆 4 的一端侧构成升降驱动用的元件不占用的空间 S。从而，可在该空间 S 内配置其他功能的结构元件等，布局的自由度高。

[0028] 另一方面，在该实施方式中，由于设于第一连杆 3 的另一端侧的导向部件 15 为将导向路径向上侧凸起形状的构成，所以，在升降构架 2 处于低位置的情况下，与未做成凸起形状而做成直线状的情况相比较，可以增大从升降构架 2 经过第一连杆 3、导向部件 15、由移动部件 14 施加于提升臂 12 的力的方向，与其抵接的导向部件 15 的壁面的切线方向所成的角度，因此，能够将施加在提升臂 12 及直动促动器 16 上的载荷均匀化，防止施加过大的载荷。

[0029] 此外，在本发明中，设在驱动部件 11 上的提升臂 12 和驱动臂 13 配置为双臂曲柄状，所以，如图 5 所示，可以使直动促动器 16 布置在由设于驱动部件 11 上的提升臂 12 的端部和驱动臂 13 的端部及驱动部件 11 的旋转轴所形成的区域内，因此，可将升降构架 2 布置在更低的位置。因而，能够同时实现使在最大下降的状态的升降构架 2 位于尽可能低的位置、和长行程化，即，使在最大上升状态的升降构架 2 位于尽可能高的位置。

[0030] 接着，图 6 ～图 10 是表示第二实施方式的图，是将基部构架 1 和升降构架 2 的长度方向的两端侧切口并将主要部分放大表示的示意性的主要部分侧面图。在该第二实施方式中，其特征为，除第一实施方式的构成元件外，在上述驱动部件 11 上除设有提升臂 12 和驱动臂 13 以外还设有联动臂 22，并且在第一连杆 3 的一端侧可转动地设有联动部件 23，在其上设有提升臂 24 和联动臂 25，将引导设于该提升臂 24 的前端的移动部件（滚轴）26 的导向部件 27 设在第二连杆 4 的一端侧，并且在设于联动部件 23 上的联动臂 25 和设于驱动部件 11 上的联动臂 22 之间设有联动连杆 28。在该实施方式中，导向部件 27 如图所示为从第二连杆 4 的上边缘向横方向突出设置的带板状部件的构成。其他的构成与第一实施方式一样，因此，赋予在图中相对应的构成元件与第一实施方式相同的符号，并省略重复的说明。

[0031] 在上述构成中，如图 7 所示，在升降构架 2 处于高位置的状态下，突设在联动部件 23 上的提升臂 24 的端部的滚轴 26 离开导向部件 27 的下面而不与其抵接。因此，在该状态下，升降构架 2 与上述一样，被悬臂梁式地支承，不过，因为构成 X 连杆机构的第一连杆 3 及第二连杆 4 和基部构架 1、升降构架 2 所形成的角度较大，所以即使是悬臂梁式的支承，也不会导致升降构架 2 弯曲。

[0032] 在使直动促动器 16 从图 7 的状态不断缩短时，和上述同样，移动部件 14 使第一连

杆 3 的导向部件 15 逐渐向另一端侧方向移动，与此同时，提升臂 12 相对第二连杆 4 支承来自第一连杆 3 的载荷，这样一来，构成 X 连杆机构的第一连杆 3 和第二连杆 4，如图 8 所示使升降构架 2 下降。这样，升降构架 2 下降到某高度时，如图 9 所示，突设在联动部件 23 上的提升臂 24 的端部的滚轴 26 与导向部件 27 的下面抵接，能够直至到达图 10 的最低位置之前，都能够利用提升臂 24 支承来自导向部件 27 的载荷。

[0033] 这样，在该实施方式中，在升降构架 2 位于低位置的情况下，利用突设在联动部件 23 上的提升臂 24、经由移动部件 26 和导向部件 27 支承第二连杆 4 的一端侧，所以升降构架 2 以简支梁式的支承状态被支承，即使在升降构架 2 上的载荷较大的情况下也能够防止其弯曲。

[0034] 该情况下，在第一连杆 3 和第二连杆 4 的一端侧配置有联动部件 23、提升臂 24、联动臂 25 和联动连杆 26，但是，由于直动促动器 16 不占位置，因此，能够在该部分形成空间，在该空间内配置其他功能的结构元件等，布局的自由度高。产业上利用的可能性

[0035] 如上所述，本发明的 X 连杆式升降机构具有如上所述的多个优点，除应用于医疗用、家庭用的床以外，还应用于升降平台等，在产业上的利用可能性大。

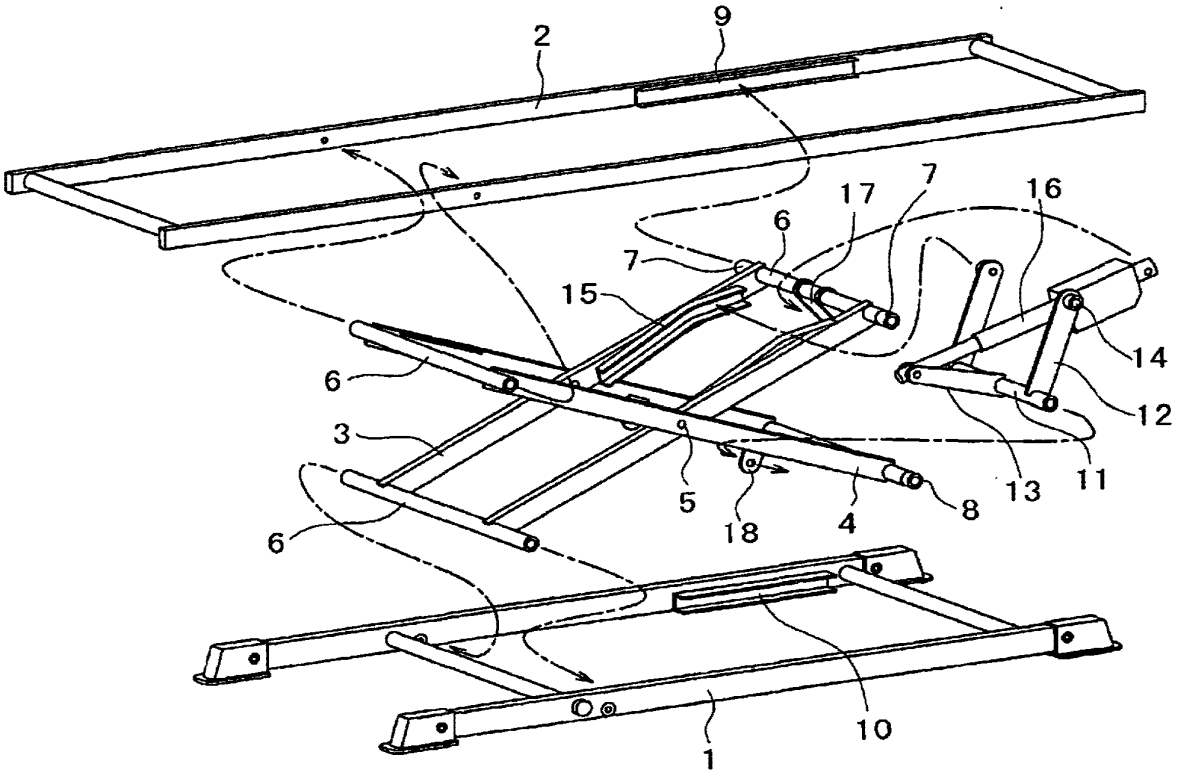

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图 1

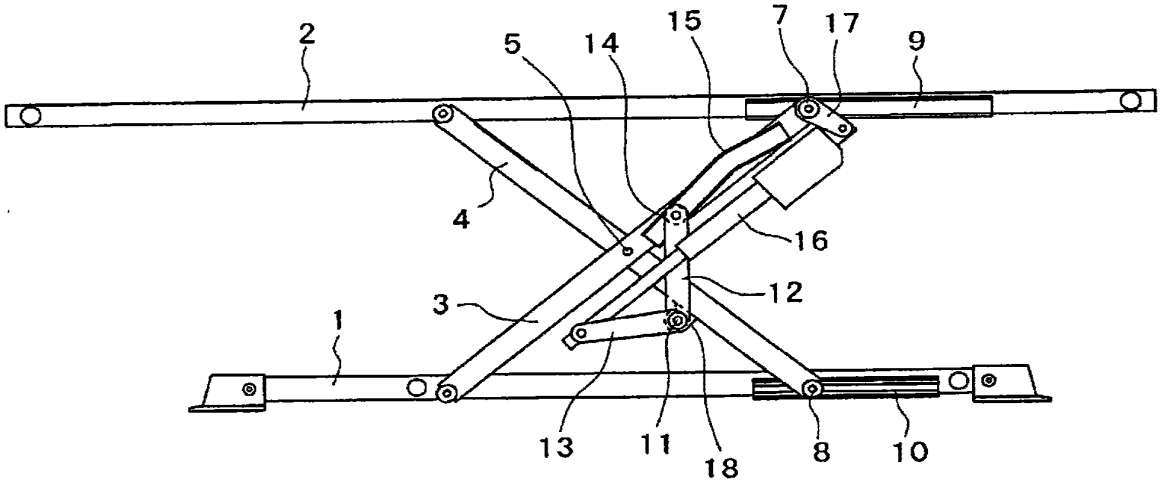

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图 2

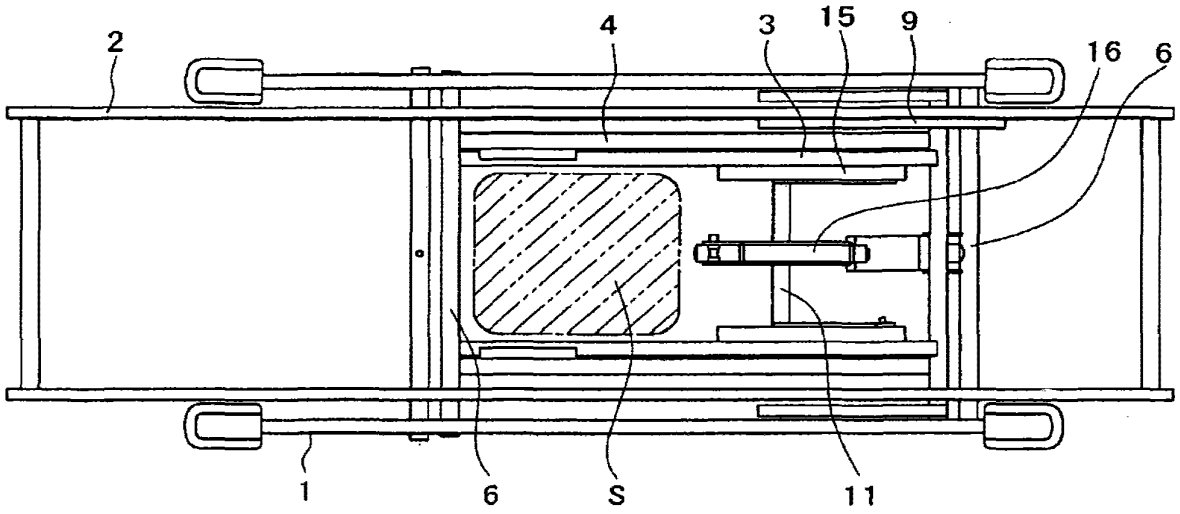

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图 3

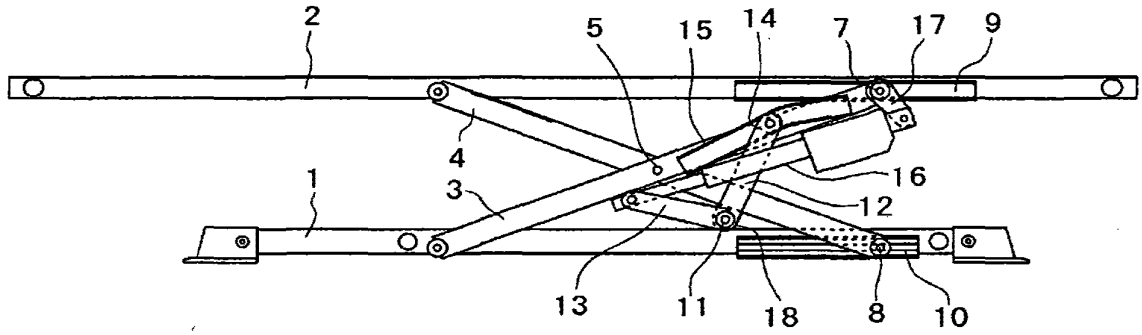

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图 4

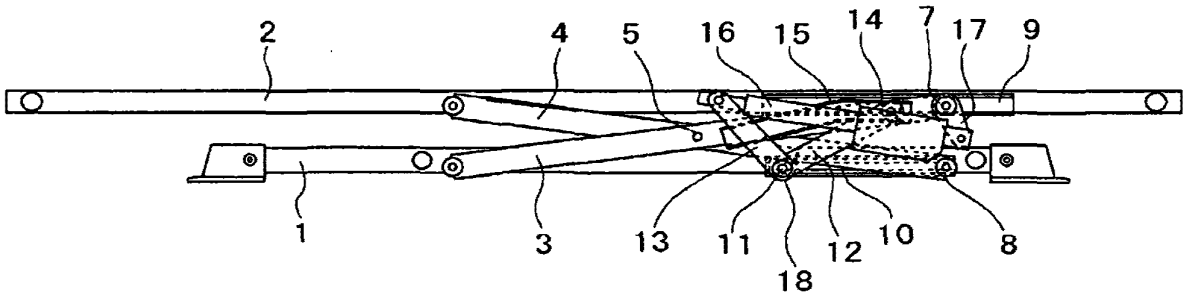

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图 5

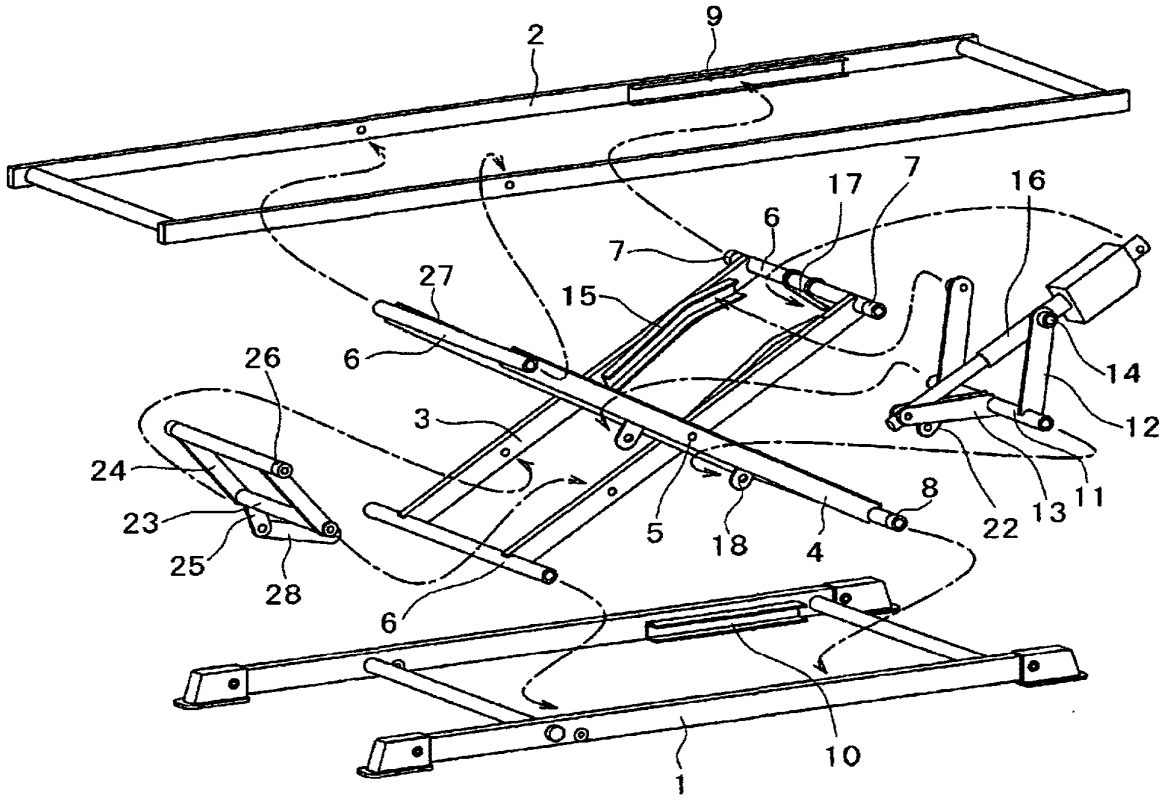


图 6

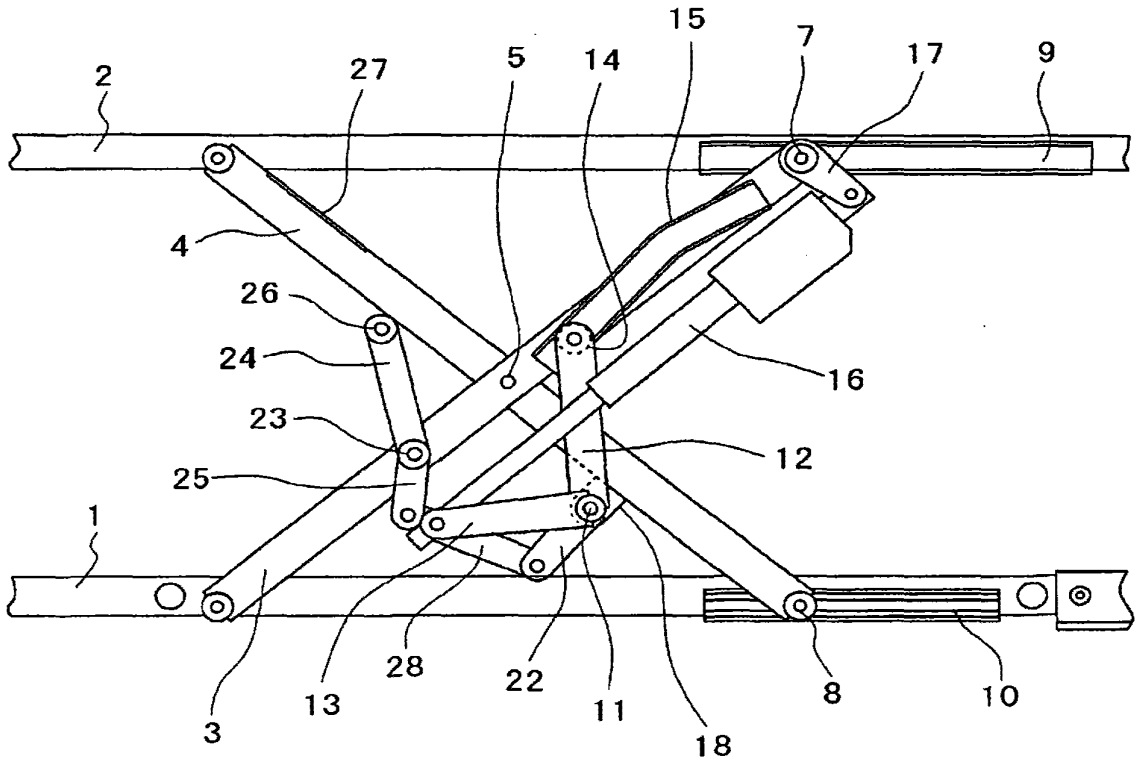

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图 7

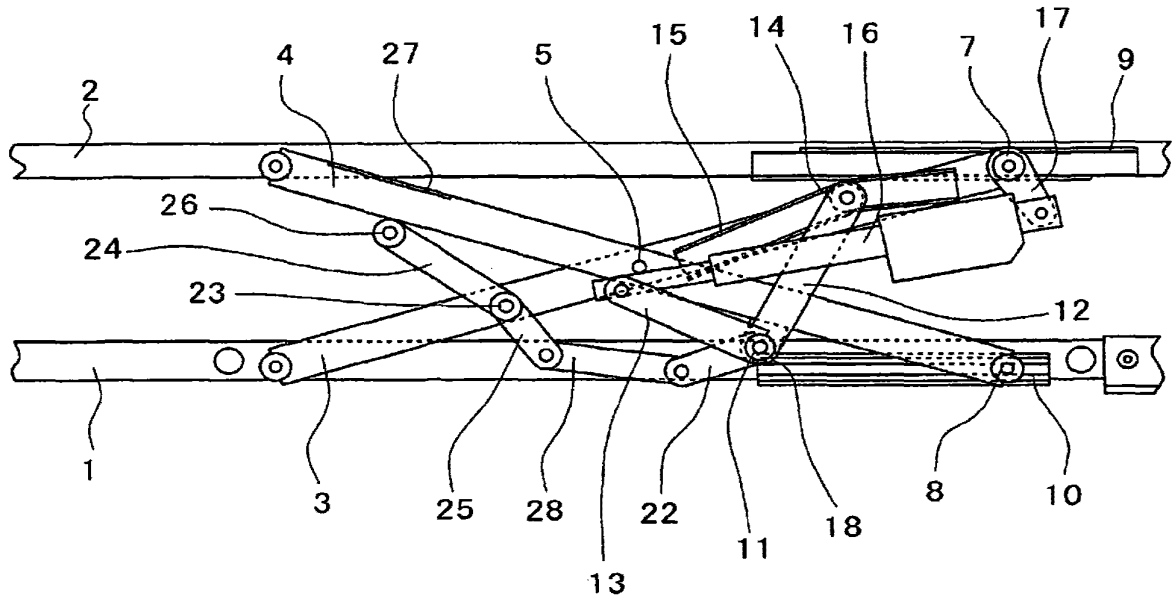

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图 8

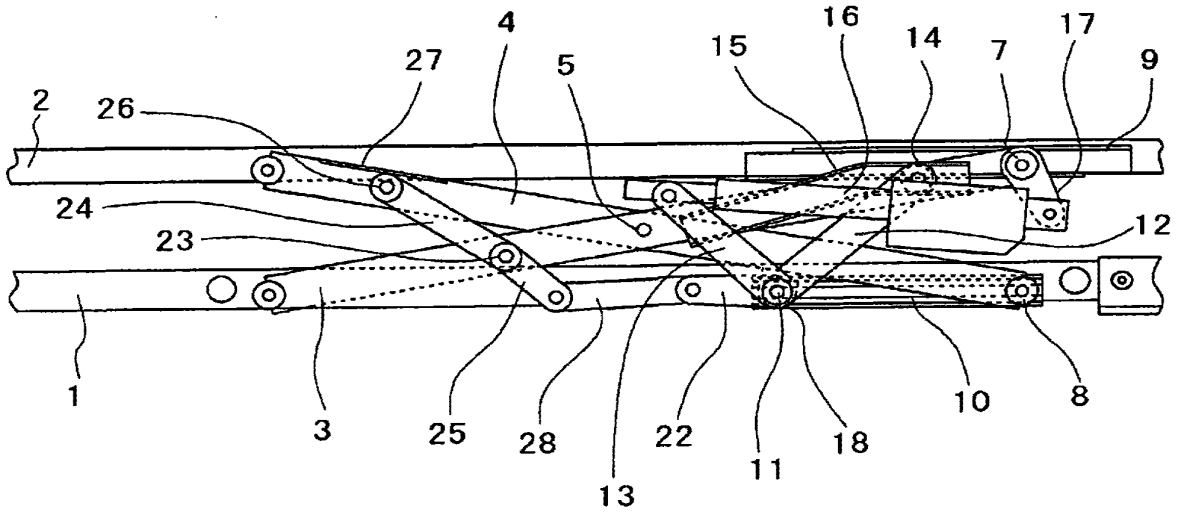

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图 9

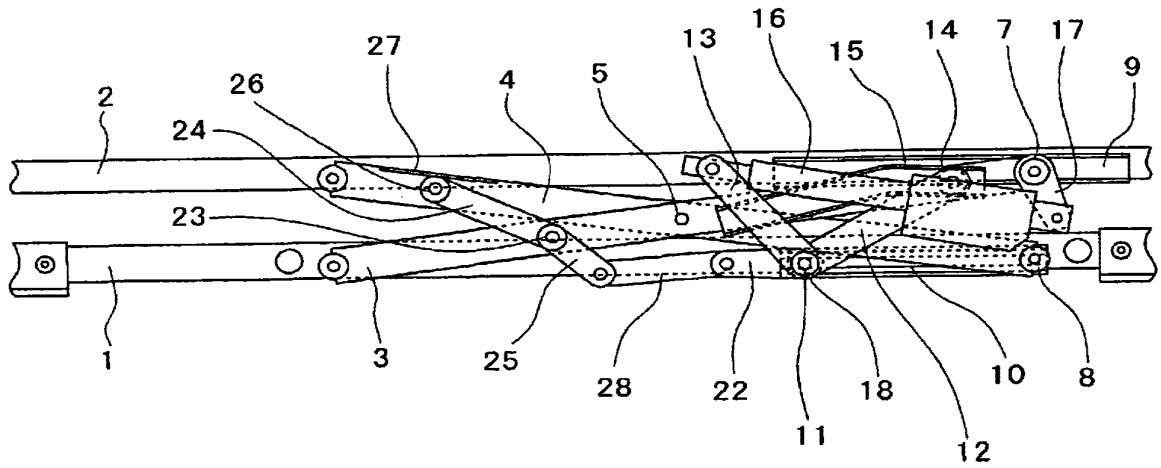

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图 10

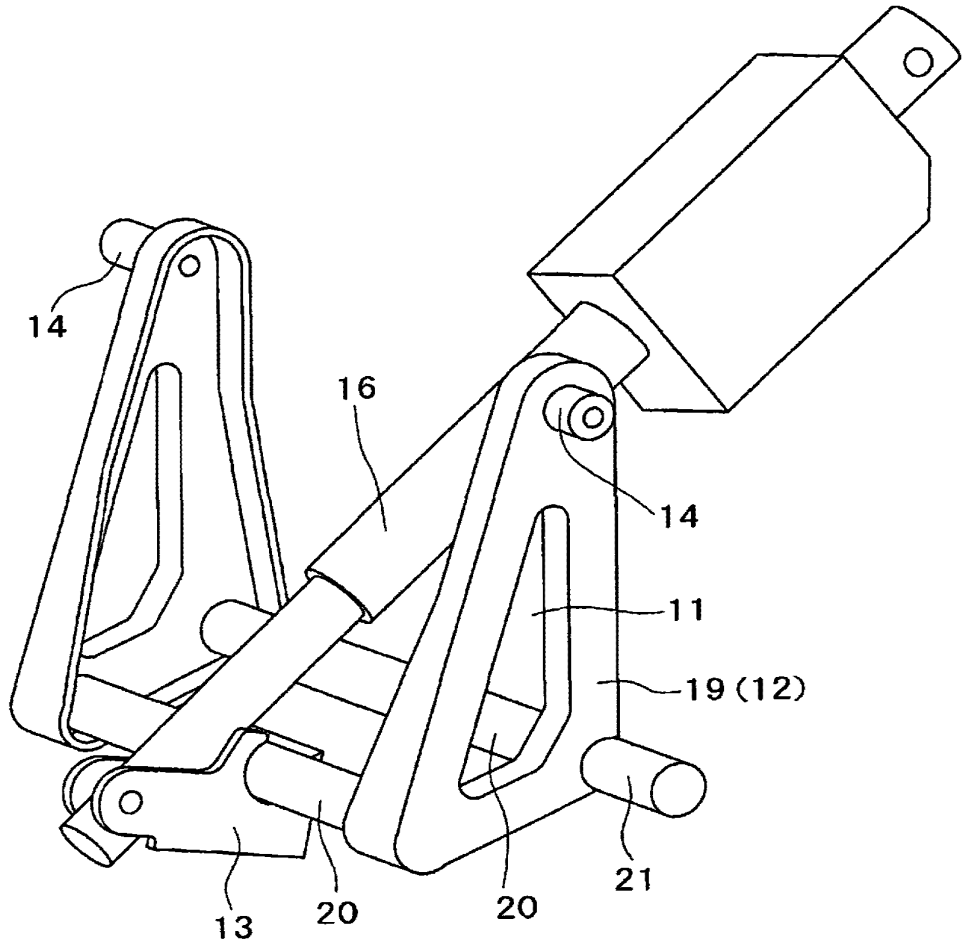


图 11

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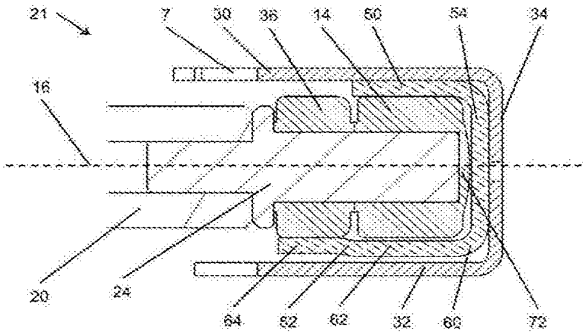
权利要求书1页 说明书6页 附图7页

(54)发明名称

车辆座椅

(57)摘要

本发明涉及一种车辆座椅(1),特别是商用车辆座椅,包括用于调节高度的剪刀式支架(3),剪刀式支架具有交叉摇杆(8a、8b)和至少一个框架(5、7)并且包括支承装置(21),摇杆(8a、8b)中的至少一个通过支承装置(21)在框架(5、7)内可移动地引导。支承装置(21)具有可围绕支承轴线(16)旋转并与第一引导件相互作用的支承辊(14)和可围绕支承轴线(16)旋转并与第二引导件相互作用的补偿辊(36)。用于补偿辊(36)的第二引导件附接到插入件(60)的底部区域(52),并且插入件(60)的侧部区域(54)固定到框架(5、7),侧部区域相对于底部区域(52)垂直地延伸,和/或插入件(60)的头部区域(50)固定到框架(5、7),头部区域平行于底部区域(52)延伸,底部区域(52)为弹性设计并且压靠补偿辊(36)。



CN 104540707 B

1.一种车辆座椅(1),其包括:

用于调节高度的剪刀式支架(3),所述剪刀式支架具有:

交叉摇杆(8a、8b),和

至少一个框架(5、7),以及

支承装置(21),所述摇杆(8a、8b)中的至少一个通过所述支承装置(21)在所述框架(5、7)内可移动地引导,

其中所述支承装置(21)具有:

能够围绕支承轴线(16)旋转并且与第一引导件相互作用的负载辊(14),和

能够围绕所述支承轴线(16)旋转并且与第二引导件相互作用的补偿辊(36),

其特征在于,所述第二引导件附接到插入件(60)的底部区域(52),

所述插入件(60)的侧部区域(54)紧固到所述框架(5、7),该侧部区域相对于所述底部区域(52)成直角延伸,和/或所述插入件(60)的头部区域(50)紧固到所述框架(5、7),该头部区域平行于所述底部区域(52)延伸,

所述底部区域(52)具有弹性设计并且压靠所述补偿辊(36),

所述框架(5、7)具有C形轮廓,所述C形轮廓朝向车辆座椅(1)的内部开口并且包括上部分支(30)、平行于所述上部分支(30)延伸的下部分支(32)以及基部分支(34),所述基部分支(34)相对于所述上部分支(30)成直角延伸并且将所述上部分支(30)连接到所述下部分支(32),

所述插入件(60)的所述侧部区域(54)紧固到所述基部分支(34),和/或所述头部区域(50)紧固到所述上部分支(30),以及

所述底部区域(52)布置成平行于所述下部分支(32),其中在所述底部区域(52)与所述下部分支(32)之间设置间隙。

2.根据权利要求1所述的车辆座椅(1),其特征在于,所述插入件(60)具有开口的C形轮廓。

3.根据权利要求1或2所述的车辆座椅(1),其特征在于,所述头部区域(50)形成用于所述负载辊(14)的所述第一引导件。

4.根据权利要求1或2所述的车辆座椅(1),其特征在于,所述头部区域(50)平行于所述上部分支(30)延伸,并且所述头部区域(50)紧密地承靠所述上部分支(30)。

5.根据权利要求1或2所述的车辆座椅(1),其特征在于,所述底部区域(52)包括邻接所述侧部区域(54)的第一部分(62)和背离所述侧部区域(54)的第二部分(64),其中所述第二部分(64)设计成凸起台阶的形式并且布置成平行于所述第一部分(62)偏移。

6.根据权利要求5所述的车辆座椅(1),其特征在于,所述第二部分(64)形成用于所述补偿辊(36)的所述第二引导件。

7.根据权利要求1或2所述的车辆座椅(1),其特征在于,形成用于所述补偿辊(36)的所述第二引导件的支撑件(66)安装到所述底部区域(52)上。

8.根据权利要求1或2所述的车辆座椅(1),其特征在于,所述插入件(60)由金属构成。

9.根据权利要求1或2所述的车辆座椅(1),其特征在于,所述插入件(60)由钢构成。

10.根据权利要求1或2所述的车辆座椅(1),其特征在于,所述车辆座椅(1)为多用途车辆的座椅。

车辆座椅

技术领域

[0001] 本发明涉及一种车辆座椅，特别是涉及多用途车辆的座椅。

背景技术

[0002] 从DE 10 2006 059 088B4已知所提及类型的车辆座椅，其能够通过剪刀式支架在高度上调节。

[0003] 在此剪刀式支架包括下部框架、布置于后者即下部框架上方的上部框架以及在两侧上的相应成对的交叉摇杆。在此剪刀式支架的摇杆通过多个横向管成对地连接到彼此。在车辆座椅的后部区域中，摇杆通过横向管铰接到下部框架和上部框架上。

[0004] 在车辆座椅的前部区域中设置支承装置，摇杆通过所述支承装置在上部框架和下部框架中在纵向方向上可移动地引导。在此在每种情况下支承装置具有与上部框架和下部框架中的引导件相互作用的两个可旋转的辊。

[0005] 当剪刀式支架的高度变化时，辊在上部框架和下部框架中的相应引导件上在纵向方向上滚动。在该过程中，在每种情况下，支承装置的辊中的一个在上部引导件上行进以及所述辊的另一个在下部引导件上行进。

[0006] 所提及类型的车辆座椅还从US 6,200,032B1中已知。为了减小游隙，特别是为了减小在竖直方向上的游隙，在此设置具有不同直径的两个辊，其中定位于内侧上的辊具有大于定位于外侧上的辊的直径。

发明内容

[0007] 目的

[0008] 本发明基于改进在开头部分所述类型的车辆座椅的目的，并且特别地基于提出一种替代的构造以减小游隙的目的。

[0009] 解决方案

[0010] 根据本发明，该目的通过一种车辆座椅来实现。可单独使用或与彼此组合使用的有利构造是从属权利要求的主题

[0011] 所述类型的车辆座椅、特别是多用途车辆的座椅包括用于调节高度的剪刀式支架，所述剪刀式支架具有交叉摇杆、至少一个框架以及支承装置，至少一个摇杆通过所述支承装置在框架内可移动地引导，其中支承装置具有可围绕支承轴线旋转并且与第一引导件相互作用的支承辊和可围绕支承轴线旋转并且与第二引导件相互作用的补偿辊。

[0012] 根据本发明，在此设置成用于补偿辊的第二引导件附接到插入件的底部区域，并且插入件的相对于底部区域成直角延伸的侧部区域紧固到框架和/或插入件的头部区域紧固到框架，所述头部区域相对于底部区域平行地延伸，并且底部区域具有可弹性变形的设计并且压靠补偿辊。

[0013] 底部区域在此由于其弹性和由第二引导件所导致的预应力而压靠补偿辊，其结果是负载辊压靠第一引导件。其结果是，减小或消除存在于引导件、负载辊和补偿辊之间的游

隙。

[0014] 如果框架具有C形轮廓，所述C形轮廓朝向车辆座椅的内部开口并且所述C形轮廓包括上部分支、平行于上部分支延伸的下部分支以及基部分支，基部分支相对于上部分支成直角延伸并且将上部分支连接到下部分支，则形成插入件的简单安装，其中侧部区域紧固到、优选焊接到基部分支，和/或头部区域紧固到、优选焊接到上部分支。

[0015] 为此目的，插入件优选同样具有开口的C形轮廓，其结果是安装被进一步简化。

[0016] 在此插入件的头部区域有利地形成用于负载辊的第一引导件。

[0017] 在安装过程中插入件在框架上的对齐通过下述事实简化，即头部区域平行于上部分支延伸并且紧密地承靠上部分支。

[0018] 底部区域有利地布置成平行于或至少基本平行于下部分支，其中在底部区域和下部分支之间设置间隙。其结果是，底部区域在朝下部分支方向上以及在远离下部分支方向上的弹性变形是可能的。

[0019] 根据本发明的一种有利构造，底部区域包括邻接侧部区域的第一部分以及背离侧部区域的第二部分，其中第二部分以凸起台阶的形式设计并且布置成偏移地平行于第一部分。在此凸起台阶确保负载辊和第一部分之间的所需距离以避免底部区域接触负载辊。

[0020] 在此第二部分还优选形成用于补偿辊的第二引导件。

[0021] 根据本发明的另一有利构造，形成用于补偿辊的第二引导件的支撑件安装到底部区域上。在这种情况下，支撑件确保第一部分和负载辊之间所需的距离以避免底部区域接触负载辊。

[0022] 插入件优选由金属构成、优选由钢构成。这允许将插入件焊接到框架，并且同时为底部区域提供所需弹性。

附图说明

[0023] 下面基于附图中所示的有利示例性实施例更详细地说明本发明。然而，本发明并不限于这些示例性实施例。在附图中：

[0024] 图1示出车辆座椅的示意性视图；

[0025] 图2示出没有椅座部的车辆座椅的透视图；

[0026] 图3示出垂直于纵向方向通过根据第一示例性实施例的支承装置的截面；

[0027] 图4示出如在纵向方向上所看到的根据第一示例性实施例的支承装置的正视图；

[0028] 图5示出垂直于纵向方向通过根据第二示例性实施例的支承装置的截面；

[0029] 图6示出如在纵向方向上所看到的根据第二示例性实施例的支承装置的正视图；

[0030] 图7示出垂直于纵向方向通过根据第三示例性实施例的支承装置的截面；

[0031] 图8示出如在纵向方向上所看到的根据第三示例性实施例的支承装置的正视图；

[0032] 图9示出根据第三示例性实施例的支承装置的透视图；以及

[0033] 图10示出在车辆座椅的上部框架和下部框架上的两个支承装置的透视图。

具体实施方式

[0034] 用于多用途车辆的车辆座椅1具有剪刀式支架3，所述剪刀式支架3包括下部框架5、布置于后者即下部框架5上方的上部框架7以及在两侧上的相应成对的交叉的第一摇杆

8a和第二摇杆8b。横向管9连接两个交叉点并且同时限定剪刀轴线，摇杆8a和8b能够围绕所述剪刀轴线相对于彼此枢转。

[0035] 车辆座椅1在车辆内侧的布置以及车辆的惯常行进方向限定下面所使用的方向性信息。相对于地面垂直取向的方向在下面被指定为竖直方向，并且垂直于竖直方向并且垂直于行进方向的方向在下面被指定为横向方向。

[0036] 第一摇杆8a通过保持管18在所述第一摇杆18的后端部处连接到彼此并且所述第一摇杆8a铰接到上部框架7上。在所述第一摇杆8a的前端部处，第一摇杆8a通过支承管20连接并且通过下部框架5中的相应支承装置21在两侧上在大致对应于行进方向的纵向方向上可移动地引导。

[0037] 第二摇杆8b通过保持管18在所述第二摇杆18b的后端部处连接到彼此并且第二摇杆8b铰接到下部框架5上。在第二摇杆18b的前端部处，第二摇杆8b同样通过支承管20连接并且通过上部框架7中相应的支承装置21在两侧上在纵向方向上可移动地引导。

[0038] 在当前情况下，横向管9、支承管20和保持管18在横向方向上延伸，剪刀轴线也是如此。通过第一摇杆8a相对于第二摇杆8b围绕剪刀轴线的枢转运动，上部框架7在下部框架5上方的高度被改变，所述高度在下文简称为剪刀式支架3的高度。通过气动弹簧12并且优选阻尼器(在此未示出)，所述剪刀式支架3成为振荡系统，这显著增加座椅的舒适度。

[0039] 车辆座椅1还具有椅座框架6，一方面，在所述椅座框架6的后部区域中，所述椅座框架6在两侧上铰接到上部框架7上，并且另一方面，在所述椅座框架的前部区域中，所述椅座框架能够通过倾斜度调节器升高和降低，因此可在所述椅座框架相对于剪刀式支架3的倾斜度方面调节。

[0040] 车辆座椅1还具有靠背10，在当前情况下所述靠背倾斜度可调节地安装到椅座框架6上。可替代地，靠背10也能够安装到上部框架7上。靠背10衬有覆盖物28。头枕40设置在靠背10在竖直方向上的上部区域中。靠背10和包括座垫的椅座框架6形成椅座部2。

[0041] 与剪刀式支架3一起，椅座部2可通过两对导轨移位，由此所述车辆座椅1可在大致对应于行进方向的纵向方向上以平移的方式调节。两对导轨在横向方向上相对于彼此偏移并且平行于彼此布置。两对导轨具有基本上相同的结构。

[0042] 每对导轨包括第一座椅导轨45(其也被指定为上部导轨)和第二座椅导轨46(也被指定为下部导轨)。在当前情况下第二座椅导轨46刚性地连接到车辆结构并且第一座椅导轨45刚性地连接到车辆座椅1的下部框架5。可替代地，可以设想到通过适配器或托架(console)将第二座椅导轨46连接到车辆结构。还可以设想到通过适配器将第一座椅导轨45连接到车辆座椅1的下部框架5。

[0043] 第一座椅导轨45相对于第二座椅导轨46并且在第二座椅导轨46内可移动地引导。通过锁定装置，第一座椅导轨45能够与第二座椅导轨46锁定。包括解锁杆44的解锁单元用于将锁定装置解锁。

[0044] 如在行进方向上或纵向方向上所看到的，解锁杆44布置于车辆座椅1的前部区域中并且围绕枢轴可枢转地安装，在当前情况下，所述枢轴在横向方向上延伸。通过将解锁杆44在竖直方向上向上拉动，所述解锁杆44围绕枢轴枢转，其结果是锁定装置被解锁。

[0045] 解锁杆44和枢轴运动学地分配到下部框架5和第一座椅导轨45。这意味着在椅座部2在纵向方向上移位的过程中，解锁杆44也因此一同移动，但是在剪刀式支架3高度变化

的情况下(即在椅座部2在竖直方向上移动的过程中)不是这样。

[0046] 上部框架7和下部框架5的在纵向方向上延伸的那些部分分别具有朝向车辆座椅1内部开口的C形轮廓。每个支承装置21具有负载辊14,所述负载辊围绕在横向方向延伸的支承轴线16可旋转地安装并且所述负载辊突出到上部框架7或下部框架5的开口C形轮廓中。

[0047] 上部框架7的C形轮廓和下部框架5的C形轮廓均具有上部分支30和下部分支32,所述下部分支32在竖直方向上布置于上部分支的下方。上部分支30和下部分支32平行于彼此延伸并且所述上部分支30和下部分支32通过相对于其以直角延伸的基部分支34连接到彼此。因此,上部分支30、下部分支32和基部分支34形成在横截面中的C形轮廓。

[0048] 在此支承装置21的负载辊14可旋转地安装到圆柱形支承轴24上。支承轴24固定地连接到支承管20,其中支承管20的中心轴线和支承轴24的中心轴线彼此对齐并且形成负载辊14的支承轴线16。在当前情况下,负载辊14具有大致圆筒形的设计。

[0049] 此外,补偿辊36安装到圆柱形的支承轴24上以可围绕支承轴线16旋转。在当前情况下,补偿辊36也具有大致圆筒形的设计。在当前情况下,补偿辊36具有与负载辊14相同的直径。

[0050] 在当前情况下,负载辊14在横向方向上的外侧上布置于支承轴24上,即面向C形轮廓的基部分支34。补偿辊36在横向方向上的内侧上布置于支承轴24上,即面向支承管20。

[0051] 同样具有大致C形横截面的插入件60在每种情况下引入到上部框架7和下部框架5的C形轮廓内。在此每个插入件60具有头部区域50、底部区域52以及连接到头部区域50和底部区域52的侧部区域54。在此头部区域50平行于上部分支30布置,底部区域52大致平行于下部分支32布置并且侧部区域54平行于C形轮廓的基部分支34布置。

[0052] 头部区域50紧密地承靠上部分支30,而在底部区域52和下部分支22之间设置间隙。侧部区域54在当前情况下通过激光焊接而焊接到C形轮廓的基部分支34。

[0053] 底部区域52包括邻接侧部区域54的第一部分62以及邻接第一部分62并且背离侧部区域54的第二部分64。在此第一部分62和头部区域50在竖直方向上大致彼此相对布置并且面向彼此。

[0054] 根据图3和图4中所示的第一示例性实施例并且根据图5和图6中所示的第二示例性实施例,第二部分64设计成凸起台阶的形式并且定位成相对于所述第一部分62大致平行并且在竖直方向上偏移。在此第一部分62定位成比第二部分64更靠近下部分支32。

[0055] 头部区域50形成用于负载辊14的第一引导件并且底部区域52的第二部分64形成用于补偿辊36的第二引导件。由凸起台阶的形状确保补偿辊36接触底部区域52的第二部分64,而负载辊14与底部区域52的第一部分62在竖直方向上间隔开。

[0056] 在当前情况下,插入件60由钢构成并且因此是弹性的。特别地,底部区域52是弹性的因此以类似于弹簧的方式起作用。在此第二部分64在竖直方向上向上压靠补偿辊36。在此负载辊14向上压靠头部区域50。

[0057] 从而确保补偿辊36和负载辊14持续地接触相应的引导件并且承靠第一引导件和承靠第二引导件。其结果是,能够补偿部件公差并且消除在竖直方向上的游隙。

[0058] 根据在图3和图4中所示的第一示例性实施例,安装到负载辊14上的扩大部72用于补偿在横向方向上的游隙。在此该扩大部72位于负载辊14的面向插入件60的侧部区域54的那一端部侧上并且所述扩大部在横向方向上突出超过负载辊14的其余部分。在此扩大部72

承靠插入件60的侧部区域54。在当前情况下，扩大部72设计成负载辊14端部侧的拱形件，所述拱形件为球形部分的形状。还可以设想到其它构造。

[0059] 根据图5和图6中所示的第二示例性实施例，设置滑动元件70以补偿在横向方向上的游隙，所述滑动元件70插入到支承轴24中的支承孔内，所述支承孔在横向方向上延伸。在此滑动元件70承靠插入件60的侧部区域54。

[0060] 根据图7、图8和图9中所示的第三示例性实施例，第二部分64沿直线邻接第一部分62。支撑件66安装(在当前情况下粘接)到底部区域52的第二部分64上，所述支撑件形成用于补偿辊36的第二引导件，而头部区域50形成用于负载辊14的第一引导件。支撑件66确保在负载辊14在竖直方向上与底部区域52的第一部分62间隔开的同时补偿辊36接触第二引导件。

[0061] 在当前情况下，第二支撑件66由非弹性或仅在很小程度上是弹性的硬塑料构成。还可以设想到支撑件66由例如橡胶的弹性材料构成。

[0062] 在第三示例性实施例中，插入件60也由钢构成并且因此是弹性的。特别地，底部区域52是弹性的，因此以类似于弹簧的方式起作用。在此第二部分64通过支撑件66在竖直方向上向上压靠补偿辊36。在此负载辊14向上压靠头部区域50。

[0063] 从而在第三示例性实施例中也确保补偿辊36和负载辊14持续地与相应的引导件接触并且承靠第一引导件和承靠第二引导件。其结果是，能够补偿部件公差并且消除在竖直方向上的游隙。

[0064] 根据图7、图8和图9中所示的第三示例性实施例，滑动元件70以类似于图5和图6中所示的第二示例性实施例中的方式用于补偿在横向方向上的游隙，所述滑动元件70插入到支承轴24中的支承孔内并且承靠插入件60的侧部区域54，所述支承孔在横向方向上延伸。

[0065] 以类似于图3和图4中所示的第一示例性实施例的方式，还可以设想到，为了补偿在横向方向上的游隙而在负载辊14上设置扩大部，所述扩大部位于负载辊14的面向插入件60的侧部区域54的那一端部侧上并且在横向方向上突出超过负载辊14的其余部分。扩大部72则承靠插入件60的侧部区域54。

[0066] 在本文所述的示例性实施例中，与下部框架5相互作用的支承装置21在设计和功能上对应于在上部框架7上的在此所描述的支承装置21。图7示出在支承装置21在上部框架7和下部框架5上的状态下，车辆座椅的一部分。

[0067] 在上面的说明书、权利要求书和附图中所公开的特征以单独和组合的方式对于以本发明的不同构造来实现本发明而言都是很重要的。

[0068] 附图标记清单

[0069] 1 车辆座椅

[0070] 2 椅座部分

[0071] 3 剪刀式支架

[0072] 5 下部框架

[0073] 6 椅座框架

[0074] 7 上部框架

[0075] 8a 第一摇杆

[0076] 8b 第二摇杆

[0077] 9 横向管

[0078] 10 靠背

[0079] 12 气动弹簧

[0080] 14 负载辊

[0081] 16 支承轴线

[0082] 18 保持管

[0083] 20 支承管

[0084] 21 支承装置

[0085] 24 支承轴

[0086] 28 覆盖物

[0087] 30 上部分支

[0088] 32 下部分支

[0089] 34 基部分支

[0090] 36 补偿辊

[0091] 40 头枕

[0092] 44 解锁杆

[0093] 45 第一座椅导轨

[0094] 46 第二座椅导轨

[0095] 50 头部区域

[0096] 52 底部区域

[0097] 54 侧部区域

[0098] 60 插入件

[0099] 62 第一部分

[0100] 64 第二部分

[0101] 66 支撑件

[0102] 70 滑动元件

[0103] 72 扩大部

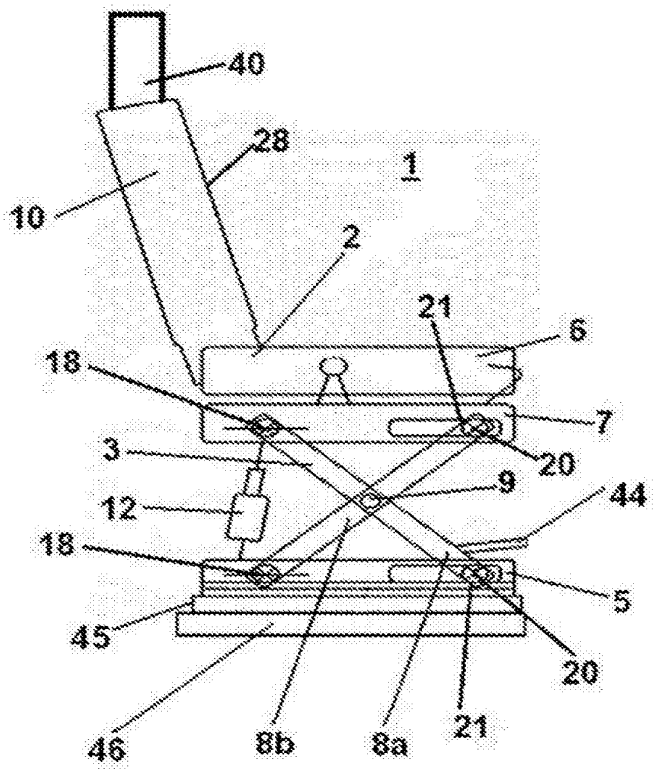


图1

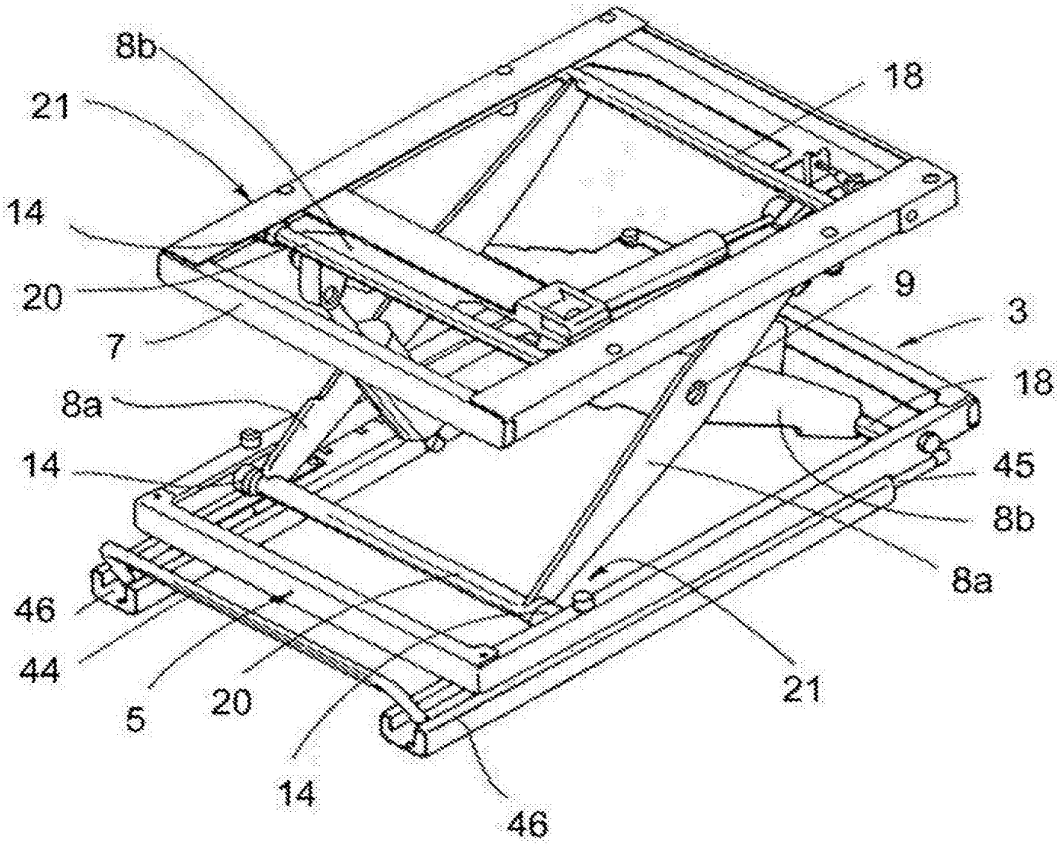


图2

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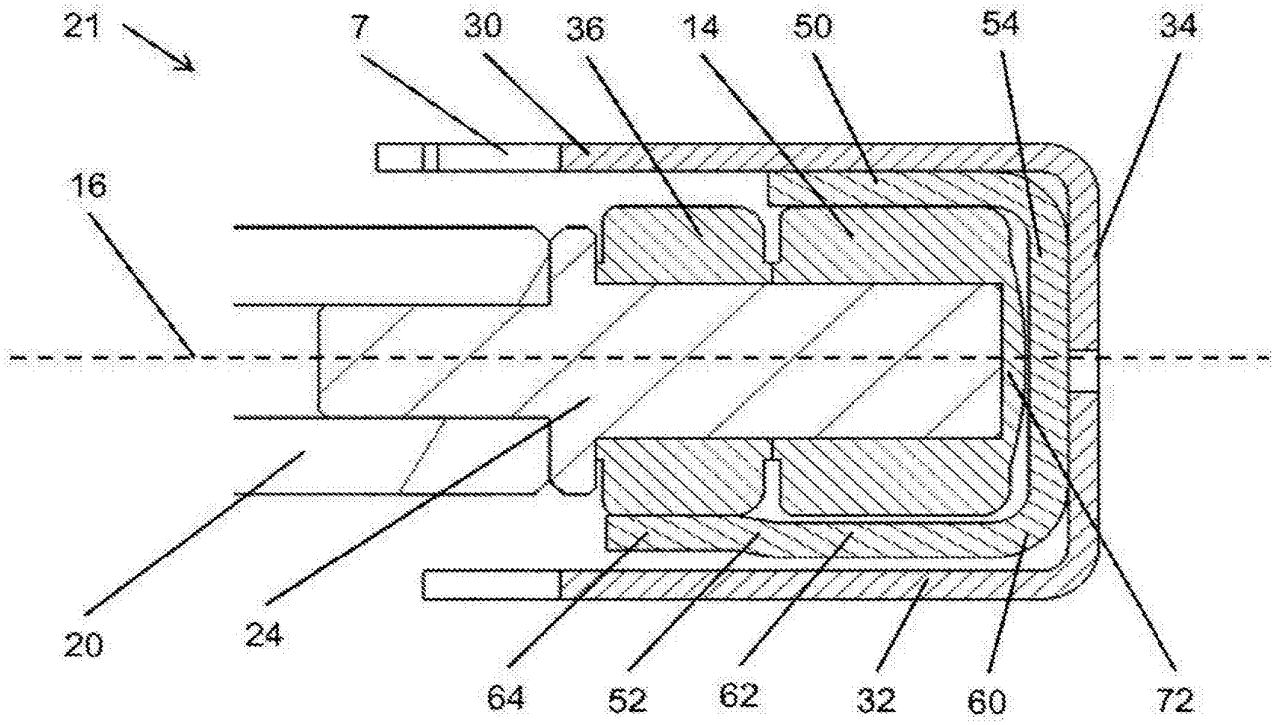

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图3

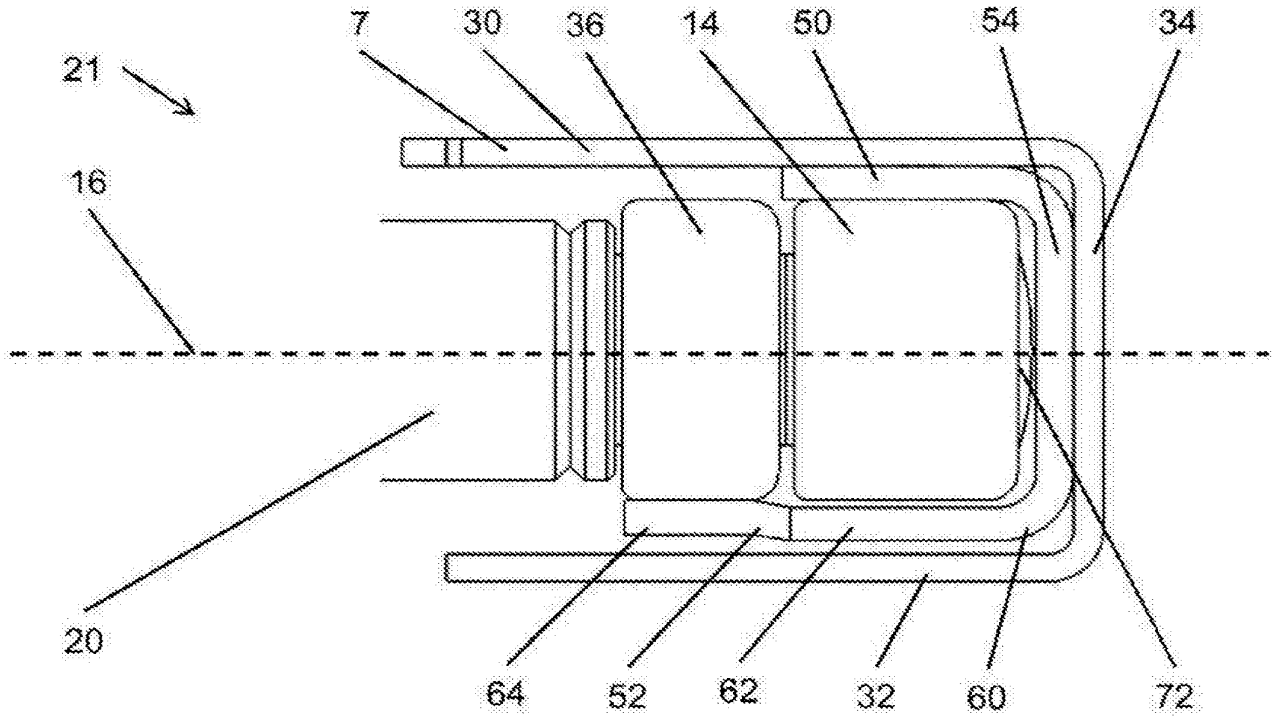

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图4

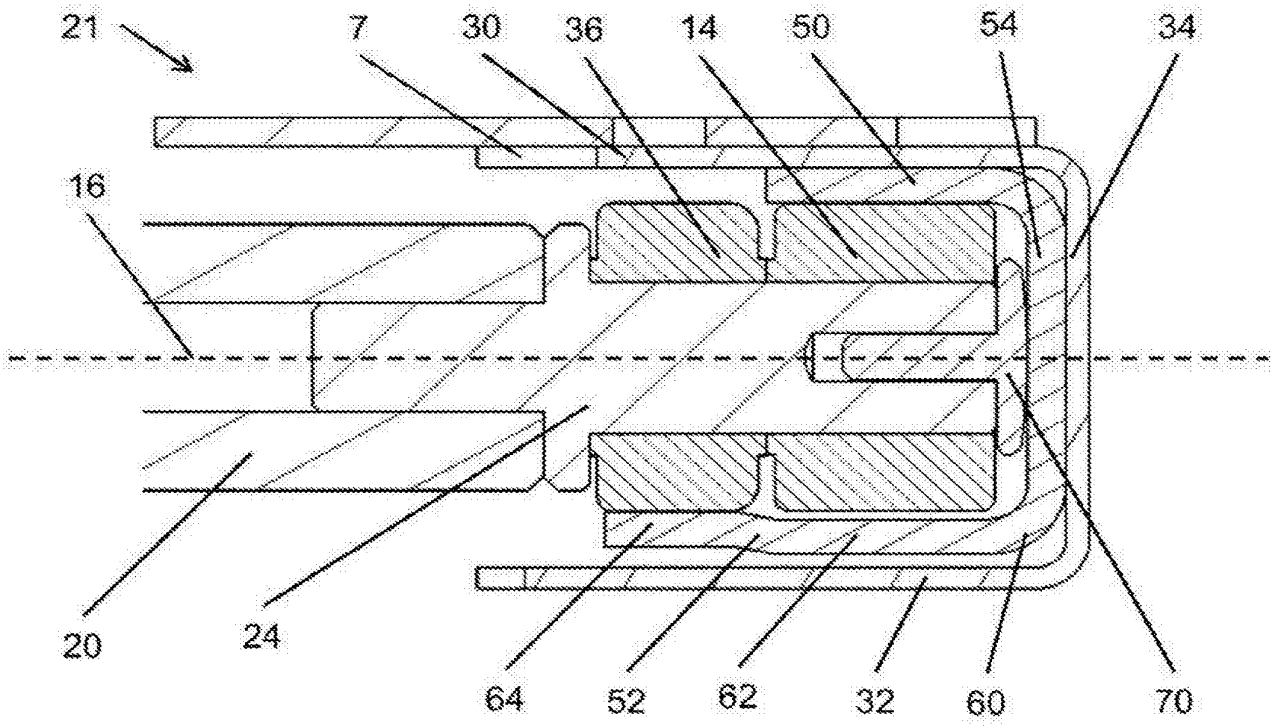

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图5

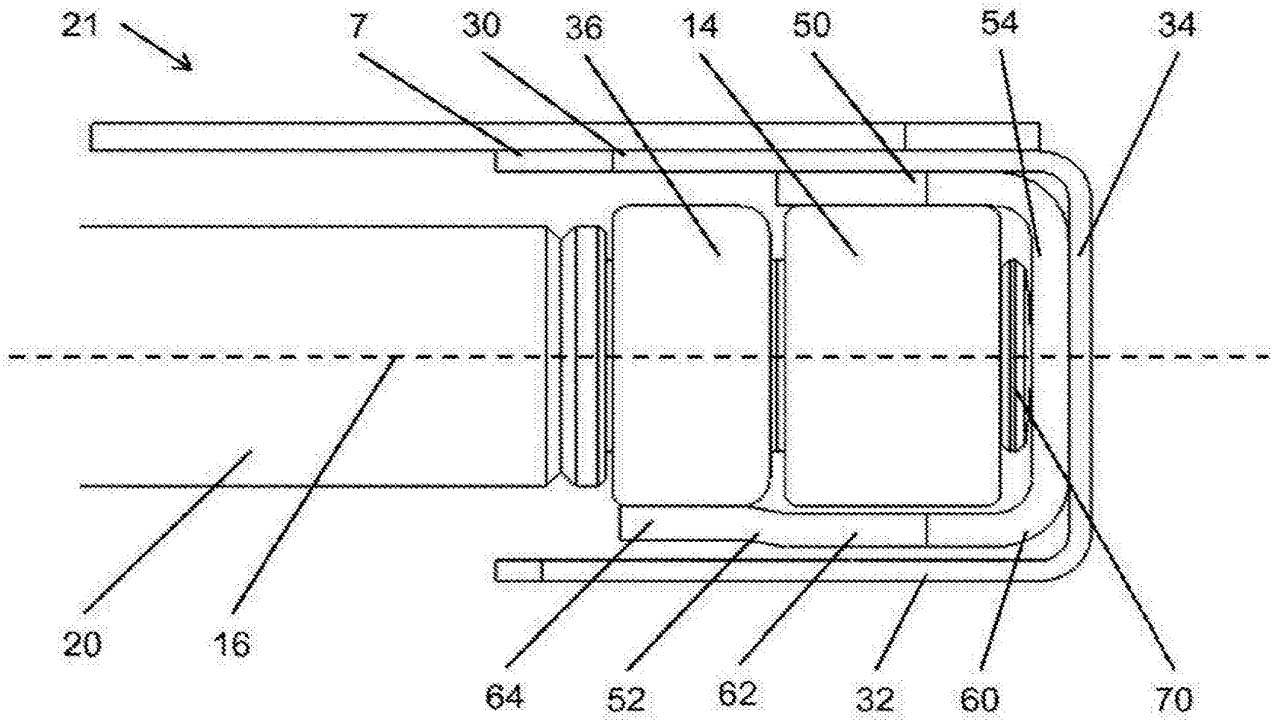

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图6

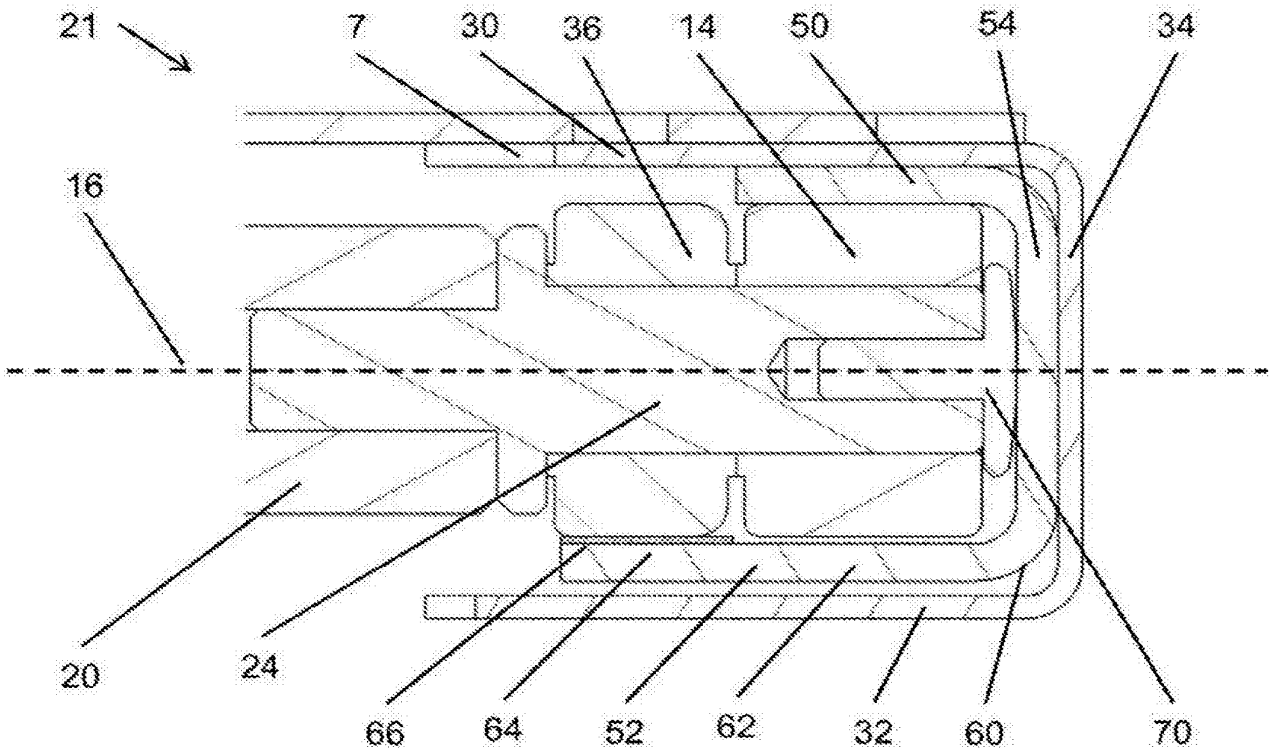

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图7

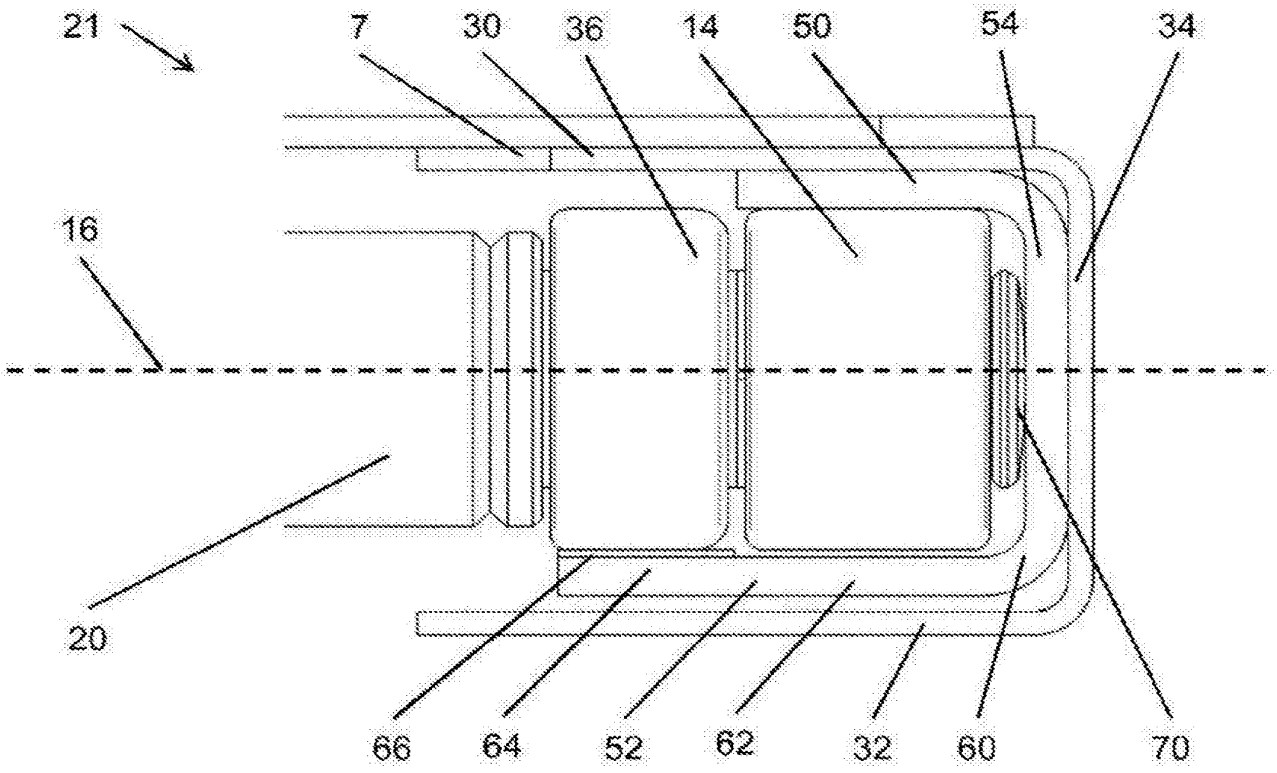

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图8

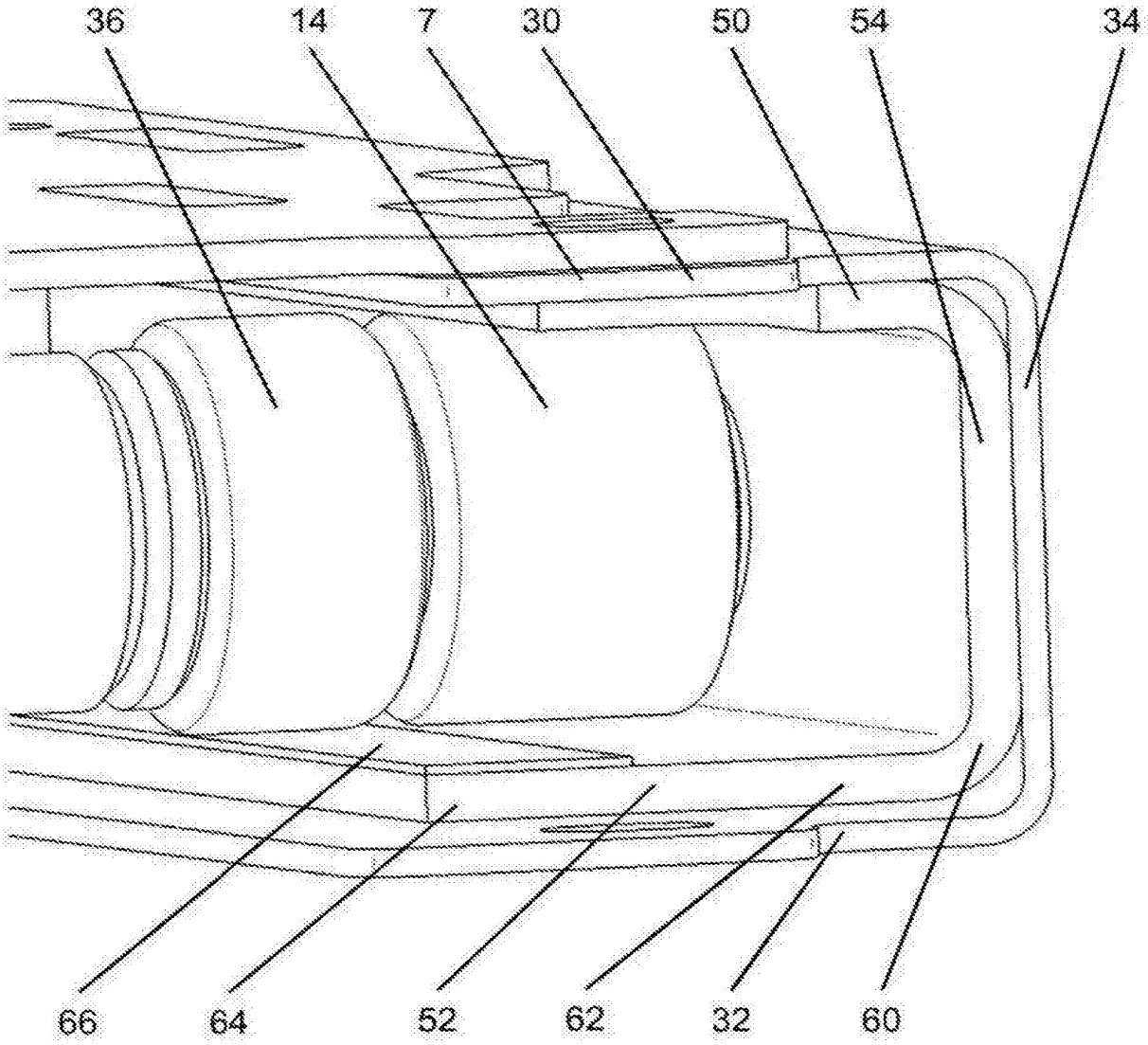


图9

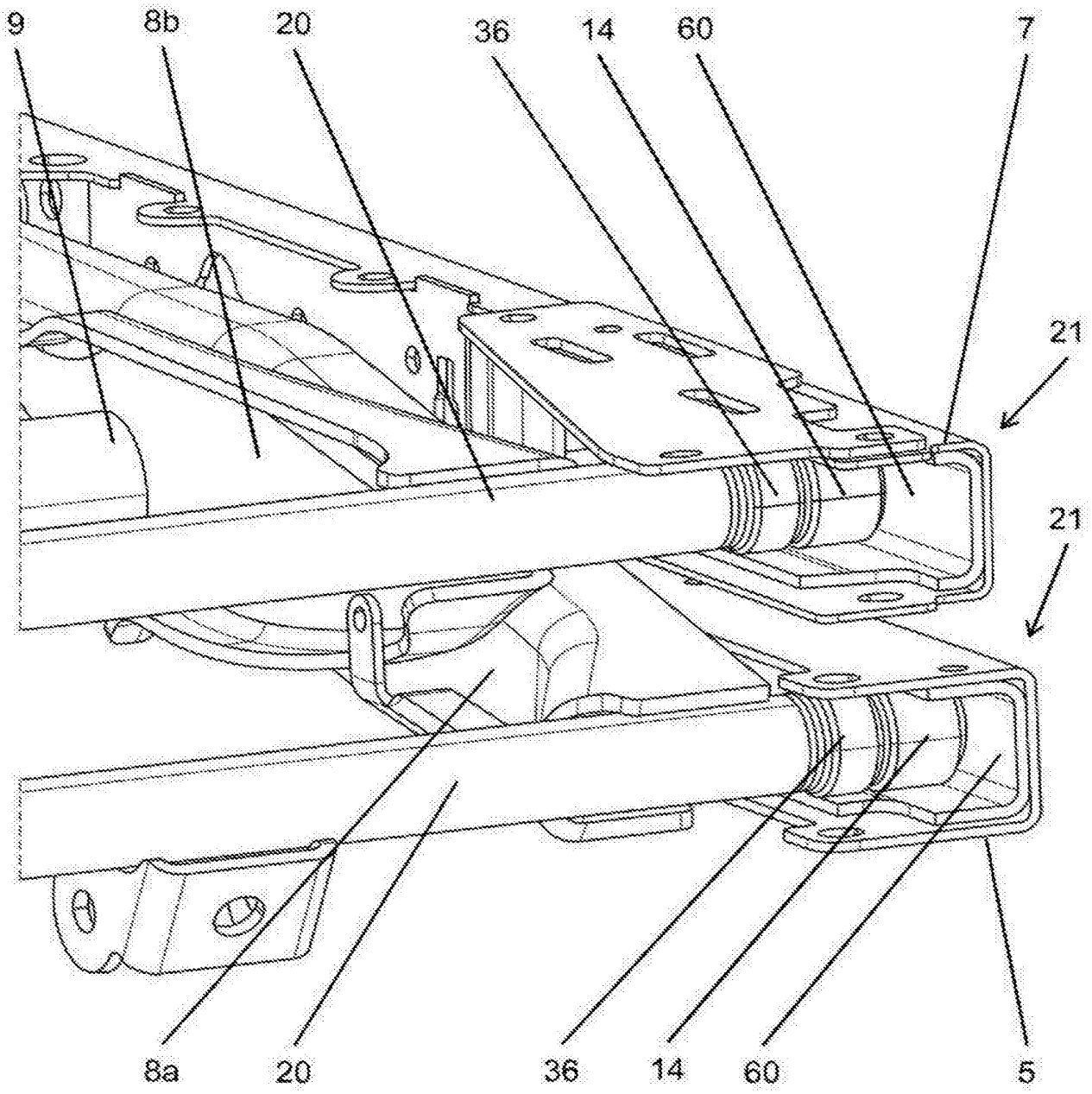


图10

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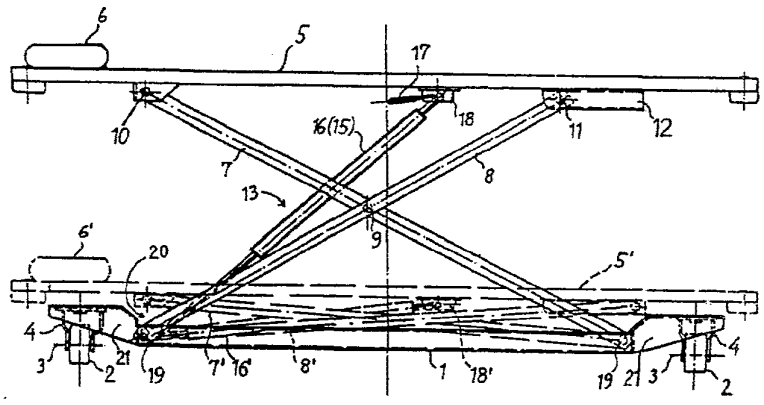
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(54) Title: LIFTING DEVICE

(54) Bezeichnung: TRAGEINRICHTUNG

(57) Abstract

The lifting device is used in workshops, particularly in workshops for repairing motor vehicles wherein mechanics use it when they are working under the bottom side of the vehicle. The device has a moving frame (1) to which are arranged pairs of crossed guiding bars (7, 8) connected to a bearing plate (5) or the like. To said plate is hinged a spring device (13) to which is affected a stop device (17) intended to stop the device at a selected position of the plate (5). The spring device (13) is provided with at least two spring units (14, 15, 16) having a different characteristic with the aim to react with a larger force in the lower part of the motion of the plate (5) and to enable the adjustment on the device for different loads. To this aim, at least two spring units (15, 16) comprised of lockable pneumatic springs having each two chambers and a discharge valve are preferred.



(57) Zusammenfassung

Eine Trageinrichtung, wie sie in Werkstätten, insbesondere Reparaturwerkstätten für Kraftfahrzeuge von den an deren Unterseite tätigen Monteuren verwendet werden kann, weist ein fahrbares Gestell (1) auf, an dem scherenartige Lenkerpaare (7, 8) angeordnet und mit einer Tragplattform (5) od.dgl. verbunden sind. An dieser ist eine Federeinrichtung (13) angelenkt, der eine Arretiereinrichtung (17) zum Fixieren der jeweils gewählten Lage der Tragplattform (5) zugeordnet ist. Die Federeinrichtung (13) weist mindestens zwei Federeinheiten (14, 15, 16) unterschiedlicher Charakteristik auf, um so dem grösseren Kraftbedarf im unteren Bereiche der Bewegung der Tragplattform (5) entgegenzuwirken und die Einstellbarkeit der Hebeeinrichtung auf verschiedene Lasten zu ermöglichen. Zu diesem Zweck sind bevorzugt wenigstens zwei Federeinheiten (15, 16) als arretierbare Gasfedern mit je zwei Kammern und je einem Überströmventil ausgebildet.

LEDIGLICH ZUR INFORMATION

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Trageinrichtung.

Die Erfindung bezieht sich auf eine Trageinrichtung nach dem Oberbegriff des Anspruches 1.

Derlei Trageinrichtungen kommen häufig in Werkstätten und vor allem in Garagen bzw. Reparaturwerkstätten für Kraftfahrzeuge zur Anwendung. Ein typisches Beispiel einer solchen Trageinrichtung zeigt die DE-OS 3,240.952, bei der die Hubeinrichtung wenigstens einen Hydraulikzylinder aufweist. Da die scherenförmig angeordneten Lenker zwangsläufig zu einer nichtlinearen Charakteristik der Belastung der Hubeinrichtung bei der Bewegung der - dort durch zwei Schienen gebildeten - Trageinrichtung führen, wird dort vorgeschlagen, die Hubeinrichtung mit verschiedenen Drükken zu betreiben. Dies ist bei derartigen fluidischen Motoren problemlos möglich. Für die Bewältigung geringerer Lasten, z.B. in Kraftfahrzeugwerkstätten für Hebevorrichtungen für einen unter einem Fahrgestell liegenden Monteur, ist jedoch eine fluidische (d.h. hydraulische oder pneumatisch) Hebevorrichtung mit Fluidreservoir und Pumpe eine relativ teure Angelegenheit.

Dies gilt auch für eine Konstruktion nach der DE-PS 2,941.454, bei der zur Vermeidung einer höheren Belastung der Hubeinrichtung zu Beginn der Hubbewegung, d.h. am unteren Ende der Bewegungsstrecke der Trageinrichtung, die vertikal verlaufende Kolbenstange des Hydraulikzylinderaggregates am Scherengelenkpunkt in der Mitte zweier mit-

einander gelenkig verbundener Lenkerarme angreift. Damit kann zwar die erhöhte Belastung der Hubeinrichtung am unteren Ende vermieden werden, jedoch ergibt sich eine Belastungsspitze am oberen Ende. Auch hier wird übrigens die Hydraulik einen relativ hohen Aufwand darstellen.

Nun sind Trageinrichtungen der eingangs genannten Art aus der US-A 3 096 059 sowie aus der nicht vorveröffentlichten EP-A-0 142 919 bekannt geworden, durch welche Konstruktionen einerseits eine teure Antriebshydraulik vermieden werden kann und andererseits durch eine erst gegen Ende des Abwärtshubes der Trageinrichtung mit ihrem Widerlager an derselben (US-A-3 096 059) bzw. am Gestell (EP-A 142.919) in Kontakt kommende Zusatzfeder ein gewisser Ausgleich für die Lastenunterschiede auf Grund der Lenkergeometrie geschaffen wird. Die Arretiereinrichtung ist im Falle der Konstruktion nach dem US-Vorschlag als Bremse ausgebildet, fehlt hingegen im Falle der EP-A 142,919 ganz, weil dort die Trageinrichtung nur zwischen einer voll zusammengeschobenen bzw. voll ausgefahrenen Lage verstellt zu werden braucht; sie soll ja nur als Unterstützung für einen Fernsehapparat od.dgl. dienen. Auch im Falle der US-A ist an eine ähnliche Anwendung gedacht, so dass in beiden Fällen die auf die Federn wirkenden Kräfte ziemlich konstant sein werden.

Der Erfindung liegt die Aufgabe zugrunde, eine Trageinrichtung für relativ geringe Lasten kostengünstig und derart auszubilden, dass sie auf unterschiedliche Lasten eingestellt werden kann. Dies gelingt erfindungsgemäss durch die im Kennzeichen des Anspruches 1 genannten Massnahmen.

Federeinheiten mit Arretiereinrichtungen in Form von Gasfedern sind für andere Zwecke, etwa für Bürosessel, an sich bekannt. Dabei ist die Ausgangshöhenlage, von der aus die Feder zusammenpressbar ist bzw. jene Ausgangslage, von der aus sich die Feder nach Lösen der Arretiereinrichtung zu ihrer Entspannung bewegt, mit Hilfe der Arretiereinrichtung wählbar. Diese Massnahmen alleine machen aber eine solche Federanordnung noch nicht auf eine Trageinrichtung der eingangs genannten Art in zweckmässiger Weise anwendbar, denn es ist ja die nicht-lineare Charakteristik der Belastung bei einer Scherenführung und die Einstellbarkeit auf verschiedene Lasten zu berücksichtigen; dazu dient die Erfindung.

Denn das Zusammenwirken der nichtlinearen Charakterisitk der Federeinheiten mit der Tatsache, dass die Federeinheiten ständig mit Lager und Widerlager verbunden sind (und nicht erst am Ende der Hubbewegung gegen eine Anschlagfläche gelangen, die das Widerlager bildet), sowie die Verstellbarkeit der Ausgangslage, bringen es mit sich, dass sich die Kräfte der Federeinheiten je nach Einstel-

lung einmal teilweise addieren, das andere Mal teilweise subtrahieren, wie dies aus der Beschreibung noch ersichtlich wird. Daraus resultieren dann unterschiedlich grosse Gesamtkräfte. Hier besitzt also die Arretiereinrichtung eine ganz andere Funktion als nach dem Stand der Technik.

Natürlich wäre es möglich, wenigstens eine der Federn etwa als Schraubenfeder auszubilden und ihr Lager, z.B. entlang einer Verstellschiene, an verschiedenen Stellen zu fixieren, um so die Verstellbarkeit zu erhalten. Einfacher gelingt dies aber, wenn wenigstens eine der Federeinheiten unterschiedlicher Charakteristik in Form einer Gasfeder mit Zylinder, Kolben und Kolbenstange vorgesehen ist.

Um eine besonders flache Federcharakteristik und grosse Federwege zu ermöglichen, sind vorteilhaft die beiden, vorzugsweise von Gasfedern gebildeten, Federeinheiten so angeordnet, dass sie das Gestell direkt mit der Trageinrichtung verbinden. Zusätzlich oder alternativ kann (für denselben Zweck) wenigstens eine Federeinheit an einer der Achsen der Lenker, insbesondere an einer mit dem Gestell verbundenen Achse, ihr Lager besitzen, da diese Federeinheit - im ausgefahrenen Zustand der Trageinrichtung - eine Schrägstellung einnimmt und so der Federweg verlängert ist. Ueberdies wird so auch die Unterbringung der Federeinheit im voll zusammengeschobenen Zustand der Tragein richtung erleichtert und damit die Gesamtbauhöhe der

Trageinrichtung samt Gestell verringert.

Zu diesem letzteren Zwecke trägt es auch bei, wenn das Gestell nach Art einer U-Form eine mittige Vertiefung aufweist, in die die Federeinheiten im abgesenkten Zustand der Trageinrichtung versenkbar sind. Vorzugsweise sind unterhalb der aufwärts gerichteten U-Schenkel des Gestelles Rollen vorgesehen, die so etwa neben den in der Vertiefung versenkten Federn (statt unter ihnen) angeordnet werden können.

Weitere Einzelheiten der Erfindung ergeben sich an Hand der folgenden Beschreibung eines in der Zeichnung schematisch dargestellten Ausführungsbeispieles. Es zeigen:

Fig. 1 eine Ausführung einer Hebevorrichtung in Seitenansicht im hochgehobenen Zustand, wogegen der abgesenkte Zustand strichliert angedeutet ist;

Fig. 2 eine Draufsicht auf die Hebevorrichtung der Fig. 1; und

Fig. 3 ein Diagramm zur Veranschaulichung der Federcharakteristiken der bei der Ausführung nach den Fig. 1 und 2 zur Anwendung kommenden Federeinheiten.

Ein Gestell 1 ist auf Rädern 2 fahrbar. Jedes Rad 2 ist an

einem um eine Drehachse 3 drehbaren Drehschemel 4 gelagert. Für Hubwagen in Kanalrohren können die Räder aber auch starr und gegenüber der Waagrechten in einem geeigneten Winkel angeordnet sein. An der Oberseite des Gestelles 1 ist eine Tragplattform 5 montiert, die z.B dazu dient, einen Monteur bei seiner Arbeit in liegender Stellung unter dem Fahrgestell eines Autos zu unterstützen. Aus diesem Grunde ist die Plattform 5 mit einem Kopfkissen 6 versehen.

Zur Anpassung an verschiedene Höhen von Fahrgestellen, z.B. von Lastwagen und Personenautos, soll die Plattform 5 höhenverstellbar sein. Zu diesem Zwecke sind je zwei Lenkerpaare 7,8 mit ihrem unteren Ende an Achsen 19 am Gestell 1 und mit ihrem oberen Ende an der Plattform 5 gelenkig befestigt. Beide Lenkerpaare 7,8 sind in ihrer Mitte durch ein mittleres Gelenk 9 scherenförmig miteinander verbunden. Während das obere Gelenk 10 des Lenkers 7 an der Plattform 5 befestigt ist, gleitet da obere Gelenk 11 des Lenkers 8 in einer Schiene 12. Im Prinzip könnten gewünschtenfalls auch Schienen für jedes der Gelenke 10,11 vorgesehen sein. Ebenso wäre es denkbar, am oberen Ende Lenker 7,8 ein weiteres Lenkerpaar vorzugsehen und so eine Doppelschere zu bilden. All diese Teile entsprechen dem Stande der Technik und können, diesem entsprechend, variiert werden.

Die Plattform 5 kann aus der in Fig. 1 mit vollen Linien

gezeigten Lage, in der sie ihre Maximalhöhe erreicht hat, in die strichliert dargestellte unterste Lage gebracht werden, in der alle Teile dasselbe Bezugszeichen, jedoch mit einem Strich versehen, tragen. Als Antrieb dient eine Federeinrichtung 13, die gegenüber einer Last als Druckfeder wirkt und aus drei miteinander zusammenwirkenden Federeinheiten 14,15 und 16 besteht.

Um dabei nicht durch die Stärke der Federeinheiten 14-16 im abgesenkten Zustand der Trageinrichtung 5 an Bauhöhe zu verlieren, ist das Gestell 1 nach Art einer U-Form (vgl. Fig. 1) in der Mitte mit einer breiten Vertiefung 20 versehen, in die Federeinheiten 14-16 versenkbar sind, so dass dann - wie strichliert angedeutet - die Trageinrichtung 5 unmittelbar auf den U-Schenkeln 21 aufruhen kann. Diese U-Schenkel 21 ragen vom unteren Niveau des Gestelles 1 etwas aufwärts und decken damit die darunter angeordneten Rollen 2 ab.

Wenn hier von Federeinheiten die Rede ist, so deshalb, um damit zum Ausdruck zu bringen, dass es sich dabei nicht um Federn im engeren Sinne des Wortes, also in Form von Schrauben- oder Blattfedern od.dgl., zu handeln braucht, sondern dass hier jede Einrichtung zur Anwendung kommen kann, die eine Federung bewirkt.

In der dargestellten Ausführung sind die Federeinheiten 15

und 16 von verstellbaren und arretierbaren Gasfedern gebildet, wie es einer bevorzugten Ausführungsform entspricht. Es werden zweckmässig dabei im Handel erhältliche Gasfedern verwendet, bei denen ein (nicht dargestelltes) Ueberströmventil, z.B. mit Hilfe eines Betätigungshebels 17, geöffnet werden kann, so dass sich z.B. die Federn 16 unter Belastung der Plattform 5 mit geringem Widerstand zusammenpressen und so in jede beliebige Ausgangslage bringen lassen. Dort wird dann der Hebel 17 wieder ausgelassen, wodurch sich das Ueberströmventil schliesst und die betreffende Gasfeder 16 auf die neue Länge eingestellt hat.

Auf diese Weise ist jeweils die Ausgangslage wenigstens einer der Federeinheiten, bevorzugt wenigstens der mit der weniger steilen Charakteristik, d.h. der Feder 15 (wie unten noch erläutert wird), zweckmässig aber beider Federn 15,16 verstellbar und durch die Arretiereinrichtung 17 festlegbar. Es sei aber betont, dass beide Federeinheiten 15,16 über den gesamten Hub der Trageinrichtung 5 stets mit ihrem Lager an der Achse 19 am Gestell 1 einerseits, und ihrem Widerlager 18 an der Trageinrichtung 5 andererseits in Verbindung bleiben.

Der Verlauf der Federkräfte sei an Hand der Fig. 3 veranschaulicht. Darin sind die Charakteristiken der drei Federeinheiten hinsichtlich der Federkraft P und des Feder-

weges L dargestellt, wobei sich aus den jeweiligen Summenkurven die Gesamtcharakteristik S der Federeinrichtung 13 erkennen lässt. Jede einer Federcharakteristik entsprechende Linie besitzt das Bezugszeichen der zugehörigen Feder zuzüglich 100.

Die erfindungsgemässe Trageinrichtung funktioniert nun wie folgt: Zunächst sei vorausgesetzt, dass die Federeinrichtung 13 so eingerichtet ist, dass sie im offenen Zustand, d.h. also bei Federweg gleich Null, also bei gehobener Trageinrichtung 5 eine Last (z.B. einen Mann) von 90 kg hält. Will der Mann sich tiefer absenken, dann betätigt er den Hebel 17 und damit das Ueberströmventil der starken Gasfeder 16 mit der steilen Charakteristik 116, wodurch die Charakteristik auf die Linie 116' schwenkt, bis er mittels des Federweges L1 die gewünschte Höhe erreicht hat, worauf er den Hebel 17 wieder auslässt. Dadurch verschiebt sich nun die Charakteristik der starken Gasfeder in die Position 116". Die Gasfeder ist jetzt in der neuen Höhe für dasselbe Gewicht, bzw. dieselbe Kraft von 90 kg arretiert. Jedoch wirkt nun die schwächere Gasfeder 15 mit der flacheren Charakteristik dahingehend, dass der elastische Federbereich gegenüber der Ausgangslage vergrössert ist, weil die Gasfeder 15 nach oben drückt und dabei die in der neuen Höhe arretierte Gasfeder 16 nach oben zu ziehen versucht, wobei der Last des Mannes aber beide Federn entgegenwirken. Soll die Trageinrichtung 5 wieder

gehoben werden, dann verringert der Mann die auf die Trageinrichtung 5 wirkende Kraft nur geringfügig, indem er mit einer Hand am ober ihm befindlichen Fahrgestell zieht oder gegen das Gestell 1 nach unten drückt, und oder indem er sich mit den Beinen am Boden abstützt. Betätigt er nun gleichzeitig mit der anderen Hand den Hebel 17, dann wird die starke Gasfeder 16 mit der steilen Charakteristik 116 die Trageinrichtung 5 wieder nach oben drücken. Dort lässt er den Hebel 17 aus, und sein volles Gewicht wird wieder oben gehalten (Charakteristik 116).

Soll nun eine geringere Last, z.B. ein Mann mit nur 70 kg die Trageinrichtung benützen, dann würde bei der erwähnten Einstellung trotz Betätigung des Hebels 17 ein Absenken der Trageinrichtung 5 unter dem geringeren Gewicht nicht erfolgen. Die Federeinrichtung 13 wird nun dadurch verstellt, dass der Mann die auf die Plattform 5 wirkende Kraft nur geringfügig dadurch erhöht, dass er sich mit einer Hand am Gestell 1 nach unten zieht oder gegen das über ihm befindliche Fahrgestell nach oben drückt während er mit der anderen Hand den Hebel 17 betätigt; dadurch sinkt die Trageinrichtung 5 auf eine etwas geringere Höhe ab, z.B. ebenfalls um den Federweg L1, worauf er den Hebel 17 wieder auslässt und dadurch die eingestellte Höhe vorläufig arretiert. Nun betätigt er mittels eines analogen Hebels 17' das Ueberströmventil der schwächeren Gasfeder 15 mit der flacheren Charakteristik 115. Dabei schwenkt

die Charakteristik auf die Linie 115' und stellt die Federeinrichtung 13 nun auf die der betreffenden Höhe entsprechend geringere Last/Kraft ein. Es ergibt sich die Gesamtcharakteristik S2. Die Plattform 5 kann nun unter geringfügiger Entlastung und Betätigung des Hebels 17 wie oben beschrieben wieder gehoben werden, wobei die Gasfeder 15 über die vorher eingestellte Höhe hinaus von der anderen Gasfeder 16 gezogen werden muss; dabei verliert diese einen Teil ihrer Kraft an die Feder 15, wodurch die Federeinrichtung 13 nunmehr auf eine geringere Last eingestellt ist.

Es muss festgehalten werden, dass in Fig. 3 die Verläufe der Federcharakteristiken nur prinzipiell und schematisch gezeigt sind, und in ihrem Verhältnis zueinander unterschiedlich liegen können. Dazu kommt, dass die für den Hub zur Verfügung stehende Kraft von der dem Diagramm zu entnehmenden Federkraft natürlich in Folge der Lenkergeometrie je nach der eingestellten Höhe mehr oder weniger stark nach unten abweicht.

In einem praktischen Ausführungsbeispiel kann der gesamtmögliche Federweg der Gasfedern 15 und 16 etwa 150 mm, die Anfangskraft der Feder 16 75 kg, ihre Endkraft (bei offenem Ueberströmventil) etwa 100 kg, die Anfangskraft der Feder 15 annähernd 25 kg und ihre Endkraft (bei geschlossenem Ueberströmventil) beispielsweise 450 kg betragen.

Die Endkraft (für das untere Ende der Bewegungsstrecke der Plattform 5) wird noch durch die Charakteristik 114 der Feder 14 in nicht-linearer Weise zur Gesamtcharakteristik S3 erhöht. Diese Feder 14 besitzt nämlich nur einen kleinen Federweg L2 und ist zusätzlich noch sehr steil, so dass sich mit ihr Anfangskräfte für den Hub von unten nach oben ergeben, die beinahe 1 Tonne erreichen können, z.B. 900 kg. Obwohl die an Hand der Fig. 1 und 2 gezeigte Hebevorrichtung nur für das Gewicht eines Mannes gedacht ist, müssen ja die Federkräfte zum Ausgleich der durch die Lenkergeometrie der angelenkten Federeinrichtung 13 sich ergebenden nicht-linearen Belastung (die entsprechend einer Winkelfunktion verläuft) und der im Anfang sehr kleinen nach oben wirkenden Kraftkomponente relativ gross dimensioniert sein. Es versteht sich, dass die aus Fig. 3 ersichtliche Gesamtcharakteristik keinen exakten Ausgleich der Belastungscharakteristik darstellen kann, doch wird dies für den Normalfall ausreichend sein. Sollte eine Anordnung erwünscht sein, bei der die Belastungscharakteristik vollkommen ausgeglichen ist, d.h. die Federkräfte in (wenigstens beinahe) jedem Punkte des Federweges gleichmässig nach oben wirken, so kann die Winkelfunktion der Belastungscharakteristik durch Anordnen weiterer, der Feder 14 ähnlicher Federn mit verkürztem Federweg ausgeglichen werden, so dass sich an Stelle des Knickes im Kurvenverlauf der Kurven 115,114 durch Staffelung unter-

schiedlich langer Federwege mehrere solcher Knicke ergeben.

Im Falle der Gasfedern 15,16 ist eine Verstellung durch die Arretiereinrichtung selbst möglich, da mit ihr die Ausgangsstellung eingestellt werden kann, ab der die Gasfeder zur Wirkung kommt. Es ist aber ebenso möglich, eine gesonderte Verstelleinrichtung vorzusehen, was insbesondere bei der Verwendung anderer Federeinrichtungen der Fall sein wird. So könnte dab obere Federlager 18 in Längsrichtung der Plattform 5 verschiebbar angeordnet sein, wobei es in verschiedenen Stellungen fixierbar ist. Auch eine Höhenverstellung des oberen und/oder des unteren Federlagers wäre denkbar.

Bevorzugt ist, wenn die Gummikörper 14 am Kolben der stärkeren Gasfeder 16 mit steilerer Charakteristik angeordnet sind, weil dann die Gelenke, mit denen die beiden Gasfedern 15,16 am Gestell 1 hängen, weniger stark unterschiedlich belastet sind. Der Vorteil dieser Anordnung wird ohne weiteres klar, wenn man beim Vergleich der in Fig. 1 dargestellten beiden Extremlagen bedenkt, dass in der unteren Lage die Feder 14 (im Gegensatz zu Fig.2) durch den Zylinder der Gasfeder 16' beaufschlagt und zusammengepresst ist.
Wenn unter Krafteinwirkung die Plattform 5 soweit abgesenkt wird, dass die Feder 14 durch den Zylinder der Gas-

feder 16' zusammengepresst wird, wird die Druckfeder 14 gespannt und speichert Kraft, die sie bei Freigabe der Arretiereinrichtung durch Betätigen des Hebels 17 am Anfang von der Hubbewegung wieder abgibt. Durch die Geometrie der Anlenkung der Gasfedern 15,16 am Gestell 1 und an der Plattform 5 wird ja im Anfange der Bewegungsstrecke nur eine kleine Kraftkomponente nach oben wirken, während die grössere Kraftkomponente parallel zur Ebene der Plattform 5 wirkt und somit nutzlos ist. Deshalb ist es günstig, wenn zum Ausgleich dieser nicht-linearen Belastungscharakteristik die Feder 14 in jenem Bereich zusätzlich wirkt, in dem die Last für die Federeinrichtung 13 am grössten ist. Einen weiteren Ausgleich schafft die Kombination der beiden Gasfedern 15,16 unterschiedlicher Charakteristik. Bei einer vereinfachten Ausführung mit insgesamt nur zwei Federeinheiten gelingt natürlich der Ausgleich weniger gut. Anderseits mag es in Spezialfällen zum Zwecke einer besseren Ausgleichung der nicht-linearen Belastungscharakteristik erwünscht sein, zusätzliche Federglieder anzuordnen. So kann die Ausbildung in der Weise getroffen sein, dass von den beiden Teilen der Feder 14 jeder davon wiederum eine andere Charakteristik besitzt. Auch könnte erfoderlichenfalls noch eine dritte Feder sich parallel zu den Gasfedern 15,16 oder auch in anderer Richtung erstrecken.

Im Rahmen der Erfindung sind zahlreiche Abwandlungen möglich; beispielsweise ist die Anordnung der Feder 14 an der

Kolbenstange einer Gasfeder zwar konstruktiv einfach und günstig, doch kann die Anordnung auch anders getroffen sein, etwa indem eine derartige Feder kurzen Federweges am unteren Ende der Abwärtsbewegung der Plattform 5 an dieser selbst oder einem anderen mit der Plattform 5 verbundenen Teil zur Anlage kommt. Während dies die einfachste Art ist, um die Feder 14 in der richtigen Bewegungsphase zur Wirkung zu bringen, gibt es auch andere Möglichkeiten, wie etwa eine der Feder 14 entsprechende Feder während der Aufwärtsbewegung durch eine andere Feder zu spannen und dann zum richtigen Zeitpunkt zur Beaufschlagung freizugeben. Dies erfordert aber einen entsprechenden getrieblichen Aufwand und würde wohl dann anzuwenden sein, wenn eine geometrische Anordnung verwendet werden soll, wie sie aus der DE-PS 2,941.454 bekannt geworden ist. Deshalb ist auch die dargestellte Verbindung der Federn 15,16, insbesondere zusammen mit der Feder 14 bevorzugt, da sie ohne komplizierte Getriebe auskommt. Bei Doppelscheren könnte, wie schon erwähnt, auch wenigstens eine Federeinrichtung zwischen den äusseren Enden der Lenker gespannt sein, wobei dann eine Zugfeder an Stelle der hier beschriebenen Druckfedern zur Anwendung käme.

P A T E N T A N S P R U E C H E

1. Trageinrichtung, die über scherenförmige Lenker mit einem am Boden angeordneten Gestell verbunden ist, von denen wenigstens zwei Lenker an jeweils einer vom Gestell getragenen Achse angelenkt sind, und die über zumindest zwei Federeinheiten unterschiedlicher Charakteristik höhenverstellbar ist, von denen jede eine Ausgangslage besitzt, in der sie völlig entspannt ist, und denen jeweils einenends ein Lager und andernends ein Widerlager zugeordnet ist, dadurch gekennzeichnet, dass die beiden Federeinheiten (15,16) über die gesamte Hubhöhe der Trageinrichtung (5) jeweils mit Lager und Widerlager verbunden sind, und dass die Arretiereinrichtung (17) als Einstelleinrichtung ausgebildet ist, mittels der die Ausgangslage wenigstens einer Federeinheit (15 bzw.16) in verschiedenen Hubhöhen der Trageinrichtung (5) festlegbar ist.

2. Trageinrichtung nach Anspruch 1, dadurch gekennzeichnet, dass wenigstens die Federeinheit (15) mit der weniger steilen Charakterisitk (115) und geringerer Anfangsfederkraft eine in verschiedenen Hubhöhen festlegbare Ausgangslage besitzt und damit hinsichtlich der auf die Trageinrichtung (5) in Hubrichtung ausgeübten Kraft einstellbar ist.

3. Trageinrichtung nach Anspruch 2, dadurch gekennzeichnet, dass jeder Federeinheit (15,16) eine Arretiereinrichtung (17) zugeordnet ist und so die Ausgangslage beider Federeinheiten (15,16) verschiedenen Hubhöhen der Trageinrichtung (5) zuordenbar ist.

4. Trageinrichtung nach Anspruch 1, 2 oder 3, dadurch gekennzeichnet, dass wenigstens eine der Federeinheiten (15,16) unterschiedlicher Charakteristik als Gasfeder mit Zylinder, Kolben und Kolbenstange ausgebildet ist.

5. Trageinrichtung nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, dass die beiden, vorzugsweise von Gasfedern gebildeten, Federeinheiten (15,16) das Gestell (1) direkt mit der Trageinrichtung (5) verbinden.

6. Trageinrichtung nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, dass wenigstens eine Federeinrichtung (15,16) an einer der Achsen der Lenker (7,8), insbesondere an einer mit dem Gestell (1) verbundenen Achse, ihr Lager besitzt.

7. Trageinrichtung nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, dass das Gestell (1) nach Art einer U-Form eine mittige Vertiefung aufweist, in die die Federeinheiten (14-16) im abgesenkten Zustand

der Trageinrichtung (5) versenkbar sind, und dass vorzugsweise unterhalb der aufwärts gerichteten U-Schenkel des Gestelles (1) Rollen (2) vorgesehen sind.

8. Trageinrichtung nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, dass wenigstens eine dritte, in einem Endbereich der Bewegung der Trageinrichtung (5), insbesondere im unteren Bereich, gegen ihr Widerlager stossende Druckfeder (14) vorgesehen ist, und dass diese Druckfeder (14) vorzugsweise an der Kolbenstange einer Gasfeder (15,16) angeordnet ist, deren Zylinder das Widerlager bildet, wobei zweckmässig diese Druckfeder (14) an der Kolbenstange der Federeinheit (16) mit steilerer Charakteristik (116) angeordnet ist.

9. Trageinrichtung nach Anspruch 8, dadurch gekennzeichnet, dass die Druckfeder (14) eine steile Charakteristik (114) mit einem kurzen Federweg aufweist und vorzugsweise von einem Gummikörper gebildet ist.

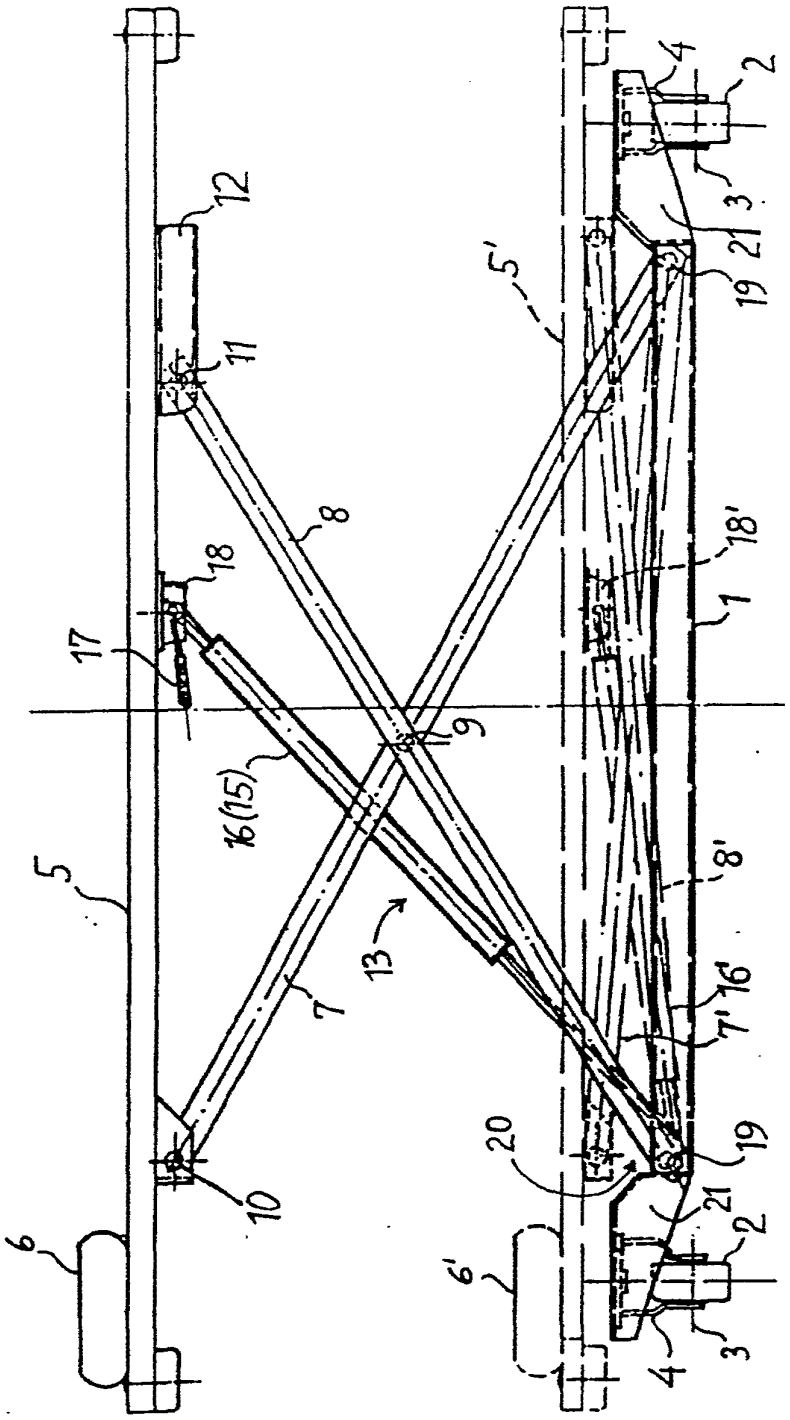


Fig. 1

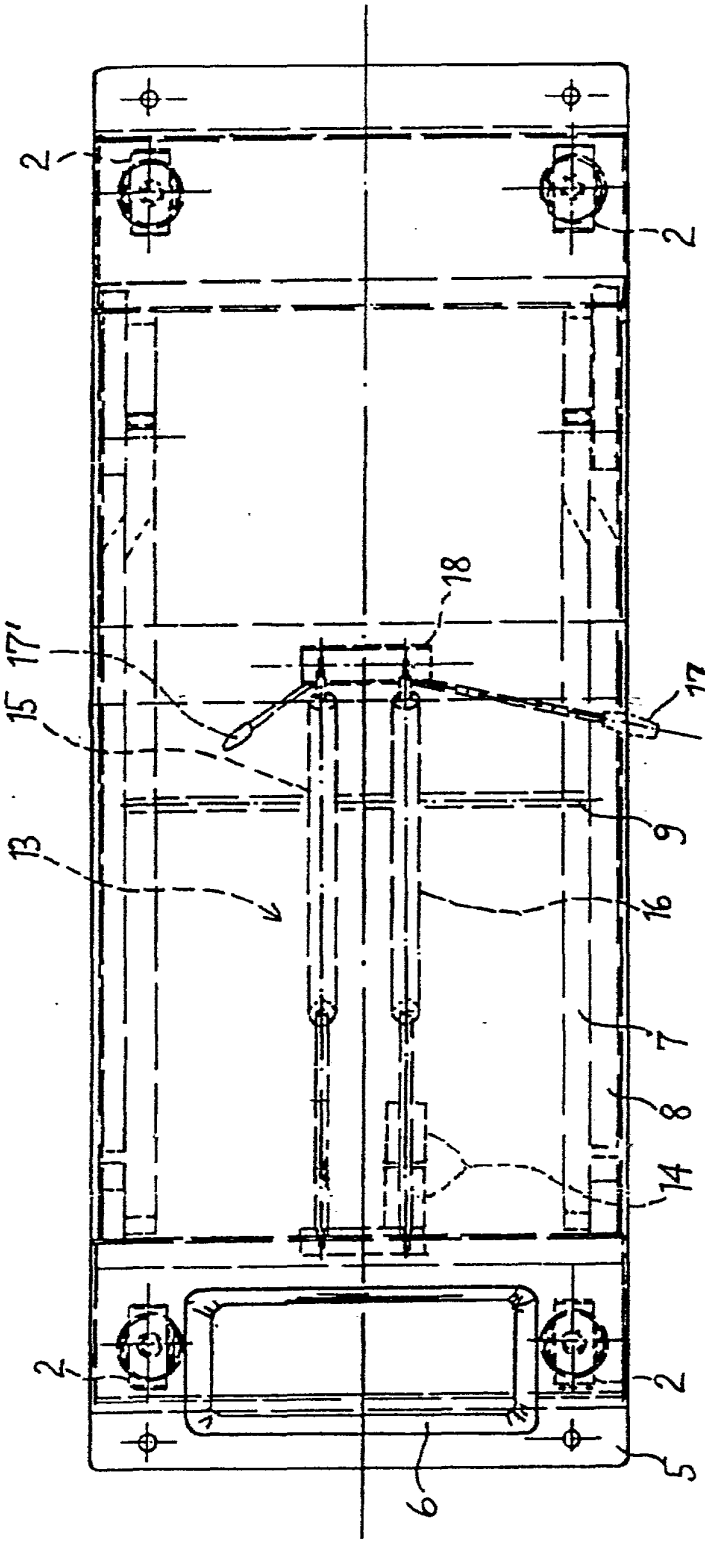


Fig. 2

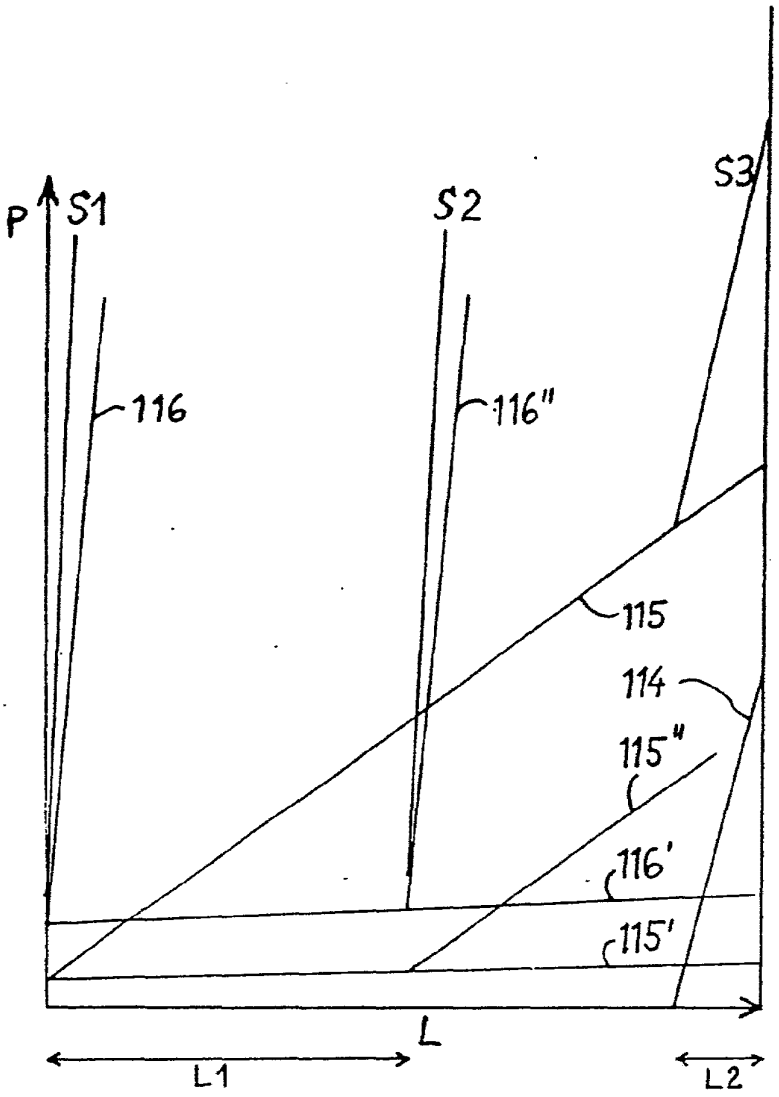


Fig. 3

INTERNATIONAL SEARCH REPORT

International Application No PCT/CH 86/00050

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) [6]

According to International Patent Classification (IPC) or to both National Classification and IPC

Int. Cl.4 : B 66 F 7/06; B 25 H 5/00

II. FIELDS SEARCHED

Minimum Documentation Searched [7]

Classification System	Classification Symbols
Int. Cl.4	B 66 F; B 25 H; A 61 G; A 47 B; A 47 C

Documentation Searched other than Minimum Documentation to the Extent that such Documents are included in the Fields Searched [8]

III. DOCUMENTS CONSIDERED TO BE RELEVANT [9]

Category *	Citation of Document, [11] with indication, where appropriate, of the relevant passages [12]	Relevant to Claim No. [13]
A	US, A, 3096059 (JOHNSON) July 2, 1963, see column 5, lines 35-75; column 6; column 7, lines 1-16; column 9, lines 54-75; column 10, lines 1-6	1
A	DE, C1, 3138717 (LADENBAU JAKOB MAIER) June 1, 1983	
A	US, A, 3116910 (MOORE) January 7, 1964	
A	GB, A, 551813 (CHESTON) March 10, 1943	
A	FR, A, 2167190 (BREMSHEY) August 17, 1973	
A	DE, A, 1920696 (FICHTEL & SACHS) November 12, 1970	
A	FR A, 2058802 (VAN DER MEIJ) May 28, 1971	

./.

* Special categories of cited documents: [10]

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

IV. CERTIFICATION

Date of the Actual Completion of the International Search	Date of Mailing of this International Search Report
10 July 1986 (10.07.86)	31 July 1986 (31.07.86)
International Searching Authority	**Signature of Authorized Officer**
European Patent Office	

Form PCT/ISA/210 (second sheet) (January 1985)

III. DOCUMENTS CONSIDERED TO BE RELEVANT (CONTINUED FROM THE SECOND SHEET)

Category *	Citation of Document, with indication, where appropriate, of the relevant passages	Relevant to Claim No
A	GB, A, 2055754 (INSTITUTTET FOR PRODUKTUDVIKLING) March 11, 1981	
A	DE, A, 1806380 (VOGEL) June 4, 1970	
A	CH, A, 473731 (BINZ & CO.) July 31, 1969	
A	US, A, 1327103 (KNOWLES) January 6, 1920	
A	FR, A1, 2282575 (SUSPA FEDERUNGSTECHNIK FRITZ BAUER & SOHNE) March 19, 1976	

ANNEX TO THE INTERNATIONAL SEARCH REPORT ON

INTERNATIONAL APPLICATION NO. PCT/CH 86/00050 (SA 12849)

This Annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the European Patent Office EDP file on 17/07/86

The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US-A- 3096059		None		
DE-C- 3138717	01/06/83	None		
US-A- 3116910		None		
GB-A- 551813		None		
FR-A- 2167190	17/08/73	NL-A-	7217712	03/07/73
		DE-A,B,C	2165209	12/07/73
		CH-A-	547634	11/04/74
DE-A- 1920696	12/11/70	None		
FR-A- 2058802	28/05/71	None		
GB-A- 2055754	11/03/81	DE-A-	3028771	26/02/81
DE-A- 1806380	04/06/70	None		
CH-A- 473731	15/06/69	NL-A-	6807167	02/12/68
		FR-A-	1567567	16/05/69
		BE-A-	715329	16/10/68
US-A- 1327103		None		
FR-A- 2282575	19/03/76	None		

For more details about this annex :
see Official Journal of the European Patent Office, No. 12/82

INTERNATIONALER RECHERCHENBERICHT

Internationales Aktenzeichen PCT/CH 86/00050

I. KLASSIFIKATION DES ANMELDUNGSGEGENSTANDS (bei mehreren Klassifikationssymbolen sind alle anzugeben)[6]

Nach der Internationalen Patentklassifikation (IPC) oder nach der nationalen Klassifikation und der IPC

Int Cl.4 B 66 F 7/06; B 25 H 5/00

II. RECHERCHIERTE SACHGEBIETE

Recherchierter Mindestprüfstoff[7]

Klassifikationssystem	Klassifikationssymbole
Int Cl.4	B 66 F; B 25 H; A 61 G; A 47 B; A 47 C

Recherchierte nicht zum Mindestprüfstoff gehörende Veröffentlichungen, soweit diese unter die recherchierten Sachgebiete fallen[8]

III. EINSCHLÄGIGE VERÖFFENTLICHUNGEN[9]

Art*	Kennzeichnung der Veröffentlichung[11], soweit erforderlich unter Angabe der maßgeblichen Teile[12]	Betr. Anspruch Nr.[13]
A	US, A, 3096059 (JOHNSON) 2. Juli 1963, siehe Spalte 5, Zeilen 35-75; Spalte 6; Spalte 7, Zeilen 1-16; Spalte 9, Zeilen 54-75; Spalte 10, Zeilen 1-6 --	1
A	DE, C1, 3138717 (LADENBAU JAKOB MAIER) 1. Juni 1983	
A	US, A, 3116910 (MOORE) 7. Januar 1964	
A	GB, A, 551813 (CHESTON) 10. März 1943	
A	FR, A, 2167190 (BREMSHEY) 17. August 1973	
A	DE, A, 1920696 (FICHTEL & SACHS) 12. November 1970	
A	FR, A, 2058802 (VAN DER MEIJ) 28. Mai 1971	
A	GB, A, 2055754 (INSTITUTTET FOR PRODUKTUDVIKLING) 11. März 1981	./.

* Besondere Kategorien von angegebenen Veröffentlichungen[10]:

"A" Veröffentlichung, die den allgemeinen Stand der Technik definiert, aber nicht als besonders bedeutsam anzusehen ist

"E" älteres Dokument, das jedoch erst am oder nach dem internationalen Anmeldedatum veröffentlicht worden ist

"L" Veröffentlichung, die geeignet ist, einen Prioritätsanspruch zweifelhaft erscheinen zu lassen, oder durch die das Veröffentlichungsdatum einer anderen im Recherchenbericht genannten Veröffentlichung belegt werden soll oder die aus einem anderen besonderen Grund angegeben ist (wie ausgeführt)

"O" Veröffentlichung, die sich auf eine mündliche Offenbarung, eine Benutzung, eine Ausstellung oder andere Maßnahmen bezieht

"P" Veröffentlichung, die vor dem internationalen Anmeldedatum, aber nach dem beanspruchten Prioritätsdatum veröffentlicht worden ist

"T" Spätere Veröffentlichung, die nach dem internationalen Anmeldedatum oder dem Prioritätsdatum veröffentlicht worden ist und mit der Anmeldung nicht kollidiert, sondern nur zum Verständnis des der Erfindung zugrundeliegenden Prinzips oder der ihr zugrundeliegenden Theorie angegeben ist

"X" Veröffentlichung von besonderer Bedeutung; die beanspruchte Erfindung kann nicht als neu oder auf erfinderischer Tätigkeit beruhend betrachtet werden

"Y" Veröffentlichung von besonderer Bedeutung; die beanspruchte Erfindung kann nicht als auf erfinderischer Tätigkeit beruhend betrachtet werden, wenn die Veröffentlichung mit einer oder mehreren anderen Veröffentlichungen dieser Kategorie in Verbindung gebracht wird und diese Verbindung für einen Fachmann naheliegend ist

"&" Veröffentlichung, die Mitglied derselben Patentfamilie ist

IV. BESCHEINIGUNG

Datum des Abschlusses der internationalen Recherche	Absendedatum des internationalen Recherchenberichts
10. Juli 1986	31 JUL 1986
Internationale Recherchenbehörde	**Unterschrift des bevollmächtigten Bediensteten**
Europäisches Patentamt	M. VAN MOL

Formblatt PCT/ISA/210 (Blatt 2) (Januar 1985)

III. EINSCHLÄGIGE VERÖFFENTLICHUNGEN (Fortsetzung von Blatt 2)

Art *	Kennzeichnung der Veröffentlichung, soweit erforderlich unter Angabe der maßgeblichen Teile	Betr. Anspruch Nr.
A	DE, A, 1806380 (VOGEL) 4. Juni 1970	
A	CH, A, 473731 (BINZ & CO.) 31. Juli 1969	
A	US, A, 1327103 (KNOWLES) 6. Januar 1920	
A	FR, A1, 2282575 (SUSPA FEDERUNGSTECHNIK FRITZ BAUER & SÖHNE) 19. März 1976	

ANHANG ZUM INTERNATIONALEN RECHERCHENBERICHT ÜBER DIE

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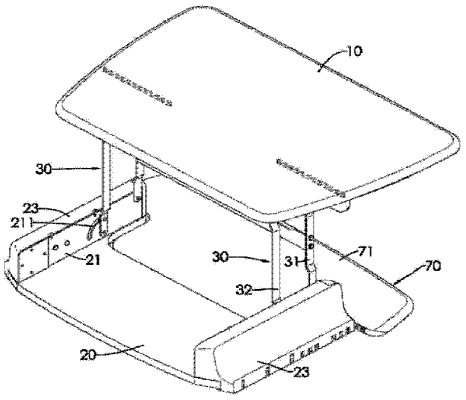
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(54)发明名称

升降桌

(57)摘要

本发明为一种升降桌，其中包含一上平台、一下平台、二枢接组与二卡固组；下平台相对设置于上平台的下方且选择性地贴靠设置于上平台的底面，二枢接组彼此相对，且各枢接组同时与上平台及下平台相枢接，各卡固组经常性地同时卡设于各枢接组与上平台上；其优点在于，通过各枢接组与各卡固组的设置，上平台可相对下平台上升或下降，而可依需求适时调整上平台与下平台的间距，且可适时调整姿势，则无论采取何种姿势皆可于上平台上进行工作，进而解决维持长时间的坐姿或站姿对健康的危害，也可以维持工作产能，达到兼顾健康与工作产能的效果。



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1. 一种升降桌，其中包含：

一上平台，其包含有二连接部，所述二连接部相对设置于上平台的底面的两侧；

一下平台，其相对设置于上平台下方且选择性地贴靠设置于上平台的底面，所述下平台包含有二连接部，所述二连接部设置于所述下平台的顶面上的两侧，且下平台的各连接部相对上平台的各连接部；

二枢接组，所述二枢接组彼此相对，且各枢接组同时与上平台的各连接部及下平台的相对应的连接部相枢接；

二卡固组，各卡固组设置于上平台的底面上，且各卡固组经常性地同时卡设于各枢接组与上平台的相对应的连接部上。

2. 如权利要求 1 所述的升降桌，其中各枢接组包含有一主枢接臂与一副枢接臂，所述主枢接臂与所述副枢接臂相对，各枢接组的主枢接臂与副枢接臂分别同时与上平台的各连接部及下平台的相对应的连接部相枢接。

3. 如权利要求 1 所述的升降桌，其中各卡固组包含有一栓件，各卡固组的栓件经常性地同时穿设于各枢接组与上平台的相对应的连接部上。

4. 如权利要求 2 所述的升降桌，其中各卡固组包含有一栓件，各卡固组的栓件选择性地同时穿设于各枢接组的主枢接臂与上平台相对应的各连接部上。

5. 如权利要求 4 所述的升降桌，其中上平台的各连接部上贯穿成形有至少一透孔，所述主枢接臂的上端成形一卡固部，所述卡固部上穿成形数个穿孔，所述主枢接臂的卡固部的该至少一穿孔选择性地与上平台的相对应的连接部的其中一透孔相对，且各卡固组包含有一栓件，各卡固组的栓件选择性地同时穿设于各枢接组的主枢接臂的卡固部的其中一穿孔与上平台的各连接部的相对应的透孔中。

6. 如权利要求 5 所述的升降桌，其中各卡固组进一步包含有一扳件与一连动件组，所述扳件、连动件组及栓件依序串接。

7. 如权利要求 6 所述的升降桌，其中各卡固组的连动件组包含有第一连动件、第二连动件与第三连动件，所述第一连动件、第二连动件与第三连动件依序相互枢接，所述第一连动件与所述扳件相连接，所述第三连动件与所述栓件相连接，且各卡固组进一步包含有一弹性回复件、一连接件，各卡固组的连接件设置于上平台的底面且与所述第二连动件相枢接，所述弹性回复件的一端与所述连接件相固接，其另一端抵靠于所述第二连动件上靠近所述第一连动件处。

8. 如权利要求 7 所述的升降桌，其中各卡固组的连动件组的第一连动件与所述扳件相枢接，且各卡固组的第一连动件可移动地嵌设于上平台的底面上。

9. 如权利要求 8 所述的升降桌，其中各卡固组包含有一外壳，所述外壳包覆第二连动件、第三连动件、弹性回复件、连接件与栓件，且卡固组的外壳与上平台相连接。

10. 如权利要求 1 所述的升降桌，其中包含二反转装置，各反转装置设置于下平台上且与各枢接组相连接，从而使上平台较容易的相对下平台上升。

11. 如权利要求 2 至 9 中任一项所述的升降桌，其中包含二反转装置，各反转装置设置于下平台上且与各枢接组相连接，从而使上平台较容易的相对下平台上升。

12. 如权利要求 11 所述的升降桌，其中各反转装置包含有一弹性回复件，弹性回复件的两端分别与各枢接组的副枢接臂及下平台的相对应的连接部相连接。

13. 如权利要求 11 所述的升降桌，其中各枢接组的副枢接臂的下端突出成形一凸部，且各反转装置包含有一弹片与一支点元件，各反转装置的弹片的一端与下平台相连接，其另一端选择性地与相对应的枢接组的副枢接臂的凸部相抵靠，各反转装置的支点元件设置于下平台上，且所述支点元件抵靠于弹片的底侧面。

14. 如权利要求 12 所述的升降桌，其中各枢接组的副枢接臂的下端突出成形一凸部，且各反转装置包含有一弹片与一支点元件，各反转装置的弹片的一端与下平台相连接，其另一端选择性地与相对应的枢接组的副枢接臂的凸部相抵靠，各反转装置的支点元件设置于下平台上，且支点元件抵靠于弹片的底侧面。

15. 如权利要求 14 所述的升降桌，其中下平台的各连接部贯穿成形有一长孔，各枢接组的副枢接臂的凸部可滑动地穿设于下平台的相对应的连接部的长孔中，且各反转装置的弹片与相对应的枢接组的副枢接臂选择性地相抵靠的一端相对该长孔。

16. 如权利要求 1 所述的升降桌，其中包含一加强元件，加强元件连接设置于二枢接组之间。

17. 如权利要求 2 或 3 所述的升降桌，其中包含一加强元件，加强元件连接设置于二枢接组之间，其包含有一前加强件，所述前加强件的两端分别连接二枢接组的主枢接臂。

18. 如权利要求 2 或 3 所述的升降桌，其中加强元件包含有一后加强件，所述后加强件的两端分别连接二枢接组的副枢接臂。

19. 如权利要求 17 所述的升降桌，其中加强元件包含有一后加强件，所述后加强件的两端分别连接二枢接组的副枢接臂。

20. 如权利要求 15 所述的升降桌，其中包含一加强元件，所述加强元件连接设置于二枢接组之间，其包含有一前加强件与一后加强件，所述前加强件的两端分别连接二枢接组的主枢接臂，所述后加强件的两端分别连接二枢接组的副枢接臂。

21. 如权利要求 1、2、3、10 或 16 所述的升降桌，其中下平台包含有数个配重块，各配重块设置于下平台上。

22. 如权利要求 20 所述的升降桌，其中下平台包含有数个配重块，各配重块设置于下平台上。

23. 如权利要求 1、2、3 或 16 所述的升降桌，其中下平台包含有二壳体，各壳体设置于各连接部的外侧周围，且下平台的各壳体位于相对应的枢接组的外侧。

24. 如权利要求 10 所述的升降桌，其中下平台包含有二壳体，各壳体设置于各连接部的外侧周围，且下平台的各壳体位于相对应的枢接组的外侧，各反转装置位于下平台的各连接部与相对应的壳体之间。

25. 如权利要求 22 所述的升降桌，其中下平台包含有二壳体，各壳体设置于各连接部的外侧周围，且下平台的各壳体位于相对应的枢接组的外侧，各反转装置位于下平台的各连接部与相对应的壳体之间。

26. 如权利要求 1、2、3、10、16 或 24 所述的升降桌，其中包含一托盘，托盘与下平台可分离地相连接。

27. 如权利要求 26 所述的升降桌，其中托盘包含有一置物板与二接设件，所述二接设件分别连接设置于所述置物板的两侧，且托盘的二接设件分别可滑动地设于下平台上。

28. 如权利要求 25 所述的升降桌，其中包含一托盘，托盘与下平台可分离地相连接，托

盘包含有一置物板与二接设件，所述二接设件分别连接设置于置物板的两侧，且托盘的二接设件分别可滑动地设于下平台的二壳体上。

29. 如权利要求 1、2、3、10、16 或 24 所述的升降桌，其中包含一托盘，所述托盘设置于上平台的底侧。

30. 如权利要求 29 所述的升降桌，其中托盘包含有一置物板与二接设件，所述托盘的各接设件的两端分别与置物板及上平台相连接。

31. 如权利要求 25 所述的升降桌，其中包含一托盘，所述托盘设置于上平台的底侧，所述托盘包含有一置物板与二接设件，所述托盘的各接设件的两端分别与置物板及上平台相连接。

升降桌

技术领域

[0001] 发明涉及一种人性化工作环境的辅助工具，尤指一种可随意调整桌面高度的升降桌。

背景技术

[0002] 由于工作性质的需要，许多人必须维持长时间的坐姿；根据医学研究，长时间的坐姿会增加所有原因的死亡率 (all-cause mortality)，特别是心血管疾病、糖尿病以及肥胖等；对于单日维持长时间坐姿的人来说，将会增加其百分之五十死于心血管疾病的机率；对于有运动习惯的人来说，维持长时间坐姿仍会增加其死亡率，这是由于维持坐姿会减缓人体中脂肪酶的循环，减少人体对脂肪的吸收，而站立时肌肉会促进脂肪酶作用，促使人体处理脂肪与胆固醇，且与运动时间的长短无关。

[0003] 为避免长时间的坐姿危害人体健康，现有技术设计有各种能够站立使用的桌子，甚至有附加在跑步机上的桌子，让使用者能边跑步边工作。

[0004] 其中，长时间站立工作虽可以使人更加有精力且可增加卡路里的消耗，但其同时也会增加人体循环系统的负担，使人体更加的疲劳，并增加颈动脉硬化、静脉曲张的风险，则长时间站立工作并非为解决维持长时间的坐姿的缺点的方式。

[0005] 因此，目前为解决维持长时间的坐姿的缺点，大多采用经常性的站立休息，即每隔一段时间由坐姿转换为立姿，同时离开工作的桌面，借此增进人体健康。

[0006] 然而，由于经常性的站立休息必需离开工作的桌面，其虽可以解决因长时间的坐姿带来的问题，却同时也牺牲了可工作的时数，使固定的每日工作时间内能够处理的工作量的减少，则无法同时顾及健康与工作产能。

发明内容

[0007] 有鉴于上述现有技术为解决维持长时间的坐姿所带来的缺点，进而产生额外的问题，本发明提供一种升降桌，其可以除了可解决维持长时间的坐姿对健康的危害，同时也可以维持工作产能，则可以兼顾健康与工作产能。

[0008] 为了可达到前述的发明目的，本发明所采取的技术手段为设计一种升降桌，其中包含：

[0009] 一上平台，其包含有二连接部，二连接部设置于上平台的底面上的两侧；

[0010] 一下平台，其相对设置于上平台下方且选择性地贴靠设置于上平台的底面，下平台包含有二连接部，二连接部设置于下平台的顶面上的两侧，且下平台的各连接部相对上平台的各连接部；

[0011] 二枢接组，二枢接组彼此相对，且各枢接组同时与上平台的各连接部及下平台的相对应的连接部相枢接；

[0012] 二卡固组，各卡固组设置于上平台的底面上，且各卡固组经常性地同时卡设于各枢接组与上平台的相对应的连接部上。

[0013] 本发明的优点在于，通过各枢接组与各卡固组的设置，其上平台可相对下平台上升或下降，借此可依需求适时调整上平台与下平台的间距，而可由坐姿改变为站姿，或者由站姿改变为坐姿，即可以适时调整姿势，且于改变姿势的同时亦可进行工作，则可解决维持长时间的坐姿或站姿对健康的危害，也可以维持工作产能，达到兼顾健康与工作产能的效果。

[0014] 进一步而言，其中各枢接组包含有一主枢接臂与一副枢接臂，主枢接臂与副枢接臂相对，各枢接组的主枢接臂与副枢接臂分别同时与上平台的各连接部及下平台的相对应的连接部相枢接。

[0015] 进一步而言，其中各卡固组包含有一栓件，各卡固组的栓件经常性地同时穿设于各枢接组与上平台的相对应的连接部上。

[0016] 进一步而言，其中各卡固组的栓件选择性地同时穿设于各枢接组的主枢接臂与上平台相对应的各连接部上。

[0017] 进一步而言，其中上平台的各连接部上贯穿成形有至少一透孔，主枢接臂的上端成形一卡固部，卡固部上穿成形数个穿孔，主枢接臂的卡固部的该至少一穿孔选择性地与上平台的相对应的连接部的其中一透孔相对，且各卡固组包含有一栓件，各卡固组的栓件选择性地同时穿设于各枢接组的主枢接臂的卡固部的其中一穿孔与上平台的各连接部的相对应的透孔中。

[0018] 进一步而言，其中各卡固组进一步包含有一扳件与连动件组，扳件、连动件组及栓件依序串接。

[0019] 进一步而言，其中各卡固组的连动件组包含有第一连动件、第二连动件与第三连动件，第一连动件、第二连动件与第三连动件依序相互枢接，第一连动件与扳件相连接，第三连动件与栓件相连接，且各卡固组进一步包含有一弹性回复件、一连接件，各卡固组的连接件设置于上平台的底面且与第二连动件相枢接，弹性回复件的一端与连接件相固接，其另一端抵靠于第二连动件上靠近第一连动件处。

[0020] 进一步而言，其中各卡固组的连动件组的第一连动件与扳件相枢接，且各卡固组的第一连动件可移动地嵌设于上平的底面上。

[0021] 进一步而言，其中各卡固组包含有一外壳，外壳包覆第二连动件、第三连动件、弹性回复件、连接件与栓件，且卡固组的外壳与上平台相连接。

[0022] 进一步而言，其中包含二反转装置，各反转装置设置于下平台上且与各枢接组相连接，从而使上平台较容易的相对下平台上升。

[0023] 进一步而言，其中包含二反转装置，各反转装置设置于下平台上且与各枢接组相连接，从而使上平台较容易的相对下平台上升。

[0024] 进一步而言，其中各反转装置包含有一弹性回复件，弹性回复件的两端分别与各枢接组的副枢接臂及下平台的相对应的连接部相连接。

[0025] 进一步而言，其中各枢接组的副枢接臂的下端突出成形一凸部，且各反转装置包含有一弹片与一支点元件，各反转装置的弹片的一端与下平台相连接，其另一端选择性地与相对应的枢接组的副枢接臂的凸部相抵靠，各反转装置的支点元件设置于下平台上，且支点元件抵靠于弹片的底侧面。

[0026] 进一步而言，其中下平台的各连接部贯穿成形有一长孔，各枢接组的副枢接臂的

凸部可滑动地穿设于下平台的相对应的连接部的长孔中，且各反转装置的弹片与相对应的枢接组的副枢接臂选择性地相抵靠的一端相对该长孔。

[0027] 进一步而言，其中包含一加强元件，加强元件连接设置于二枢接组之间。

[0028] 进一步而言，其中包含一加强元件，加强元件连接设置于二枢接组之间，其包含有一前加强件，前加强件的两端分别连接二枢接组的主枢接臂。

[0029] 进一步而言，其中加强元件包含有一后加强件，后加强件的两端分别连接二枢接组的副枢接臂。

[0030] 进一步而言，其中包含一加强元件，加强元件连接设置于二枢接组之间，其包含有一前加强件与一后加强件，前加强件的两端分别连接二枢接组的主枢接臂，后加强件的两端分别连接二枢接组的副枢接臂。

[0031] 进一步而言，其中下平台包含有数个配重块，各配重块设置于下平台上。

[0032] 进一步而言，其中下平台包含有二壳体，各壳体设置于各连接部的外侧周围，且下平台的各壳体位于相对应的枢接组的外侧。

[0033] 进一步而言，其中下平台包含有二壳体，各壳体设置于各连接部的外侧周围，且下平台的各壳体位于相对应的枢接组的外侧，各反转装置位于下平台的各连接部与相对应的壳体之间。

[0034] 进一步而言，其中包含一托盘，托盘与下平台可分离地相连接。

[0035] 进一步而言，其中托盘包含有一置物板与二接设件，二接设件分别连接设置于置物板的两侧，且托盘的二接设件分别可滑动地设于下平台上。

[0036] 进一步而言，其中包含一托盘，托盘与下平台可分离地相连接，托盘包含有一置物板与二接设件，二接设件分别连接设置于置物板的两侧，且托盘的二接设件分别可滑动地设于下平台的二壳体上。

[0037] 进一步而言，其中包含一托盘，托盘设置于上平台的底侧。

[0038] 进一步而言，其中托盘包含有一置物板与二接设件，托盘的各接设件的两端分别与置物板及上平台相连接。

[0039] 进一步而言，其中包含一托盘，托盘设置于上平台的底侧，托盘包含有一置物板与二接设件，托盘的各接设件的两端分别与置物板及上平台相连接。

附图说明

[0040] 图 1 为本发明一较佳实施例的俯视立体外观图。

[0041] 图 2 为本发明一较佳实施例的仰视立体外观图。

[0042] 图 3 为本发明一较佳实施例的部分元件侧视图。

[0043] 图 4 为本发明一较佳实施例的前视图。

[0044] 图 5 为本发明一较佳实施例的部分元件立体外观图。

[0045] 图 6 为本发明一较佳实施例的部分元件立体分解图。

[0046] 图 7 为本发明一较佳实施例的另一部分元件立体外观图。

[0047] 图 8 为本发明一较佳实施例的部分元件前视图。

[0048] 图 9 为本发明一较佳实施例的第一使用动作图。

[0049] 图 10 为本发明一较佳实施例的第二使用动作图。

[0050] 图 11 为本发明一较佳实施例的第三使用动作图。

[0051] 图 12 为本发明一较佳实施例的使用示意图。

[0052] 图 13 为本发明一较佳实施例的使用示意图。

[0053] 图 14 为本发明一较佳实施例的俯视立体外观图。

[0054] 图 15 为本发明一较佳实施例的再一部分元件立体外观图。

[0055] 主要元件符号说明

[0056] 10 上平台 11 连接部

[0057] 111 透孔 20 下平台

[0058] 21 连接部 211 长孔

[0059] 22 配重块 23 壳体

[0060] 30 枢接组 31 主枢接臂

[0061] 311 卡固部 3111 穿孔

[0062] 32 副枢接臂 40 卡固组

[0063] 41 栓件 42 扳件

[0064] 43 连动件组 431 第一连动件

[0065] 432 第二连动件 433 第三连动件

[0066] 44 弹性回复件 45 连接件

[0067] 46 外壳 50 反转装置

[0068] 51 弹性回复件 52 支架

[0069] 53 弹片 54 支点元件

[0070] 60 加强元件 61 前加强件

[0071] 62 后加强件 70 托盘

[0072] 71 置物板 72 接设件

[0073] 70A 托盘 71A 置物板

[0074] 72A 接设件 80 防护元件。

具体实施方式

[0075] 以下配合图式及本发明的较佳实施例，进一步阐述本发明为达成预定目的所采取的技术手段。

[0076] 如图 1 至图 4 所示，本发明的升降桌包含一上平台 10、一下平台 20、二枢接组 30、二卡固组 40、一反转装置 50 与一加强元件 60。

[0077] 如图 2 与图 4 至图 6 所示，前述的上平台 10 包含有二连接部 11，二连接部 11 设置于上平台 10 的底面的两侧，进一步而言，各连接部 11 上贯穿成形有至少一透孔 111。

[0078] 如图 2 至图 4 所示，前述的下平台 20 相对设置于上平台 10 下方且选择性地贴靠设置于上平台 10 的底面，下平台 20 包含有二连接部 21、数个配重块 22 与二壳体 23，二连接部 21 设置于下平台 20 的顶面的两侧，且下平台 20 的各连接部 21 相对上平台 10 的各连接部 11，各配重块 22 设置于下平台 20 上，各壳体 23 设置于各连接部 21 的外侧；进一步而言，各连接部 21 上贯穿成形有一长孔 211，且各配重块 22 设置于下平台 20 的底面。

[0079] 如图 3 与图 5 所示，前述的二枢接组 30 彼此相对，各枢接组 30 同时与上平台 10

的各连接部 11 及下平台 20 的相对应的连接部 21 相枢接，且各枢接组 30 位于下平台 20 的相对应的壳体 23 的内侧，且各枢接组 30 包含有一主枢接臂 31 与一副枢接臂 32，主枢接臂 31 与副枢接臂 32 相对，各枢接组 30 的主枢接臂 31 与副枢接臂 32 分别同时与上平台 10 的各连接部 11 及下平台 20 的相对应的连接部 21 相枢接；进一步而言，请一并参阅图 6 与图 7 所示，主枢接臂 31 的上端成形一卡固部 311，卡固部 311 上穿成形数个穿孔 3111，主枢接臂 31 的卡固部 311 的该至少一穿孔 3111 选择性地与上平台 10 的连接部 11 的其中一透孔 111 相对，副枢接臂 32 的下端设有一凸部 321，各枢接组 30 的副枢接臂 32 的凸部 321 可滑动地穿设于下平台 20 的相对应的连接部 21 的长孔 211 中。

[0080] 如图 2、图 4 与图 8 所示，前述的各卡固组 40 设置于上平台 10 的底面上，且各卡固组 40 经常性地同时卡设于各枢接组 30 与上平台 10 的相对应的连接部 11 上，从而使各枢接组 30、上平台 10 与下平台 20 的相对位置固定；进一步而言，请一并参阅图 6 所示，各卡固组 40 包含有一栓件 41，各卡固组 40 的栓件 41 选择性地穿设于各枢接组 30 的主枢接臂 31 的卡固部 311 的其中一穿孔 3111 与上平台 10 的连接部 11 的相对应的透孔 111 中；再进一步而言，如图 5 与图 8 所示，各卡固组 40 包含有一扳件 42 与连动件组 43，扳件 42、连动件组 43 及栓件 41 依序串接；

[0081] 在一较佳实施例中，如图 5、图 6 与图 8 所示，各卡固组 40 的连动件组 43 包含有第一连动件 431、第二连动件 432 与第三连动件 433，第一连动件 431、第二连动件 432 与第三连动件 433 依序相互枢接，各卡固组 40 的第一连动件 431 可移动地嵌设于上平台 10 的底面上，且第一连动件 431 与扳件 42 相枢接，第三连动件 433 与栓件 41 相连接，且各卡固组 40 进一步包含有一弹性回复件 44、一连接件 45 与一外壳 46，各卡固组 40 的连接件 45 设置于上平台 10 的底面且与第二连动件 432 相枢接，弹性回复件 44 的一端与连接件 45 相固接，其另一端抵靠于第二连动件 432 上靠近第一连动件 431 处，外壳 46 包覆第二连动件 432、第三连动件 433、弹性回复件 44、连接件 45 与栓件 41，且卡固组 40 的外壳 46 与上平台 10 相连接。

[0082] 如图 3 与图 7 所示，前述的各反转装置 50 设置于下平台 20 上且与各枢接组 30 相连接，从而使上平台 10 较容易的相对下平台 20 上升，其中包含一弹性回复件 51、一支架 52、一弹片 53 与一支点元件 54，弹性回复件 51 的一端与支架 52 相连接，其另一端套设于各枢接组 30 的副枢接臂 32 上，各反转装置 50 的支架 52 与下平台 20 相连接，各反转装置 50 的弹片 53 的一端与下平台 20 相连接，其另一端相对下平台 20 的各连接部 21 的长孔 211 且选择性地与相对应的枢接组 30 的副枢接臂 32 相连接，支点元件 54 抵靠于弹片 53 的底侧面，且各反转装置 50 的支点元件 54 设置于下平台 20 上；进一步而言，各反转装置 50 设置于下平台 20 的各连接部 21 上且位于下平台 20 的各连接部 21 与相对应的壳体 23 之间。

[0083] 如图 4 所示，前述的加强元件 60 设置于二枢接组 30 之间，加强元件 60 包含有一前加强件 61 与一后加强件 62，前加强件 61 的两端分别连接二枢接组 30 的主枢接臂 31，后加强件 62 的两端分别连接二枢接组 30 的副枢接臂 32。

[0084] 实际使用时，先将本发明的升降桌放置于一桌面上，而上平台 10 上可依需求放置工作时所需的物品，如：电脑、文件、台灯、文书用品等，则可依工作姿势调整上平台 10 与下平台 20 间的相对距离；

[0085] 具体而言，如图 3、图 8 至图 10 及图 12 所示，进行下降时，先将二卡固组 40 的扳

件 42 分别扳动，使各卡固组 40 的连动组的第一连动件 431、第二连动件 432 及第三连动件 433 依序连动、压缩弹性复位件并同时牵动栓件 41，进而使栓件 41 脱离相对应的各枢接组 30 的主枢接臂 31 的卡固部 311 的该至少一穿孔 3111 与上平台 10 的连接部 11 的相对应的透孔 111，借此使各枢接组 30 的主枢接臂 31 与上平台 10 解除相对固定的状态，则各枢接组 30 的主枢接臂 31 及副枢接臂 32 与上平台 10 的相对应的连接部 11 可相对转动，且各枢接组 30 的主枢接臂 31 及副枢接臂 32 可相对下平台 20 的相对应的连接部 21 转动，借此使得上平台 10 与下平台 20 之间的距离可以缩减，则上平台 10 相对下平台 20 有下降的功效；

[0086] 如图 3 与图 8 至图 11 所示，当上平台 10 与下平台 20 调整至一适当距离或相互贴靠时，停止扳动各卡固组 40 的扳片，使各卡固组 40 的弹性复位件 44 通过其本身的弹力牵动连动组 43 的第二连动件 432，同时使第一连动件 431 及第三连动件 433 依序连动而牵动栓件 41，进而使栓件 41 穿设于相对应的各枢接组 30 的主枢接臂 31 的卡固部 311 的其中一穿孔 3111 与上平台 10 的连接部 11 的相对应的透孔 111 中，则使上平台 10 与下平台 20 之间的距离固定；

[0087] 进一步而言，如图 3、图 10 与图 11 所示，于各枢接组 30 的副枢接臂 32 与上平台 10 及下平台 20 相对转动的同时，各枢接组 30 的副枢接臂 32 的凸部 321 可于下平台 20 的相对应的连接部 21 的长孔 211 中滑动，并同时使相对应的反转装置 50 的弹性复位件 51 拉长变形；

[0088] 再进一步而言，如图 11 所示，由于支点元件 54 抵靠弹片 53 的底侧面，当上平台 10 与下平台 20 逐渐贴靠时，各枢接组 30 的副枢接臂 32 的凸部 321 会抵靠于相对应的反转装置 50 的弹片 53 上，使得弹片 53 弯曲；

[0089] 如图 3、图 8 与图 9 所示，当欲使上平台 10 与下平台 20 的间距增加时，同时将二卡固组 40 的扳件 42 分别扳动，牵动各卡固组 40 的连动组、压缩弹性复位件 44 以及栓件 41，进而使栓件 41 脱离相对应的各枢接组 30 的主枢接臂 31 的卡固部 311 的穿孔 3111 与上平台 10 的连接部 11 的相对应的透孔 111，借此使各枢接组 30 与上平台 10 解除相对固定的状态，借此使得上平台 10 与下平台 20 之间的距离可以增加，则上平台 10 相对下平台 20 有上升的功效；

[0090] 进一步而言，如图 3、图 10 与图 11 所示，于各枢接组 30 的副枢接臂 32 与上平台 10 及下平台 20 相对转动的同时，各枢接组 30 的副枢接臂 32 的凸部 321 可于下平台 20 的相对应的连接部 21 的长孔 211 中滑动，并同时使相对应的反转装置 50 的弹性复位件 51 压缩回复；

[0091] 再进一步而言，当上平台 10 与下平台 20 之间距离逐渐加大时，各枢接组 30 的副枢接臂 32 的凸部 321 会逐渐不抵靠于相对应的反转装置 50 的弹片 53 上，使得弹片 53 回复而不弯曲。

[0092] 综上所述，本发明的优点在于，其上平台 10 可相对下平台 20 上升或下降，借此可依需求适时调整上平台 10 与下平台 20 的间距，而可由坐姿改变为站姿，或者由站姿改变为坐姿，即可以适时调整姿势，且于改变姿势的同时亦可进行工作，则可解决维持长时间的坐姿或站姿对健康的危害，也可以维持工作产能，达到兼顾健康与工作产能的效果。

[0093] 另一方面，由于使用上会于上平台 10 上放置大量的物品，而增加上平台 10 的荷重，则较难使上平台 10 相对下平台 20 上升；通过反转装置 50 的弹性复位件、弹片 53 与支

点元件 54 的设置，当上平台 10 相对下平台 20 上升时，弹性复位件的弹力与弹片 53 的弹力会对相对应的枢接组 30 的副枢接臂 32 的凸部 321 作用，而辅助各枢接组 30 的副枢接臂 32 的凸部 321 由下平台 20 的相对应的连接部的长孔 211 的下端移向上端，即对各枢接组 30 的副枢接臂 32 产生一向上抬升力，并同时作用于上平台 10（因各枢接组 30 的副枢接臂 32 与上平台 10 的相对应的连接部相枢接），则使用者可较为不费力地使上平台 10 相对下平台 20 上升。

[0094] 再一方面，通过加强元件 60 的设置，使得二枢接组 30 相互固定，可强化二枢接组 30 之间的结构强度，进而避免上平台 10 相对下平台 20 升降时产生摇晃不稳的情形，即上平台 10 能够相对下平台 20 平稳地升降。

[0095] 又一方面，当进行上平台 10 的升降时，本发明的整体重心会于上平台 10 与下平台 20 之间移动，且当上平台 10 上放置有工作所需的各种物品，如：电脑荧幕、键盘等，由于所述器具有一定重量，使本发明与所述物品的总重心会移动并偏向上平台 10，则可能使本发明与所述物品一同倾斜，导致所述物品翻倒或毁损；通过各配重块 22 的设置，可增加下平台 20 的重量，当上平台 10 上设置一定重量范围内的物品时，下平台 20 可以平衡上平台 10 与物品的总重量，而使总重心不偏向任一侧，则避免本发明与所述物品一同倾斜的情形发生。

[0096] 次一方面，通过下平台 20 的各壳体 23 与各卡固组 40 的外壳 46 的设置，当进行升降操作时，使用者的手指或其他异物不会卡入各卡固组 40、各连接部与各枢接组 30 的连接处以及各反转装置 50 内，则可保护使用者的安全与本发明的各机构，同时亦可美化本发明的外观。

[0097] 此外，本发明进一步包含一托盘 70；

[0098] 在一较佳实施例中，如图 1、图 13 所示，托盘 70 与下平台 20 可分离地相连接，托盘 70 包含有一置物板 71 与二接设件 72，二接设件 72 分别连接设置于置物板 71 的两侧，且托盘 70 的二接设件 72 分别可滑动地设于下平台 20 上，进一步而言，托盘 70 的二接设件 72 分别穿设于下平台 20 的各壳体 23 上；

[0099] 在使用时，托盘 70 可依需求装设于下平台 20 上，而可放置如键盘的物品，并可依需求调整托盘 70 与下平台 20 之间的距离；

[0100] 在一较佳实施例中，如图 14 所示，托盘 70A 设置于上平台 10 的底侧，托盘 70A 的各接设件 72A 的两端分别与置物板 71A 及上平台 10 相连接；

[0101] 在使用时，托盘 70A 可随上平台 10 进行升降，当使用调整姿势时，可较为方便使用或取用放置于托盘 70 上的物品，如：键盘；通过托盘 70、70A 的设置，则使本发明于使用上更符合一般工作环境的需求而更加方便。

[0102] 另外，如图 15 所示，在一较佳实施例中，各枢接组 30 的主枢接臂 31 上与副枢接臂 32 上分别包覆有一防护元件 80，该防护元件 80 可为 EVA 泡棉（ethylene-vinyl acetate copolymer）所制，借此，当各枢接组 30 与相对应的连接部 21 相对转动时，可避免手指误伸至各枢接组 30 与相对应的连接部 21 之间而使手指夹伤的情形发生，则较为安全。

[0103] 以上所述仅是本发明的较佳实施例而已，并非对本发明做任何形式上的限制，虽然本发明已以较佳实施例揭露如上，然而并非用以限定本发明，本领域技术人员，在不脱离本发明技术方案的范围内，当可利用上述揭示的技术内容作出些许更动或修饰为等同变化

的等效实施例，但凡是未脱离本发明技术方案的内容，依据本发明的技术实质对以上实施例所作的任何简单修改、等同变化与修饰，均仍属于本发明权利要求的范围内。

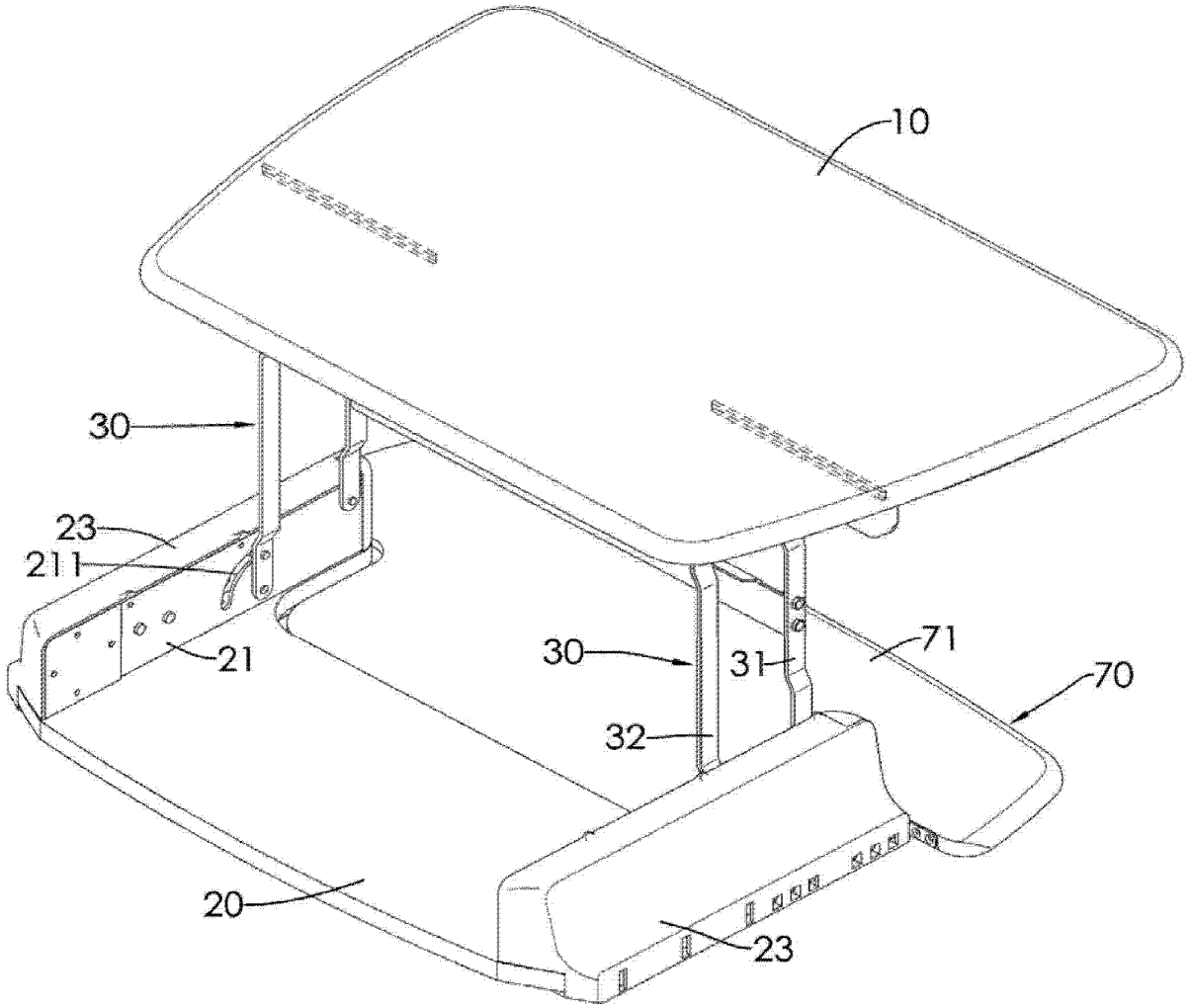


图 1

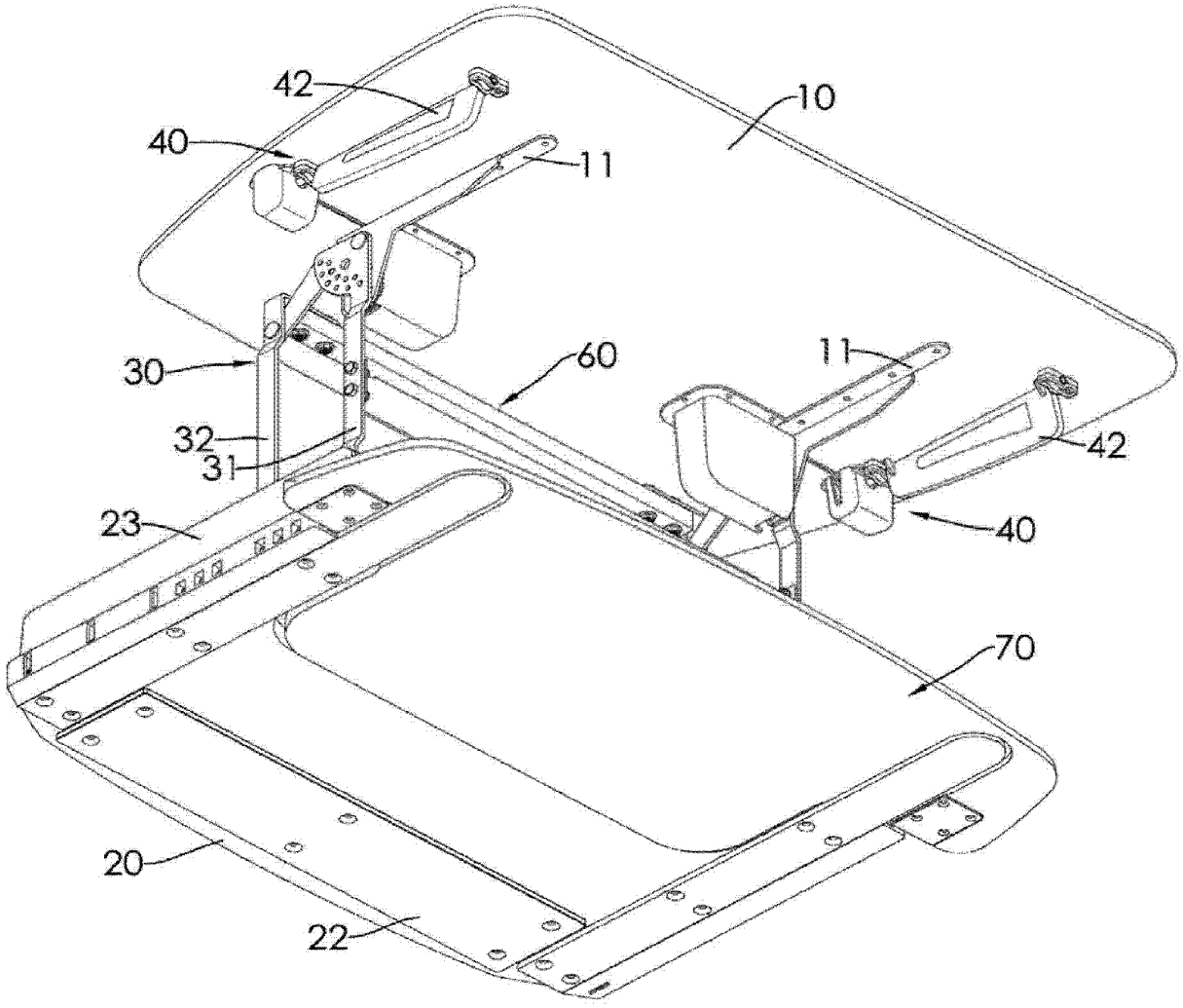


图 2

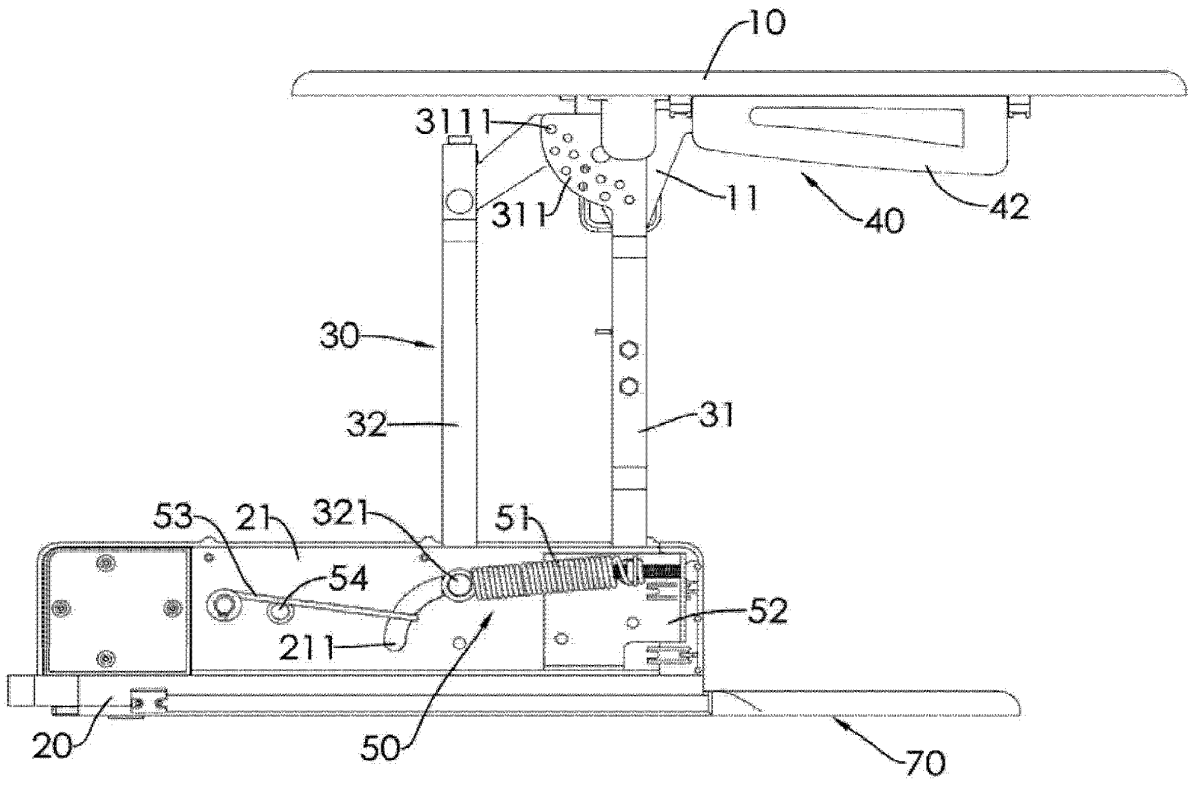


图 3

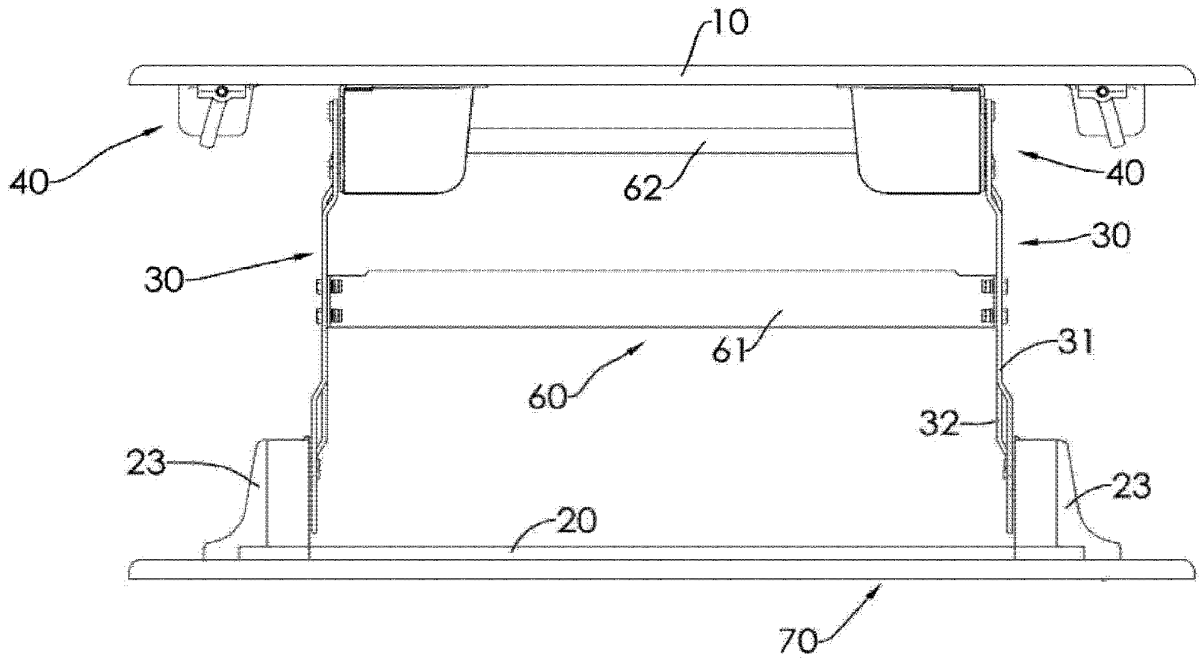


图 4

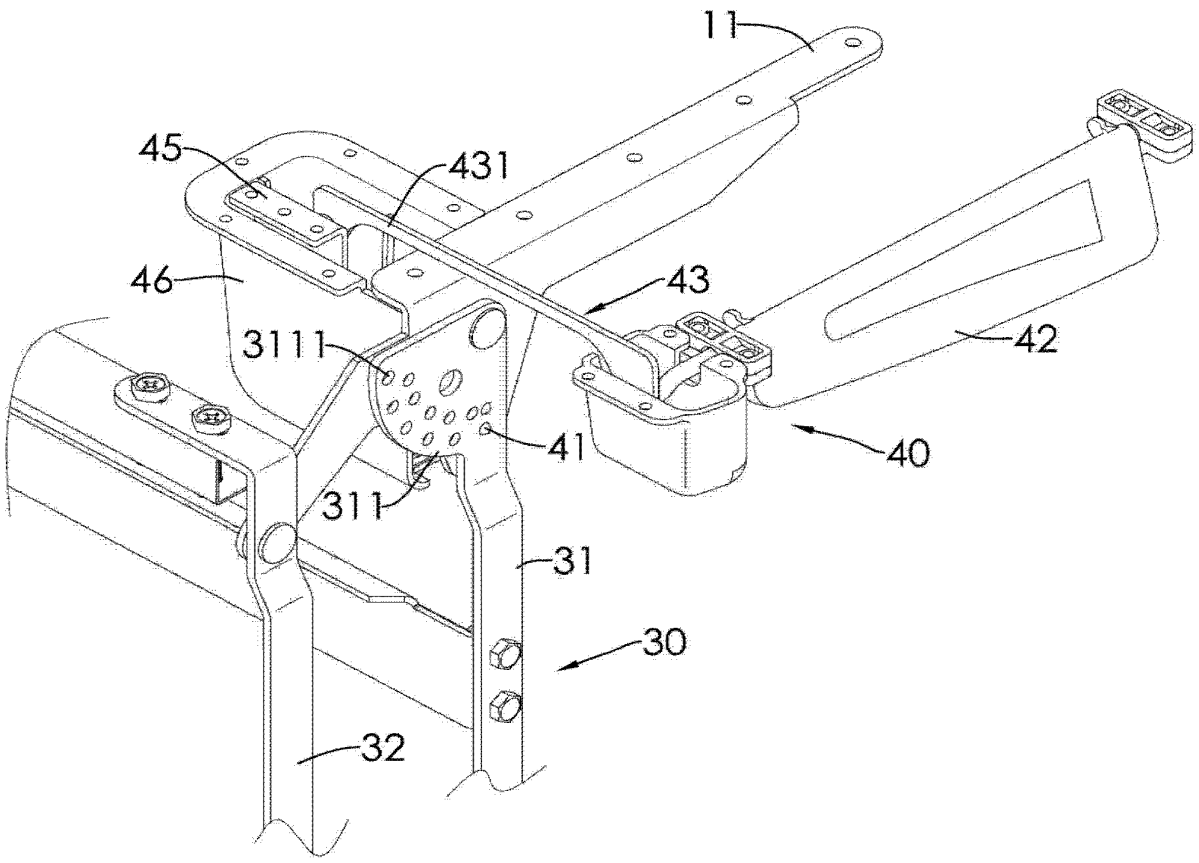


图 5

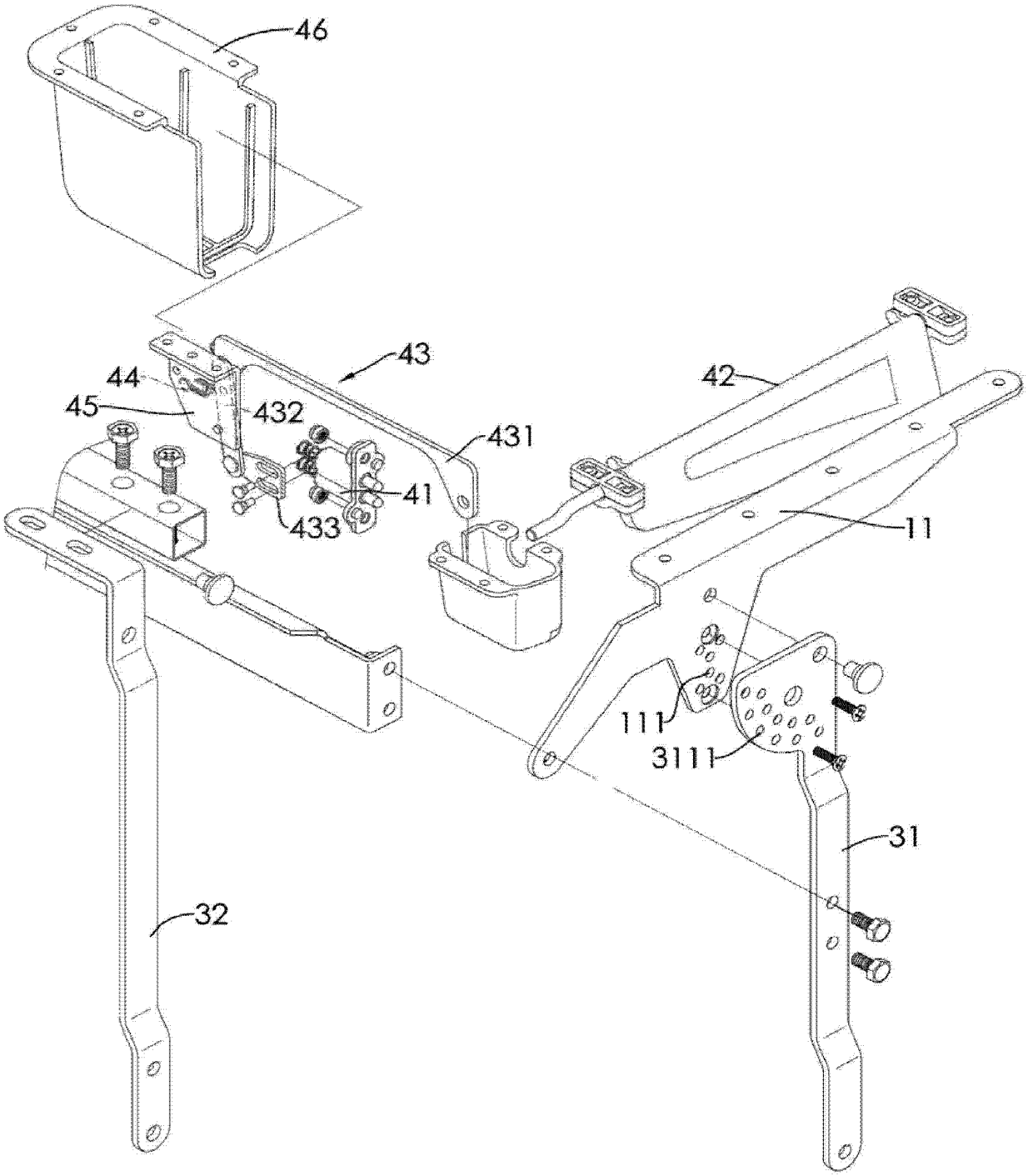


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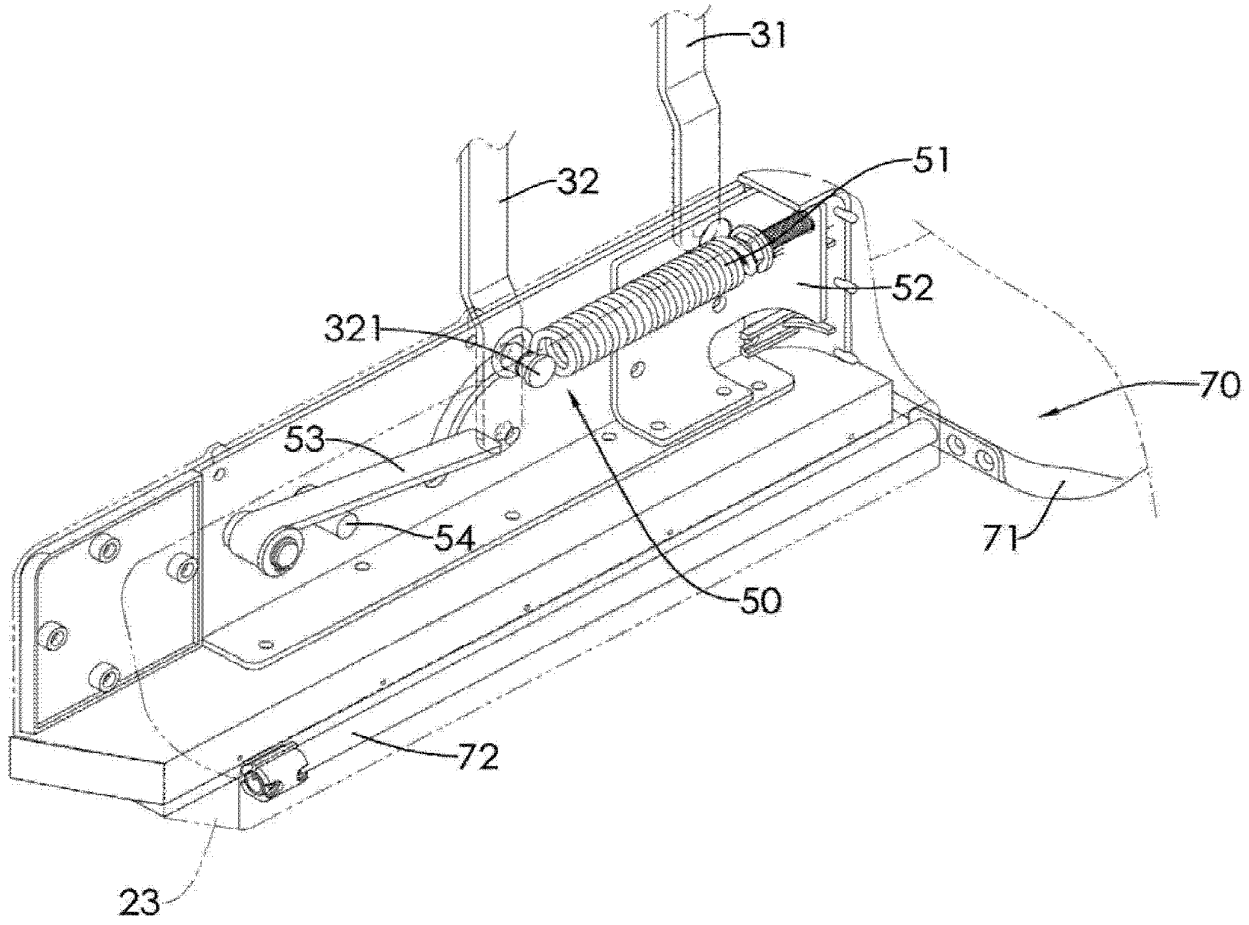


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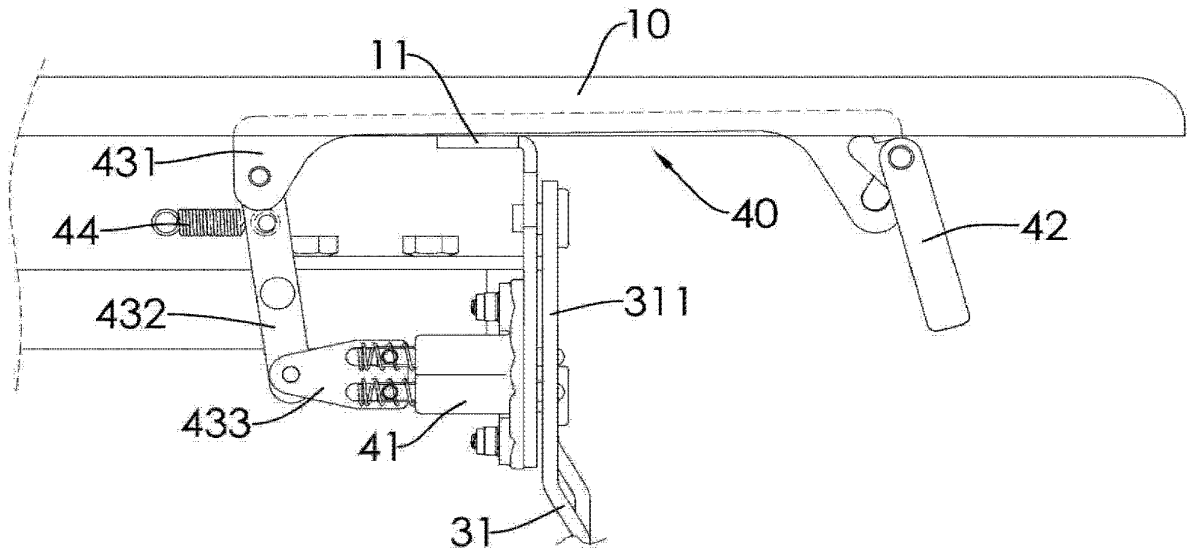


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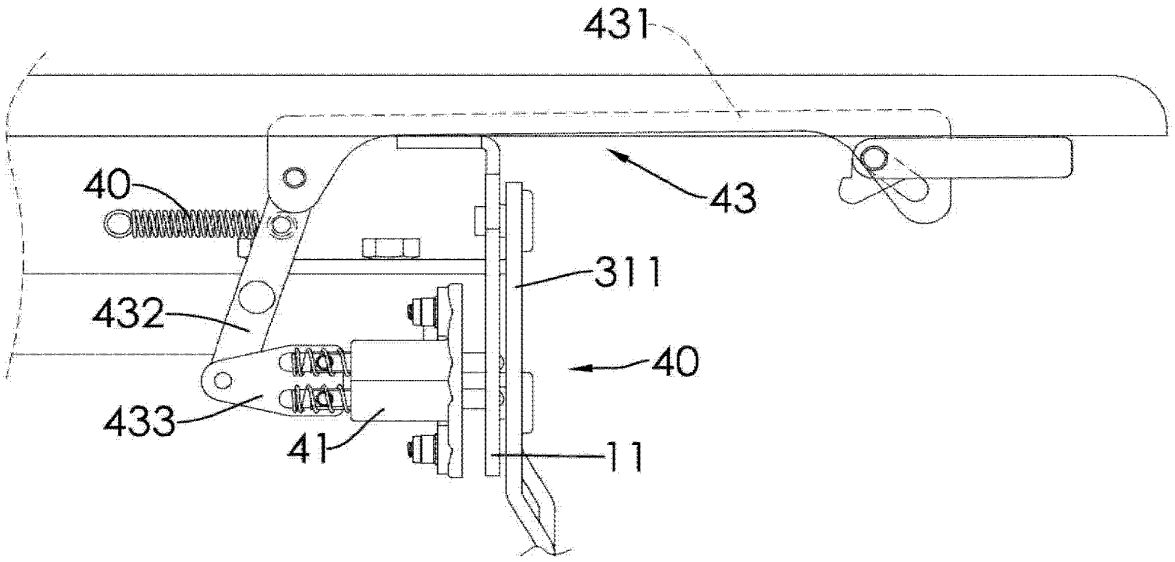


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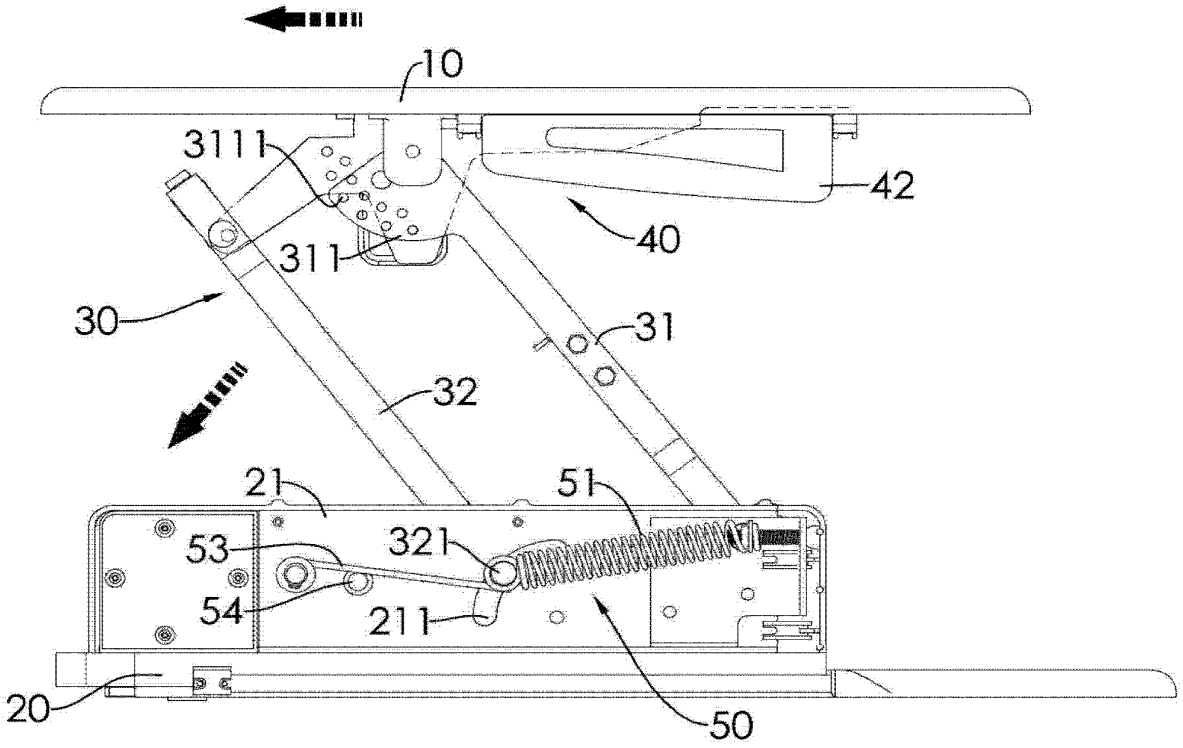

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图 10

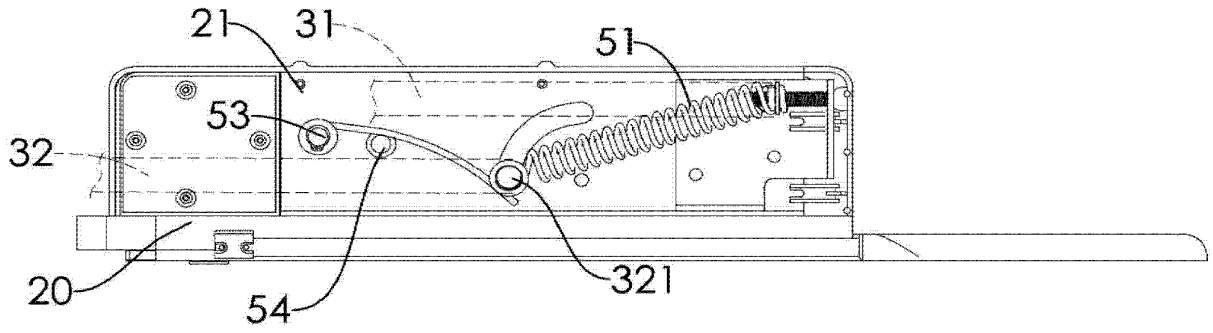

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图 11

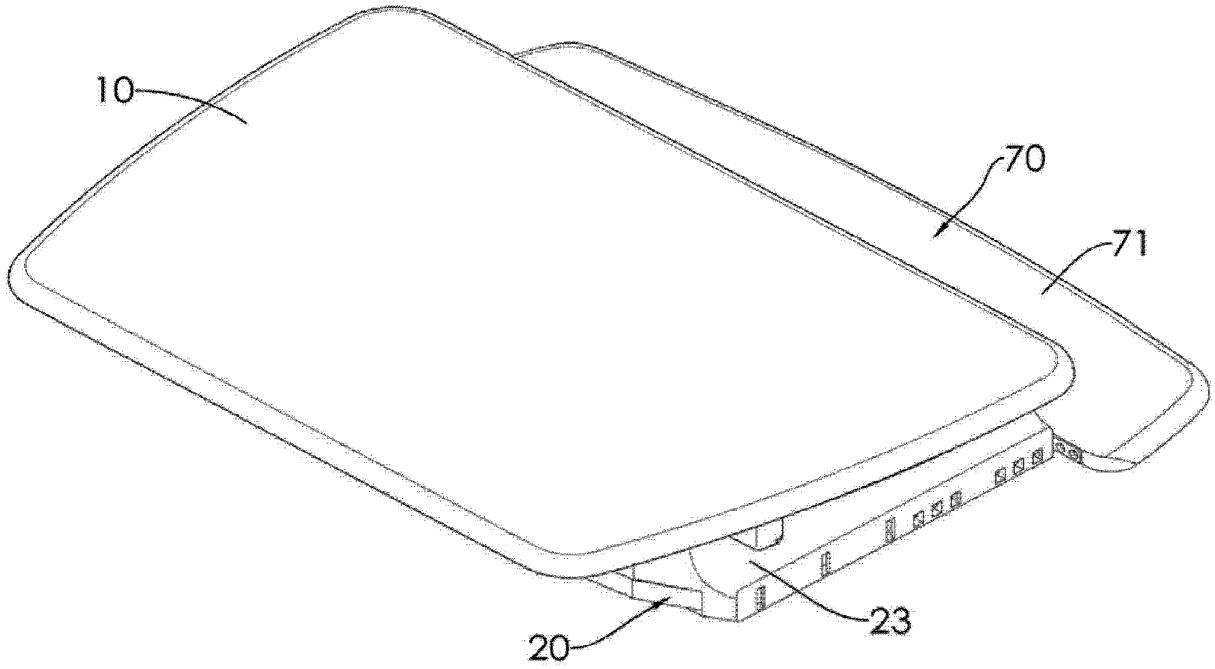


图 12

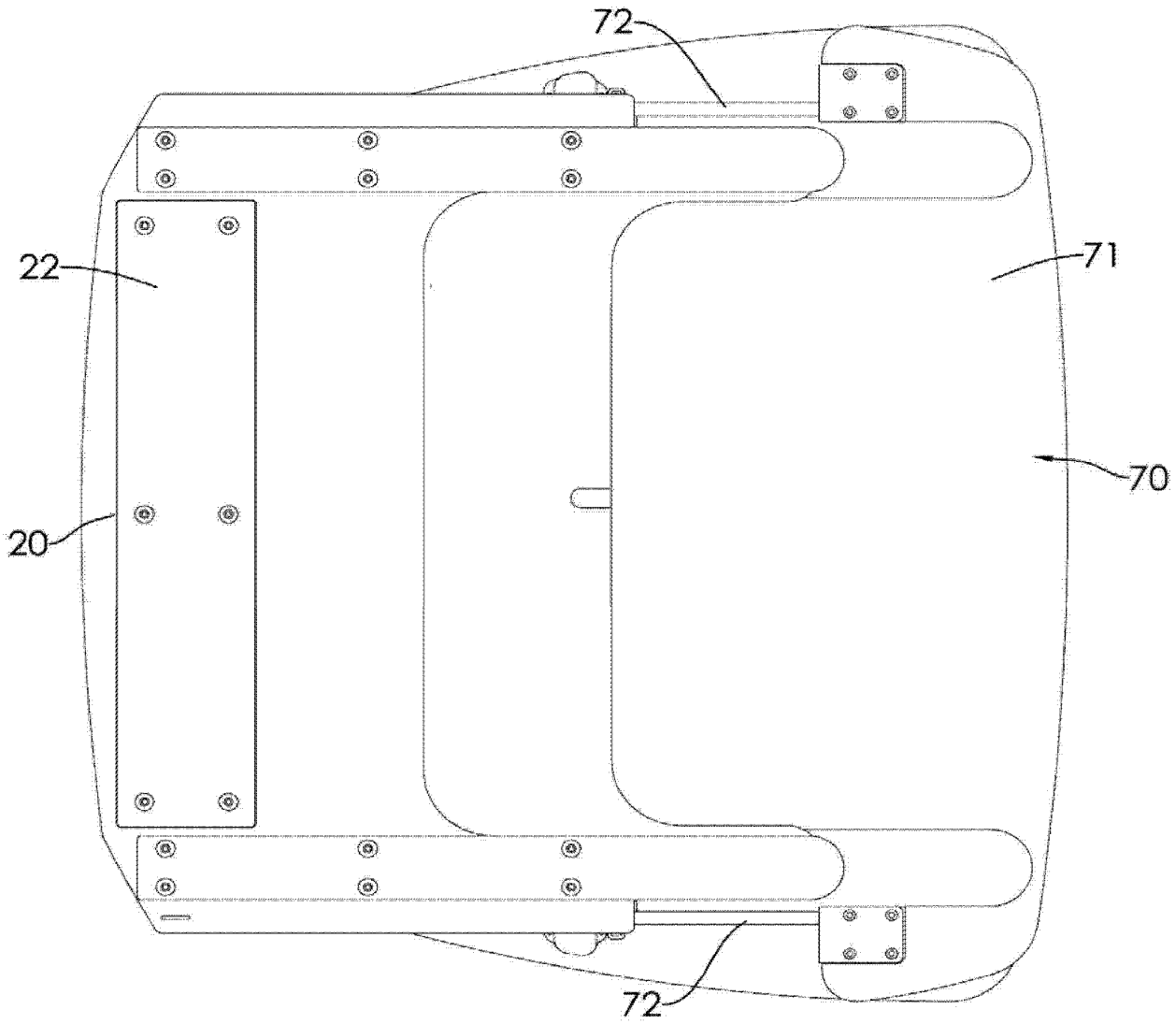


图 13

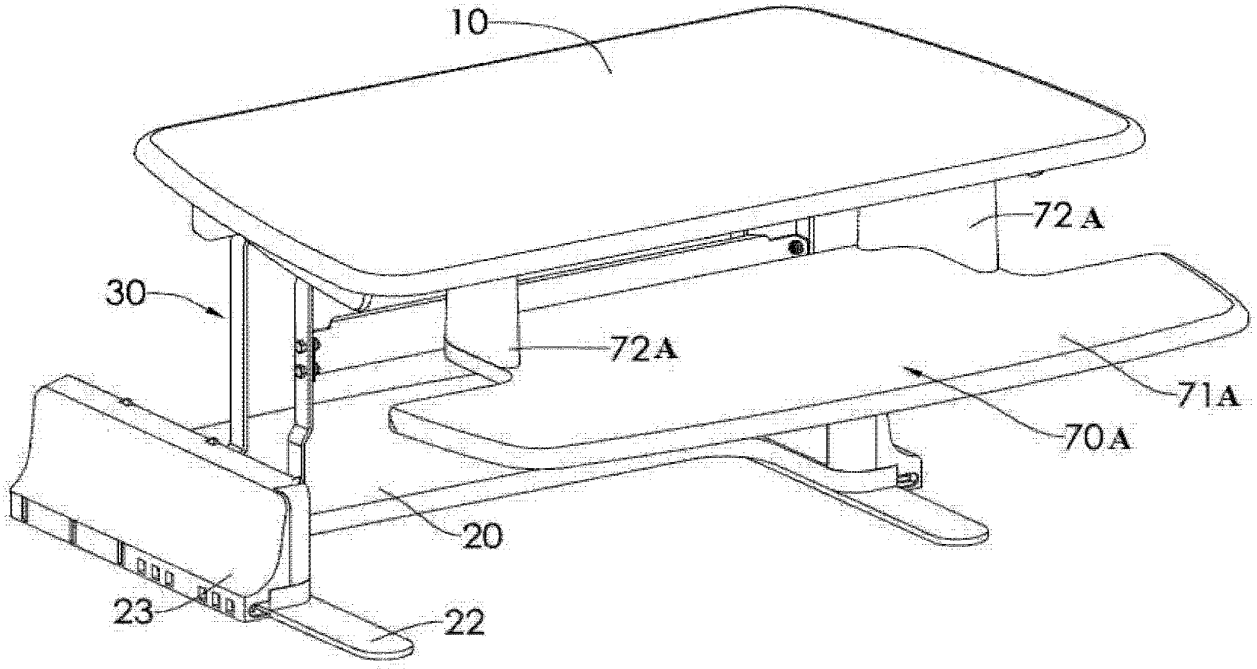


图 14

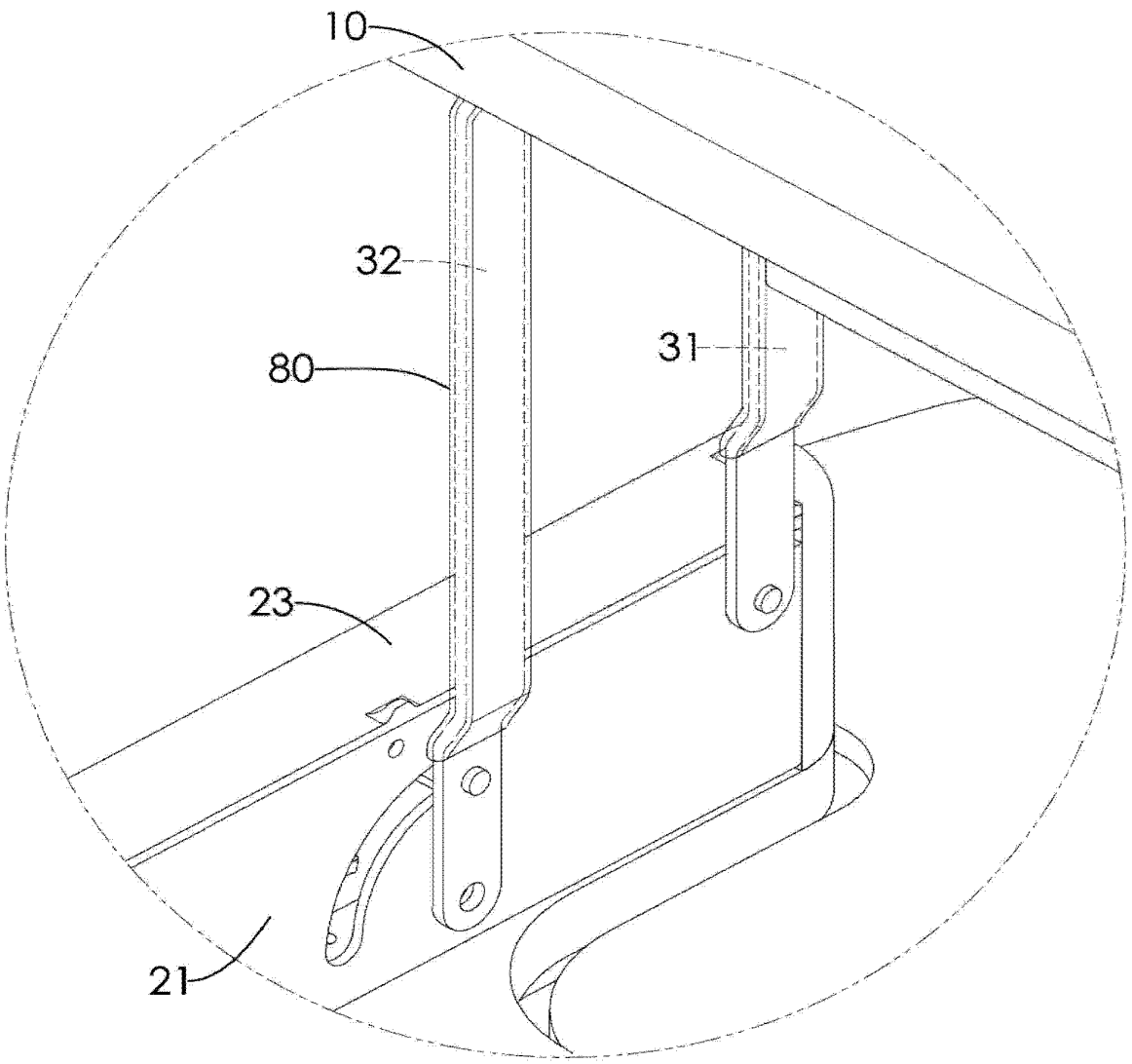


图 15

Electronic Patent Application Fee Transmittal

Application Number:	17493830
Filing Date:	04-Oct-2021
Title of Invention:	DESKTOP WORKSPACE THAT ADJUSTS VERTICALLY
First Named Inventor/Applicant Name:	Nathan Mark Poniatowski
Filer:	Daniel Thomas Lund
Attorney Docket Number:	1001-001US13

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	2806	1	104	104
		Total in USD ($)		**104**

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A1

DEMANDE DE BREVET D'INVENTION

(21) **N° 73 43641**

(54) **Table élévatrice vétérinaire.**

(51) Classification internationale (Int. Cl.²). **A 61 D 3/00.**

(22) Date de dépôt ..... 4 décembre 1973, à 9 h 30 mn.
(33) (32) (31) Priorité revendiquée :

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(71) Déposant : BENMOURA Pierre, Clinique de Parme, 64600 Anglet.

(72) Invention de :

(73) Titulaire : *Idem* (71)

(74) Mandataire :

D Vente des fascicules à l'IMPRIMERIE NATIONALE, 27, rue de la Convention — 75732 PARIS *CEDEX 15*

Cette invention rentre dans le cadre des appareils élévateurs destinés à faciliter les interventions vétérinaires.

Dans les dispositifs connus de ce genre le relevage ou l'abaissement du plateau se font le plus souvent par le moyen d'un effort physique de l'opérateur et avec une amplitude faible, de telle sorte qu'il faut hisser avant examen ou enlever après intervention les animaux, à partir d'une certaine hauteur.

Ces manoeuvres représentent un effort et quelque fois un danger avec les animaux lourds (chien St bernard ou dogues, etc.) ou dangereux, que les opérateurs doivent prendre à plein bras pour les placer sur la table d'opération.

Pour les mêmes raisons les systèmes actuellement utilisés présentent un inconvénient pour les chiens grands blessés qu'il faut hisser à hauteur d'intervention, manipulation qu'il est toujours utile de limiter au maximum.

Le dispositif suivant invention, grâce à son piètement en croix qui peut se développer très largement, amène la table de consultation pratiquement au niveau du sol, ce qui permet au maître de l'animal de l'inviter à se placer lui même sur la plate forme, en évitant une intervention fatigante, salissante ou dangereuse.

Ensuite par le jeux du verin hydraulique et de la pompe à fluide actionnée éléctriquement, le plateau monte le sujet à la hauteur exactement désirée pour l'intervention.

L'ouverture de la vanne éléctromagnétique permet au fluide de quitter le verin permettant ainsi à la table de descendre.

Le dispositif représenté sur les figures présente un verin 4 en position horizontale dont le bras extensible est fixé à un étrier 5 solidaire du piètement croisé ; comme le représente les figures 1,2,3, le verin ne change pas de plan, cette disposition demande un effort mécanique moindre, le verin peut être utilisé en extension ou en compression.

Selon d'autres réalisations le verin peut être fixé à d'autres parties du piètement croisé mobile.

Selon d'autres réalisations il est possible de remplacer le verin hydraulique par un verin à air comprimé ou par un système mécanique type vis sans fin, qui en tournant dans des écrous fixés au piètement fait monter ou descendre le plateau selon le sens de rotation.

Le dispositif objet de l'invention, sera utilisé pour les tables de consultation des vétérinaires, mais aussi en adjoignant des verins secondaires sous le plateau, celui ci sera susceptible de changer de plans indépendamment de la position du pied, réalisation utile, en chirurgie vétérinaire.

Des réalisations ayant le socle 3 fixé à des roues et le verin ou le système mécanique actionables manuellement permettent lorsqu'on remplace la table 1 par un système de civière amovible de charger à bonne hauteur un chien porté dans un coffre ou sur des sièges de voiture.

REVENDICATIONS

1 Dispositif permettant aux vétérinaires de lever sans effort les animaux à soigner depuis le sol jusqu'à hauteur d'intervention.

Caractérisé par le fait que le plateau d'examen est fixé sur un piètement articulé.

Caractérisé par le fait que la mobilisation du piètement se fait par un verin hydraulique, à air comprimé ou une vis sans fin reliés à un système commandé manuellement ou éléctriquement.

Pl. unique

FIG 1

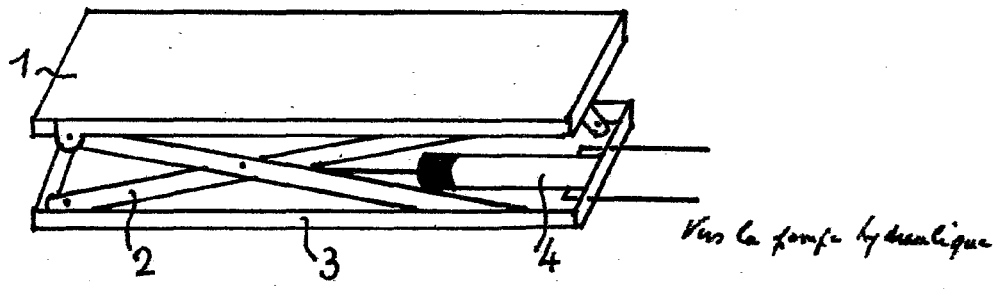


FIG 2

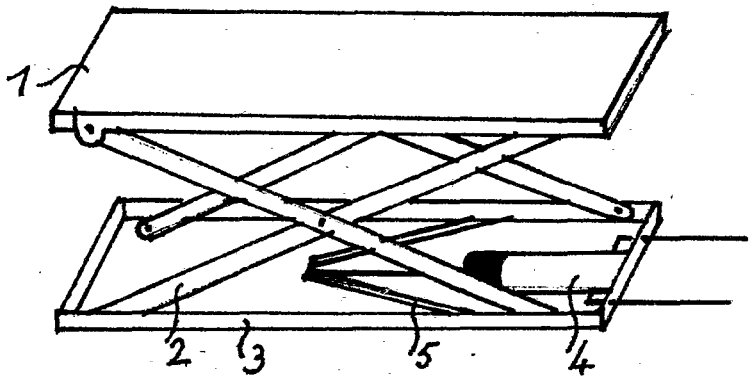
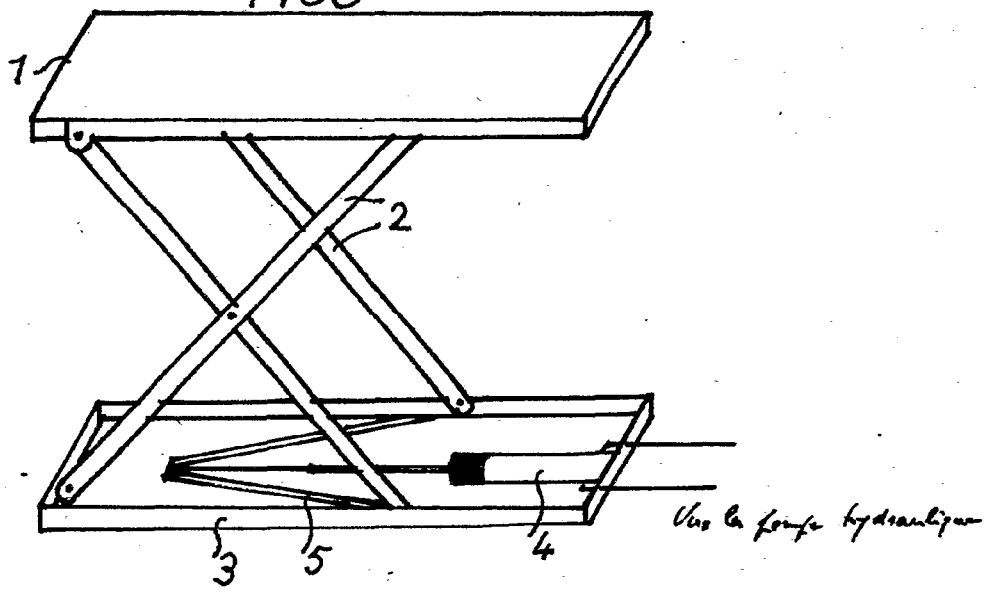


FIG 3



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(74) Agents: **GOULD, James R.** et al.; Schwegman, Lundberg & Woessner, P.A., P.O. Box 2938, Minneapolis, Minnesota 55402 (US).

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Published:
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(54) **Title**: HEIGHT ADJUSTABLE DEVICE

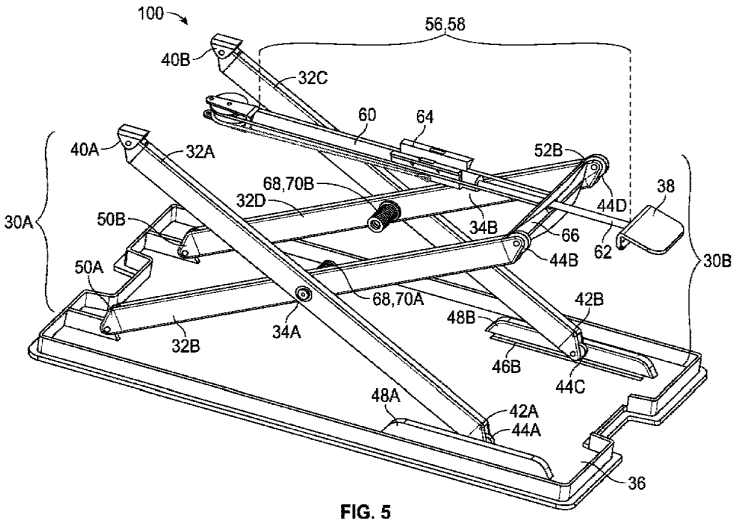


FIG. 5

(57) **Abstract**: A height adjustable device can comprise: a base; a first scissor linkage assembly coupled to the base and having a first scissor joint; a second scissor linkage assembly coupled to the base and having a second scissor joint; a worksurface coupled to the first and second scissor linkages; a bracket movably coupled to the first scissor linkage and the second scissor linkage and movable relative to the worksurface; and a first energy storage member coupled to the worksurface and connected by at least one tension member to the bracket, wherein the first energy storage member is configured to bias the bracket in a horizontal direction.

WO 2017/053200 A1

HEIGHT ADJUSTABLE DEVICE

CLAIM OF PRIORITY

This patent application claims the benefit of priority of U.S. Provisional Patent Application Serial Number 62/232,133, titled "HEIGHT ADJUSTABLE DEVICE," to Swartz et al., filed on September 24, 2015 (Attorney Docket No. 5983.384PRV), which is incorporated by reference herein in its entirety.

TECHNICAL FIELD

This disclosure generally relates to systems and methods for height adjustable devices.

BACKGROUND

Height adjustable devices can be used in desks, tables, desktop units, sit-to-stand applications or other applications. Existing height adjustable worksurfaces do not use a level force counter-balance system.

OVERVIEW

The present inventors have recognized, among other things, that a height adjustable device can be configured in an economical manner and have a constant lifting force throughout its vertical height adjustment range. This disclosure provides unique systems and methods for height adjustable devices. The present application discloses a height adjustable device that can include an energy storage member such as a locking gas spring which can act upon horizontal force between a moving bracket and a work surface. In the height adjustable device, a vertical lifting force can decrease as the scissor leg arms move closer to a horizontal or lowered position. To counteract such a decreasing force, a second energy storage device, such as a spring (torsion or equivalent) can be added to the scissor legs, such as at a link or joint between the scissor leg arms, and can increase in force as the scissor leg arms rotate relative to one

another. By providing the two energy storage devices, one configured to act upon an angular force at a rotating scissor joint and one configured to act upon a horizontal force at a moving bracket, a constant vertical lifting force can be achieved. The height adjustable device can hold a weight placed on it throughout the whole vertical travel range.

For the purposes of this disclosure, the term "desk" can include any sort of desk, table, worksurface, or display surface. "Worksurface" can include any generally horizontal surface, but is not limited to surfaces used for "work". In addition, the height adjustable device can be configured to support any item that can benefit by an adjustable height and in such cases, the item can be substituted for the "worksurface". A height adjustable device can be configured as a desktop unit that can sit atop a table or desk and can be used to hold a computer, a computer system, a computer monitor, a laptop or notebook computer, a worksurface, tools, instruments or other items. A height adjustable device can be configured as a stand-alone table, desk or worksurface and can allow an operator to use the height adjustable device in a standing or sitting position.

This overview is intended to provide an overview of subject matter of the present patent application. It is not intended to provide an exclusive or exhaustive explanation of the invention. The detailed description is included to provide further information about the present patent application. The details of one or more aspects of the disclosure are set forth in the accompanying drawings and the description below. Other features, objects, and advantages will be apparent from the description and drawings, and from the claims.

To further illustrate the HEIGHT ADJUSTABLE DEVICE disclosed herein, a non-limiting list of examples is provided here:

In Example 1, a height adjustable device can comprise: a base; a first scissor linkage assembly coupled to the base and having a first scissor joint; a second scissor linkage assembly coupled to the base and having a second scissor joint; a worksurface coupled to the first and second scissor linkages; a bracket movably coupled to the first scissor linkage and the second scissor linkage and movable relative to the worksurface; and a first energy storage member coupled to the worksurface and connected by at least one tension member to the bracket,

wherein the first energy storage member is configured to bias the bracket in a horizontal direction.

In Example 2, the height adjustable device of Example 1 can optionally be configured to further comprise: a second energy storage member located at one of the first and second scissor joints, the second energy storage member configured to bias the worksurface upwardly; and wherein the first energy storage member and the second energy storage member are configured to provide the height adjustable device with a constant lifting force throughout a vertical height adjustment range.

In Example 3, the height adjustable device of any one or any combination of Examples 1-2 can optionally be configured to further comprise: a second energy storage member located at one of the first and second scissor joints, the second energy storage member configured to bias the worksurface upwardly.

In Example 4, the height adjustable device of Example 3 can optionally be configured such that the first energy storage member and the second energy storage member are configured to provide the height adjustable device with a constant lifting force throughout a vertical height adjustment range.

In Example 5, the height adjustable device of any one or any combination of Examples 1-4 can optionally be configured such that the first energy storage member is a gas spring.

In Example 6, the height adjustable device of Example 5 can optionally be configured to further comprise: a cradle member coupled to the worksurface and slidably coupled to the gas spring.

In Example 7, the height adjustable device of Example 5 can optionally be configured such that the gas spring includes a movable piston configured to extend through an aperture in the bracket.

In Example 8, the height adjustable device of Example 5 can optionally be configured to further comprise: a pulley assembly coupled to the gas spring.

In Example 9, the height adjustable device of Example 8 can optionally be configured such that the pulley assembly includes a first pulley wheel rotably engaging a first tension member, the first tension member connecting the bracket and the cradle member.

In Example 10, the height adjustable device of Example 9 can optionally be configured such that the pulley assembly includes a second pulley wheel rotably engaging a second tension member, the second tension member connecting the bracket and the cradle member.

In Example 11, the height adjustable device of any one or any combination of Examples 2-10 can optionally be configured such that the second energy storage member is a torsion spring.

In Example 12, the height adjustable device of any one or any combination of Examples 1-11 can optionally be configured such that the first scissor linkage assembly includes: a first arm member movably coupled to the base; and a second arm member coupled to the first arm member at the first scissor joint, the second arm member rotably coupled to the base; and wherein the second scissor linkage assembly includes: a third arm member movably coupled to the base; and a fourth arm member coupled to the third arm member at a second scissor joint, the fourth arm member rotably coupled to the base.

In Example 13, the height adjustable device of any one or any combination of Examples 1-12 can optionally be configured such that the base is configured in a U-shape.

In Example 14, the height adjustable device of any one or any combination of Examples 1-13 can optionally be configured to further comprise: an extension spring coupled to the bracket and to the worksurface and configured to bias the bracket in a horizontal direction.

In Example 15, the height adjustable device of any one or any combination of Examples 1-14 can optionally be configured to further comprise: an enclosure bracket attached to a bottom surface of the worksurface, wherein first and second scissor linkage assemblies are rotably attached to the enclosure bracket.

In Example 16, the height adjustable device of any one or any combination of Examples 1-15 can optionally be configured such that the first scissor linkage assembly includes a first roller configured to roll on the base and the first scissor linkage assembly includes a second roller configured to roll on the base.

In Example 17, the height adjustable device of any one or any combination of Examples 1-16 can optionally be configured such that the first energy storage member is a gas spring coupled to the worksurface, extending through an aperture in the bracket, and connected by at least one tension member to the bracket, wherein the gas spring is configured to bias the bracket in a horizontal direction; wherein the second energy storage member is a torsion spring located at one of the first and second scissor joints, the torsion spring configured to bias the worksurface upwardly; and wherein the gas spring and the torsion spring are configured to provide the height adjustable device with a constant lifting force throughout a vertical height adjustment range.

In Example 18, a height adjustable device can comprise: a base; a scissor linkage assembly including: a first gas spring assembly extending from a first end to a second end, the first end rotably coupled to the base; and a second gas spring assembly extending from a third end to a fourth end, the third end rotably coupled to the base, a collar assembly having a first collar portion slidably coupled to the first gas spring assembly and a second collar portion slidably coupled to the second gas spring assembly, the first collar portion rotatingly coupled to the second collar portion by a scissor joint; and a worksurface coupled to the scissor linkage at the second end and the fourth end; wherein the scissor linkage is configured to bias the worksurface in the vertical direction.

In Example 19, the height adjustable device of Example 18 can optionally be configured to further comprise: a torsion spring coupled between the first collar portion and the second collar portion and configured to bias the worksurface in the vertical direction.

In Example 20, the height adjustable device of any one or any combination of Examples 18-19 can optionally be configured to further comprise: a first gas spring release handle configured to unlock the first gas spring assembly and a second gas spring release handle configured to unlock the second gas spring assembly.

In Example 21, the height adjustable device of any one or any combination of Examples 1-20 can optionally be configured such that all elements, operations, or other options recited are available to use or select from.

BRIEF DESCRIPTION OF THE DRAWINGS

Corresponding reference characters or text descriptions indicate corresponding parts throughout the several views. The exemplifications set out herein illustrate exemplary examples of this disclosure, and such exemplifications are not to be construed as limiting the scope of this disclosure in any manner.

FIG. 1 illustrates a perspective view of a height adjustable device in a lowered position, in accordance with at least one example of this disclosure.

FIG. 2 illustrates a perspective view of a height adjustable device in a raised position, in accordance with at least one example of this disclosure.

FIG. 3 illustrates a side view of a height adjustable device, in accordance with at least one example of this disclosure.

FIG. 4 illustrates a perspective view of a height adjustable device, in accordance with at least one example of this disclosure.

FIG. 5 illustrates a perspective view of a height adjustable device (with worksurface removed), in accordance with at least one example of this disclosure.

FIG. 6 illustrates a perspective view of a height adjustable device (with worksurface removed), in accordance with at least one example of this disclosure.

FIG. 7 illustrates a top view of a height adjustable device (with transparent worksurface), in accordance with at least one example of this disclosure.

FIG. 8 illustrates a front view of a height adjustable device, accordance with at least one example of this disclosure.

FIG. 9 illustrates a cross sectional side view of the height adjustable device of FIG. 8, in accordance with at least one example of this disclosure.

FIG. 10 illustrates a perspective view of a height adjustable, in accordance with at least one example of this disclosure.

FIG. 11 illustrates a perspective view of the height adjustable device of FIG. 10, in accordance with at least one example of this disclosure.

FIG. 12 illustrates a perspective view of a height adjustable device in a lowered position (worksurface is removed), in accordance with at least one example of this disclosure.

FIG. 13 illustrates a top view of a height adjustable device (worksurface is removed), in accordance with at least one example of this disclosure.

FIG. 14 illustrates a front view of a height adjustable device, in accordance with at least one example of this disclosure.

FIG. 15 illustrates a perspective view of a height adjustable device 100, in accordance with at least one example of this disclosure.

FIG. 16 illustrates a top view of a height adjustable device (worksurface is removed), in accordance with at least one example of this disclosure.

FIG. 17 illustrates a perspective view of a height adjustable device 200, in accordance with at least one example of this disclosure.

FIG. 18 illustrates a perspective view of a height adjustable device 200, in accordance with at least one example of this disclosure.

FIG. 19 illustrates a perspective view of a height adjustable device in a folded configuration, in accordance with at least one example of this disclosure.

FIG. 20 illustrates a side view of a height adjustable device, in accordance with at least one example of this disclosure.

FIG. 21 illustrates a side view of a height adjustable device, in accordance with at least one example of this disclosure.

DETAILED DESCRIPTION

FIG. 1 illustrates a perspective view of a height adjustable device 100 in a lowered position 20, in accordance with at least one example of this disclosure. The height adjustable device 100 can be configured as a desktop platform that can provide for sitting or standing operations. The height adjustable device 100 can be located on a desk 22 and can support items such as an electronic device 24 on a worksurface 26. The desk 22 can be a table, a desk, a shelf, or other type of furniture. The desk 22 can include a desk top 27. The desk top 27 can be a table top, a desk top, a work surface, or other type of platform. The height adjustable device 100 can be configured as a desktop platform and can be free standing or permanently attached to the desk top 27.

FIG. 2 illustrates a perspective view of a height adjustable device 100 in a raised position 28, in accordance with at least one example of this disclosure. The raised position 28 can allow working at a standing position. The worksurface 26 can be supported by a first scissor linkage assembly 30A and a second scissor linkage assembly 30B. The first scissor linkage assembly 30A and the second scissor linkage assembly 30B can provide a scissoring action to aid in raising and lowering the height adjustable device 100.

FIG. 3 illustrates a side view of a height adjustable device 100, in accordance with at least one example of this disclosure. The first scissor linkage assembly 30A can include a first arm member 32A that can be rotatingly coupled to a second arm member 32B at a first scissor joint 34A. The first scissor linkage assembly 30A and the second scissor linkage assembly 30B can be coupled to a base 36 (see also FIG. 4). When the worksurface 26 is moved downwardly 25, e.g. moved closer to the base 36, the lower end of the first arm member 32A can move horizontally closer 29A to the right side of the base 36. When the worksurface 26 is lowered, the upper end of the second arm member 32B can move horizontally closer 29B to the right side of the worksurface 26. The ends of the first arm member 32A and the second arm member 32B can move in the opposite direction when the worksurface 26 is raised.

FIG. 4 illustrates a perspective view of a height adjustable device 100, in accordance with at least one example of this disclosure. The height adjustable device 100 can include at least a first scissor linkage assembly 30A as described above. The height adjustable device 100 can include a second scissor linkage assembly 30B. The worksurface 26 and the base 36 can be coupled to the first and second scissor linkage assemblies 30A, 30B. In the present application, a scissor leg assembly can also be referred to as a scissor lift mechanism or a scissoring linkage. The second scissor linkage assembly 30B can include a third arm member 32C and a fourth arm member 32D. The third and fourth arm members 32C, 32D can be coupled together near their middle areas by a rotable connection such as a second scissor joint 34B. The base 36 can be planar. The base can be rectangular, curved, or have a combination of curved and straight portions. The height adjustable device 100 can include a gas spring release handle 38 which will be described in more detail below.

FIG. 5 illustrates a perspective view of a height adjustable device 100, in accordance with at least one example of this disclosure. The worksurface 26 (see FIG. 4) is removed to show other components. The first scissor linkage assembly 30A can include the first arm member 32A and the second arm member 32B. The first arm member 32A can be movably coupled to the worksurface 26 at a first upper joint 40A. The first upper joint 40A can be a pin joint, a hinge, or any type of joint where the first arm member 32A can be allowed to rotate relative to the worksurface 26. The first arm member 32A can be movably coupled to a base 36 at a first lower rolling/sliding joint 42A. The first lower rolling/sliding joint 42A can be any type of tracked, slotted, wheeled, or other joint connection that can allow the first arm member 32A to move horizontally and rotationally relative to the base 36. The first lower rolling/sliding joint 42A can include an element such as a first roller 44A that can roll/slide along the base 36. The first roller 44A can ride on the base 36, and can allow the second end of the first arm member 32A to move in a straight path parallel to the length of the base 36. A first track 46A (see FIG. 7) can be formed in to the base 36 to guide the lower rolling elements. A first guide member 48A can be located along a side of the first lower rolling/sliding joint 42A and can guide one or both of the first arm member 32A or the first roller 44A.

The second arm member 32B can be movably coupled to the worksurface 26 at a first lower joint 50A. The first lower joint 50A can be a pin joint, a hinge, or any type of joint where the second arm member 32B can be allowed to rotate relative to the base 36. The second arm member 32B can be movably coupled to the worksurface 26 at a first upper rolling/sliding joint 52A. The first upper rolling/sliding joint 52A can be any type of tracked, slotted, wheeled, or other joint connection that can allow the second arm member 32B to move horizontally and rotationally relative to the worksurface 26. The first upper rolling/sliding joint 52A can include an element, such as a second roller 44B that can roll/slide along the bottom surface 54 of the worksurface 26 (see FIG. 8). The second roller 44B can allow the second end of the second arm member 32B to move in a straight path parallel to the length of the worksurface 26.

The second scissor linkage assembly 30B can include the third arm member 32C and the fourth arm member 32D. The third arm member 32C can

be movably coupled to the worksurface 26 at a second upper joint 40B. The second upper joint 40B can be a pin joint, a hinge, or any type of joint where the third arm member 32C can be allowed to rotate relative to the worksurface 26. The third arm member 32C can be movably coupled to the base 36 at a second lower rolling/sliding joint 42B. The second lower rolling/sliding joint 42B can be any type of tracked, slotted, wheeled, or other joint connection that can allow the third arm member 32C to move horizontally and rotationally relative to the base 36. The second lower rolling/sliding joint 42B can include an element such as a third roller 44C that can roll/slide along the base 36. The third roller 44C can ride on the base 36, and can allow the second end of the third arm member 32C to move in a straight path parallel to the length of the base 36. The second track 46B can be formed in to the base 36 to guide the lower rolling elements. A second guide member 48B can be located along a side of the second lower rolling/sliding joint 42B and can guide one or both of the third arm member 32C or the third roller 44C.

The fourth arm member 32D can be movably coupled to the worksurface 26 at a second lower joint 50B. The second lower joint 50B can be a pin joint, a hinge, or any type of joint where the fourth arm member 32D can be allowed to rotate relative to the base 36. The fourth arm member 32D can be movably coupled to the worksurface 26 at a second upper rolling/sliding joint 52B. The second upper rolling/sliding joint 52B can be any type of tracked, slotted, wheeled, or other joint connection that can allow the fourth arm member 32D to move horizontally and rotationally relative to the worksurface 26. The second upper rolling/sliding joint 52B can include an element such as a fourth roller 44D that can roll/slide along the bottom surface 54 of the worksurface 26. The fourth roller 44D can allow the second end of the fourth arm member 32D to move in a straight path parallel to the length of the worksurface 26. In some example configurations, any or all of the first, second, third, or fourth rollers 44A, 44B, 44C, 44D can be replaced by gliding elements, sliding pins, or slides.

A first energy storage member 56 can be located under the worksurface 26. The first energy storage member 56 can be a gas spring, one or more elastic members such as an extension spring or elastomeric strap, or a combination of any of the previously mentioned devices. In the present application the first

energy storage member 56 can also be referred to as a gas spring 58. The gas spring 58 can include a gas spring cylinder 60 and a gas spring piston 62. The gas spring piston 62 can extend and retract from the gas spring cylinder 60. The gas spring 58 can be stabilized under a worksurface 26 by a gas spring cradle 64. The gas spring cradle 64 can be shaped to fit around all or a portion of the gas spring 58 and configured support the gas spring 58. The gas spring cradle 64 can be coupled to the worksurface 26 and the gas spring 58/gas spring cylinder 60 can slide within the gas spring cradle 64.

The second arm member 32B and the fourth arm member 32D can be coupled to a moving bracket 66 (can also be known as "bracket"). In an example, the second arm member 32B and the fourth arm member 32D can be rotatingly attached to the moving bracket 66. The moving bracket 66 can move horizontally relative to the worksurface 26. The gas spring piston 62 can engage a gas spring release handle 38, which can be configured to unlock the gas spring 58. A second energy storage member 68, shown as either or both of a first and second torsion spring 70A, 70B can be located at one or both of the first and second scissor joints 34A, 34B. The second energy storage member 68 can be a torsion spring, or any type of energy storage device that is configured to aid or counteract torque related forces at the first and/or second scissor joints 34A, 34B. The second energy storage member 68 can be used to assist a weight counterbalance. Because the first torsion spring 70A can contact the first and second arm members 32A, 32B and/or the second torsion spring 70B can contact the third and fourth arm members 32C, 32D at the first and second scissor joints 34A, 34B; when the height adjustable device is raised or lowered, the second energy storage member 68 can create a counterbalancing force.

It is fully contemplated by the present application that in another example, the first and second lower rolling/sliding joints 42A, 42B on the base 36 can be on the opposite end of the height adjustable device 100 as the first and second upper rolling/sliding joints 52A, 52B of the worksurface 26. Such a configuration would also apply to the first and second lower joints 50A, 50B and first and second upper joints 40A, 40B.

FIG. 6 illustrates a perspective view of a height adjustable device 100 (with worksurface removed), in accordance with at least one example of this

disclosure. The gas spring cradle 64 can be coupled to the bottom surface 54 of the worksurface 26 (see (FIG 9). A first attachment member 72A (see FIG 11) and a second attachment member 72B can be coupled to or formed into the gas spring cradle 64 and can aid in attaching first and second tension members 74A, 74B to the gas spring cradle 64. The first and second attachment members 72A, 72B can be a hook, a protruding element, an aperture, a clamp, a crimp, or any other means of attaching a tension member to a bracket. In the present application, the first and second tension members 74A, 74B can include devices such as a rope, a cable, a strap, a chain, or a cord or a combination of the aforementioned elements. In another example, first and second tension members 74A, 74B can be coupled to the worksurface 26 (see FIG 4). The gas spring piston 62 can be slidably engaged with the gas spring cylinder 60 on one end, and can be coupled to the worksurface 26 on the other end. A release pin (not shown) can be located at the tip of the gas spring piston 62 near attachment to the worksurface 26 (see FIG 9). Normally, the gas spring 58 can be locked at all times.

When the height of the worksurface 26 needs to be adjusted, the gas spring release handle 38 can be squeezed; a tab located on the gas spring release handle 38 can press a release pin, and unlock the gas spring 58. With the gas spring 58 unlocked, a user can adjust the height of the worksurface 26. The moving bracket 66 can be rotatingly coupled with the second arm member 32B at the first upper rolling/sliding joint 52A, and can be rotatingly coupled with the fourth arm member 32D at the second upper rolling/sliding joint 52B. An aperture 76 can be defined near the middle of the moving bracket 66. The gas spring piston 62 can extend and slide through the aperture 76.

A pulley assembly 78 can be coupled to one end of the gas spring cylinder 60. The pulley assembly 78 can include a pulley holding bracket 80, a first pulley wheel 82A and a second pulley wheel 82B. The first pulley wheel 82A and the second pulley wheel 82B can be rotatingly engaged with the pulley holding bracket 80. The first pulley wheel 82A and the second pulley wheel 82B can be located on the same axis, but they can rotate independently of each other. A first tension member 74A can be coupled to the first attachment member 72A (see FIG 12) on its first end, can be routed around the first pulley wheel 82A,

and can be coupled to the moving bracket 66 on its second end. A second tension member 74B can be coupled to the second attachment member 72B on its first end, can be routed around the second pulley wheel 82B, and can be coupled to the moving bracket 66 on its second end.

FIG. 7 illustrates a top view of a height adjustable device 100, in accordance with at least one example of this disclosure. The worksurface 26 is shown as transparent to display other components under it. The first track 46A and a second track 46B can be formed into the base 36 to guide the lower rolling elements, such as the first roller 44A and the third roller 44C. The gas spring cylinder 60 can be allowed to slide within the gas spring cradle 64 as the worksurface 26 is raised or lowered. The gas spring 58 can bias the height adjustable device 100 towards the raised position 28 (see FIG. 2). The first tension member 74A and the second tension member 74B can be coupled to the moving bracket 66. The moving bracket 66 can be rotatingly coupled to the second arm member 32B and the fourth arm member 32D. A gas spring release pin 84 is shown at the end of the gas spring piston 62. The gas spring release pin 84 can unlock the gas spring 58 when actuated by the gas spring release handle 38.

FIG. 8 illustrates a front view of a height adjustable device 100, in accordance with at least one example of this disclosure. A second energy storage member 68 can be located at one or both of the first and second scissor joint 34A, 34B. As related above, the second energy storage member 68 can be a first and/or second torsion spring 70A, 70B. The main portion of the first torsion spring 70A can be located to the right of the second arm member 32B. The main portion of the second torsion spring 70B can be located to the left of the fourth arm member 32D. A torsion spring axis 86 can coincide with an axis of the first and second scissor joints 34A, 34B. A first leg of each torsion spring can be connected to one of the arms and a second leg of each torsion spring can be connected to the other arm. In an example, the torsion spring can be located on either side of the scissor joint, or in between the arms of the scissor joints (see FIGS. 11-12). The bottom surface 54 can provide attachment points for the first and second upper joints 40A, 40B of the first arm member 32A and the third arm member 32C.

FIG. 9 illustrates a cross sectional side view of the height adjustable device 100 of FIG. 8, in accordance with at least one example of this disclosure. As the worksurface 26 moves downwardly 25, a horizontally facing arm angle 91 (as well as other angles of the device – this angle is used for illustration purposes) can decrease, and as a result, tension on the second torsion spring 70B can increase. Tension of the second torsion spring 70B can cause a torque 92 to increase on the third and fourth arm members 32C, 32D and can bias the fourth roller 44D towards the center 94 (in a horizontal direction) of the second scissor joint 34B. As the worksurface 26 moves downwardly 25, the horizontally facing arm angle 91 can decrease, and the fourth roller 44D can move away from the center 94 of the second scissor joint 34B. As a result, the moving bracket 66 also can move away from the center 94 of the second scissor joint 34B. Since one end of the first and second tension members 74A, 74B are fixedly attached to the moving bracket 66, and the other end of the first and second tension members 74A, 74B is coupled to the gas spring cradle 64; the first and second tension members 74A, 74B can pull on the gas spring cylinder 60 and can cause the tension on the gas spring 58 to increase. The gas spring 58 can apply an increasing horizontal pull force 96 on to the moving bracket 66 and can bias the moving bracket 66 towards the center 94 of the second scissor joint 34B. As the horizontally facing arm angle 91 is decreased as the worksurface 26 is moved downwardly 25, a first vertical lift force 97 created by the gas spring 58 can also decrease. However, simultaneously the torque 92 and a second vertical lift force 98 applied onto the second scissor linkage assembly 30B by the second torsion spring 70B can increase. As a result, a total lift force 99 provided by the height adjustable device 100 can stay constant. Depending on an example configuration, (whether there is one or two torsion springs), some or all of the previously described actions will occur simultaneously on the first scissor linkage assembly 30A (see FIG. 8).

The base 36 can include a planar lower horizontal member 88 upon which a raised vertical member 90 can be integral or attached. Lower rollers can ride upon the planar lower horizontal member 88 and/or be guided by the first and second tracks 46A, 46B (see FIG. 7).

In additional examples, of the height adjustable device 100, the first and second energy storage members 56, 68, such as the gas spring 58, or the first and second torsion springs 70A, 70B can be calibrated for any weight that the height adjustable device 100 is designed to support. The energy storage members can be designed/calibrated to provide either a stronger or weaker biasing forces for raising or lowering the height adjustable device. The energy storage members can be provided with tensioning/spring force adjustments. The bottom surface 54 can provide attachment points for the gas spring cradle 64, and the gas spring 58.

FIG. 10 illustrates a perspective view of a height adjustable device 101, in accordance with at least one example of this disclosure. In an example, the base 36 can be configured in a U-shape 102 that can lay in a horizontal position on a floor or desktop surface. The middle portion 104 of the U-shape 102 can include a first rotable attachment point 106A for the second arm member 32B of the first scissor linkage assembly 30A and the base first end 108A of the U-shape 102 can provide a first track 146A for a sliding or rolling attachment for the first arm member 32A of the first scissor linkage assembly 30A.

The middle portion 104 of the U-shape 102 can include a second rotable attachment point 106B for the fourth arm member 32D of the second scissor linkage assembly 30B and the base second end 108B of the U-shape 102 can provide a second track 146B for a sliding or rolling attachment for the third arm member 32C of the second scissor linkage assembly 30B. The height adjustable device 101 can include a gas spring (see FIG. 12). A first and second torsion spring 70A, 70B can be used to assist weight counterbalance for raising, lowering, or supporting the worksurface 26.

FIG. 11 illustrates a perspective view of the height adjustable device 101 of FIG. 10, in accordance with at least one example of this disclosure. In FIG. 11, the worksurface 26 is removed to show the other components underneath. An enclosure bracket 110 can be coupled to the bottom surface 54 of the worksurface 26 (see FIG. 8). The enclosure bracket 110 can extend from a bracket first end 112 to a bracket second end 114. A channel portion 116 can provide a depth 118 (see also FIG. 14) that can receive the gas spring 58, the pulley assembly 78, and the gas spring cradle 64. At the bracket first end 112, the

enclosure bracket 110 can include a first extension member 120A and a second extension member 120B that can provide attachment points for the first upper joint 40A and the second upper joint 40B. The enclosure bracket 110 can include a first and second slot 122A, 122B for the first and second upper rolling/sliding joints 52A, 52B. The first and second slots 122A, 122B can be configured as a slot, a track, a guide or similar configuration that can guide the horizontal movement of the first and second upper rolling/sliding joints 52A, 52B and/or the moving bracket 66.

The first torsion spring 70A is illustrated located at the first scissor joint 34A. Torsion springs can be located in each scissor joint. The working principles of this example can be the same as the example explained above. The gas spring piston 62 is shown in an extended position 124. In the extended position 124, the segment of the first and second tension members 74A, 74B from the first and second attachment members 72A, 72B to the pulley assembly 78 is long, when compared the same segment of the first and second tension members 74A, 74B from the first and second attachment members 72A, 72B to the pulley assembly 78 in a compressed position 126 shown in FIG. 12. Returning to FIG. 11, in the extended position 124, the pulley assembly 78 has extended away from the gas spring cradle 64. Because the gas spring 58 is connected by the first and second tension members 74A, 74B to the moving bracket 66 and allowed to slide in the gas spring cradle 64, the amount of gas spring length change can be different than the horizontal length that the moving bracket 66 moves from the extended position 124 to the compressed position 126. In an example, the gas spring length change can be double the horizontal length that the moving bracket 66 moves.

FIG. 12 illustrates a perspective view of a height adjustable device 101 in a lowered position 20 (worksurface is removed), in accordance with at least one example of this disclosure. The height adjustable device 101 is shown in a lowered position 20 with the first and second scissor linkage assemblies 30A, 30B folded. The gas spring 58 is shown in a compressed position 126. The pulley assembly 78 has moved closer to the gas spring cradle 64 as compared to the extended position 124 shown in FIG. 11. Returning to FIG. 12, the channel portion 116 can be narrow enough to nest between the second arm member 32B

and fourth arm member 32D. The first extension member 120A and the second extension member 120B can rest atop the first and second scissor linkage assemblies 30A, 30B (while attached to a bottom surface 54 of the worksurface 26, see FIG. 8). The enclosure bracket 110 can include first and second side flanges 130A, 130B for additional attachment points to the worksurface 26.

FIG. 13 illustrates a top view of a height adjustable device 101 (worksurface is removed), in accordance with at least one example of this disclosure. The first and second tension members 74A, 74B can be connected at one end to the moving bracket 66, extend around the pulley assembly 78 and then connected at the other end to the first and second attachment members 72A, 72B on the gas spring cradle 64. The gas spring 58 can be movable within the gas spring cradle 64. The gas spring cradle 64 can be coupled to the enclosure bracket 110.

FIG. 14 illustrates a front view of a height adjustable device 101, in accordance with at least one example of this disclosure. In an example, the first torsion spring 70A can be mounted between the first and second arm members 32A, 32B. In an example, the second torsion spring 70B can be mounted between the third and fourth arm member 32C, 32D. The depth 118 of the channel portion 116 is shown.

FIG. 15 illustrates a perspective view of a height adjustable device 100, in accordance with at least one example of this disclosure. A first and second extension spring 132A, 132B can be mounted between the moving bracket 66 and the worksurface 26. In another example the first and second extension spring 132A, 132B can be mounted between the moving bracket 66 and the enclosure bracket 110 (see FIG. 12). In some configurations, a lift force can be provided by means of at least one extension spring. One or more torsion springs can be used to assist the weight counterbalance. A second torsion spring 70B is shown located at the second scissor joint 34B. Torsion springs can also be used to supplement the lift force. A gas spring 58 configured to lock and unlock can also be included to be able to lock/unlock and raise/lower the height adjustable device 100. A gas spring release handle 38 can be pressed to unlock the gas spring 58.

FIG. 16 illustrates a top view of a height adjustable device 100, in accordance with at least one example of this disclosure. The first and second extension spring 132A, 132B can be located under the worksurface 26 (see FIG. 15). One or more extension springs can be used. One end of the first and second extension springs 132A, 132B can be fixedly attached to the worksurface 26. The other end of the first and second extension springs 132A, 132B can be fixedly attached to the moving bracket 66. The extension springs can bias the moving bracket 66 towards the center of the first and second scissor joints 34A, 34B (in a horizontal direction).

The moving bracket 66 can move parallel to the worksurface 26 as explained in the previous sections. As the worksurface 26 is moved downwardly to a lower position, the moving bracket 66 moves away from the center of the first and second scissor joints 34A, 34B, and can increase the tension on the first and second extension spring 132A, 132B, which can be elongated. In addition, first and second torsion springs 70A, 70B can be located at the first and second scissor joints 34A, 34B. A lift force provided by the extension spring and torsion spring complement each other as explained in previous sections. A resulting lift force can be constant.

A gas spring cylinder 60 can be fixedly attached to the moving bracket 66. A gas spring piston 62 can be slidably engaged with the gas spring cylinder 60 and coupled to the worksurface 26. A tip of the gas spring piston 62 can be in contact to a gas spring release handle 38. A gas spring release pin 84 (see FIG. 7) can be located at the tip of the gas spring piston 62. Normally, the gas spring 58 is locked at all times. When the height of the worksurface needs to be adjusted, the gas spring release handle 38 can be actuated; a tab located on the gas spring release handle 38 presses on to the gas spring release pin 84, and can unlock the gas spring 58. The user can proceed to adjust the height level of the height adjustable device 100.

FIG. 17 illustrates a perspective view of a height adjustable device 200, in accordance with at least one example of this disclosure. The height adjustable device 200 can include a base 236, a worksurface 226, and a scissor linkage assembly 230. The scissor linkage assembly 230 can include a first gas spring assembly 231A and a second gas spring assembly 231B that can be connected in

a scissor joint 233 at a collar assembly 235. The first and second gas spring assemblies 231A, 231B can each include a gas spring and an outer cover.

FIG. 18 illustrates a perspective view of a height adjustable device 200, in accordance with at least one example of this disclosure. The worksurface 226 is not shown for clarity. The first gas spring assembly 231A can include a first upper rotating member 237A and a first upper fixed member 239A (may be in two portions). The worksurface 26 (see FIG. 18) can be coupled to the first upper fixed member 239A. The first upper rotating member 237A can be located between two portions of the first upper fixed member 239A and can rotate relative to the first upper fixed member 239A as the height adjustable device 100 is raised and lowered. The second gas spring assembly 231B can include second upper rotating member 237B and a second upper fixed member 239B (may be in two portions). The worksurface 26 can be coupled to the second upper fixed member 239B. The second upper rotating member 237B can be located between two portions of the second upper fixed member 239B and can rotate relative to the second upper fixed member 239B as the height adjustable device 200 is raised and lowered.

The first gas spring assembly 231A can include a first lower rotating member 241A and a first lower fixed member 243A (may be in two portions). The base 36 can be coupled to the first lower fixed member 243A. The first lower rotating member 241A can be located between two portions of the first lower fixed member 243A and can rotate relative to the first lower fixed member 243A as the height adjustable device is raised and lowered. The second gas spring assembly 231B can include second lower rotating member 241B and a second lower fixed member 243B (may be in two portions). The base 236 can be coupled to the second lower fixed member 243B. The second lower rotating member 241B can be located between two portions of the second lower fixed member 243B and can rotate relative to the second lower fixed member 243B as the height adjustable device 200 is raised and lowered.

FIG. 19 illustrates a perspective view of a height adjustable device 200 in a folded configuration 228 in accordance with at least one example of this disclosure. The height adjustable device 200 can include a scissor linkage assembly 230. The worksurface 226 is made transparent to show the components

under it. In the folded configuration 228, the first and second gas spring assemblies 231A, 231B are shown in a compressed position 227.

FIG. 20 illustrates a side view of a height adjustable device 200, in accordance with at least one example of this disclosure. The height adjustable device 200 can include a worksurface 226 and a base 236. The first gas spring assembly 231A can include an outer covering, such as a first telescoping cover 245A. The second gas spring assembly 231B can include an outer covering, such as a second telescoping cover 245B. The first and second telescoping covers 245A, 245B can hide or protect gas springs (see FIG. 21). The height adjustable device 200 can include a collar assembly 235 having a first collar portion 247A that can be slidably engaged with the first gas spring assembly 231A and a second collar portion 247B that can be slidably engaged with the second gas spring assembly 231B. The first and second collar portions 247A, 247B can be rotatably coupled with each other at the scissor joint 233 and can include a torsion spring connected to the first and second collar portions 247A, 247B.

FIG. 21 illustrates a side view of a height adjustable device 200 including a scissor linkage assembly 230, in accordance with at least one example of this disclosure. The first gas spring assembly 231A is shown in cross section. The first telescoping cover 245A can include a first gas spring 258 having first gas spring cylinder 260 and a first gas spring piston 262. The gas spring piston 262 can be slidably engaged with the gas spring cylinder 260. A lower end of the gas spring cylinder 260 can be fixedly attached to the first lower rotating member 241A. An upper end of the gas spring piston 262 can be fixedly attached to the first upper rotating member 237A.

A release pin 284 can be located on the upper end of the gas spring piston 262 right near the first gas spring release handle 238A, such as underneath the handle. The first and second gas springs 258A, (258B under cover) can normally be locked, and therefore, any height adjustment can be disabled. When the first and second gas spring release handles 238A, 238B are actuated or squeezed, a tab located on each handle can press the release pins and can unlock the gas springs. A user can adjust the height of the worksurface 226 by pushing it down or allowing it to rise. The second gas spring assembly 231B can include similar internal elements. Any of the examples provided herein can be configured with

varied gas spring, torsion spring or extension spring strengths to support whatever load is required.

A method of adjusting a desk or worksurface is provided. By providing a height adjustable device with a torsion spring at a scissor joint and a first energy storage member located under a worksurface, a constant vertical lifting force can be achieved and a height adjustable device can hold a weight placed on it through the whole vertical travel range. The torsion spring or second energy storage member can be configured to act upon angular motion at the scissor joint, while the first energy storage member, such as a gas spring or an extension spring is configured to act upon a horizontal motion between the moving bracket and the worksurface.

Each of these non-limiting examples can stand on its own, or can be combined in various permutations or combinations with one or more of the other examples.

The above detailed description includes references to the accompanying drawings, which form a part of the detailed description. The drawings show, by way of illustration, specific embodiments in which the invention can be practiced. These embodiments are also referred to herein as "examples." Such examples can include elements in addition to those shown or described. However, the present inventors also contemplate examples in which only those elements shown or described are provided. Moreover, the present inventors also contemplate examples using any combination or permutation of those elements shown or described (or one or more aspects thereof), either with respect to a particular example (or one or more aspects thereof), or with respect to other examples (or one or more aspects thereof) shown or described herein.

In the event of inconsistent usages between this document and any documents so incorporated by reference, the usage in this document controls.

The above description is intended to be illustrative, and not restrictive. For example, the above-described examples (or one or more aspects thereof) may be used in combination with each other. Other embodiments can be used, such as by one of ordinary skill in the art upon reviewing the above description. Also, in the above Detailed Description, various features may be grouped together to streamline the disclosure. This should not be interpreted as

intending that an unclaimed disclosed feature is essential to any claim. Rather, inventive subject matter may lie in less than all features of a particular disclosed embodiment. Thus, the following claims are hereby incorporated into the Detailed Description as examples or embodiments, with each claim standing on its own as a separate embodiment, and it is contemplated that such embodiments can be combined with each other in various combinations or permutations. The scope of the invention should be determined with reference to the appended claims, along with the full scope of equivalents to which such claims are entitled.

WHAT IS CLAIMED IS:

1. A height adjustable device comprising:

a base;

a first scissor linkage assembly coupled to the base and having a first scissor joint;

a second scissor linkage assembly coupled to the base and having a second scissor joint;

a worksurface coupled to the first and second scissor linkages;

a bracket movably coupled to the first scissor linkage and the second scissor linkage and movable relative to the worksurface; and

a first energy storage member coupled to the worksurface and connected by at least one tension member to the bracket, wherein the first energy storage member is configured to bias the bracket in a horizontal direction.

2. The height adjustable device of claim 1, further comprising:

a second energy storage member located at one of the first and second scissor joints, the second energy storage member configured to bias the worksurface upwardly; and

wherein the first energy storage member and the second energy storage member are configured to provide the height adjustable device with a constant lifting force throughout a vertical height adjustment range.

3. The height adjustable device of claim 1, further comprising:

a second energy storage member located at one of the first and second scissor joints, the second energy storage member configured to bias the worksurface upwardly.

4. The height adjustable device of claim 3, wherein the first energy storage member and the second energy storage member are configured to provide the height adjustable device with a constant lifting force throughout a vertical height adjustment range.

5. The height adjustable device of any one of claims 1-4, wherein the first energy storage member is a gas spring.

6. The height adjustable device of claim 5, further comprising a cradle member coupled to the worksurface and slidably coupled to the gas spring.

7. The height adjustable device of claim 5, wherein the gas spring includes a movable piston configured to extend through an aperture in the bracket.

8. The height adjustable device of claim 5, further comprising a pulley assembly coupled to the gas spring.

9. The height adjustable device of claim 8, wherein the pulley assembly includes a first pulley wheel rotably engaging a first tension member, the first tension member connecting the bracket and the cradle member.

10. The height adjustable device of claim 9, wherein the pulley assembly includes a second pulley wheel rotably engaging a second tension member, the second tension member connecting the bracket and the cradle member.

11. The height adjustable device of any one of claims 2-10, wherein the second energy storage member is a torsion spring.

12. The height adjustable device of any one of claims 1-11, wherein the first scissor linkage assembly includes:

a first arm member movably coupled to the base; and

a second arm member coupled to the first arm member at the first scissor joint, the second arm member rotably coupled to the base; and

wherein the second scissor linkage assembly includes:

a third arm member movably coupled to the base; and

a fourth arm member coupled to the third arm member at a second scissor joint, the fourth arm member rotably coupled to the base.

13. The height adjustable device of any one of claims 1-12, wherein the base is configured in a U-shape.

14. The height adjustable device of any one of claims 1-13, further comprising an extension spring coupled to the bracket and to the worksurface and configured to bias the bracket in a horizontal direction.

15. The height adjustable device of any one of claims 1-14, further comprising an enclosure bracket attached to a bottom surface of the worksurface, wherein first and second scissor linkage assemblies are rotably attached to the enclosure bracket.

16. The height adjustable device of any one of claims 1-15, wherein the first scissor linkage assembly includes a first roller configured to roll on the base and the first scissor linkage assembly includes a second roller configured to roll on the base.

17. The height adjustable device of any one of claims 1-16,

wherein the first energy storage member is a gas spring coupled to the worksurface, extending through an aperture in the bracket, and connected by at least one tension member to the bracket, wherein the gas spring is configured to bias the bracket in a horizontal direction;

wherein the second energy storage member is a torsion spring located at one of the first and second scissor joints, the torsion spring configured to bias the worksurface upwardly; and

wherein the gas spring and the torsion spring are configured to provide the height adjustable device with a constant lifting force throughout a vertical height adjustment range.

18. A height adjustable device comprising:

a base;

a scissor linkage assembly including:

a first gas spring assembly extending from a first end to a second end, the first end rotably coupled to the base; and

a second gas spring assembly extending from a third end to a fourth end, the third end rotably coupled to the base,

a collar assembly having a first collar portion slidably coupled to the first gas spring assembly and a second collar portion slidably coupled to the second gas spring assembly, the first collar portion rotatingly coupled to the second collar portion by a scissor joint; and

a worksurface coupled to the scissor linkage at the second end and the fourth end; wherein the scissor linkage is configured to bias the worksurface in the vertical direction.

19. The height adjustable device of claim 18, further comprising a torsion spring coupled between the first collar portion and the second collar portion and configured to bias the worksurface in the vertical direction.

20. The height adjustable device of any one of claims 18-19, further comprising a first gas spring release handle configured to unlock the first gas spring assembly and a second gas spring release handle configured to unlock the second gas spring assembly.

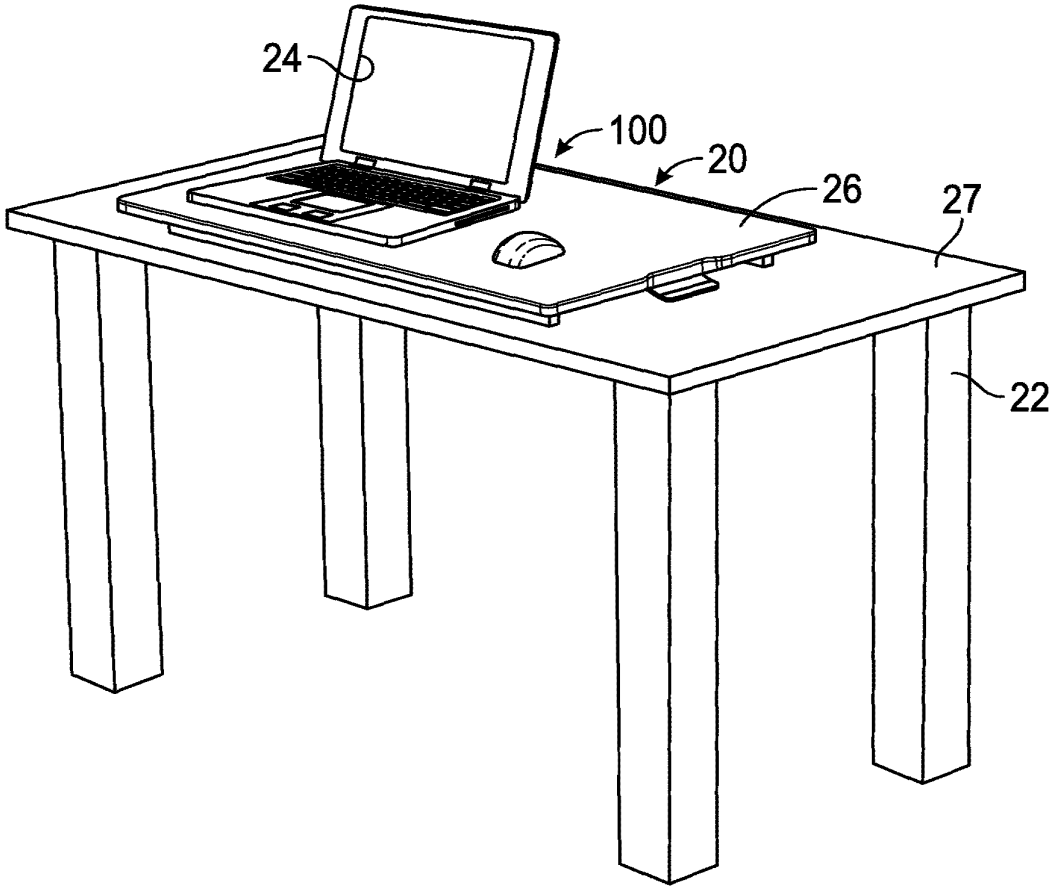


FIG. 1

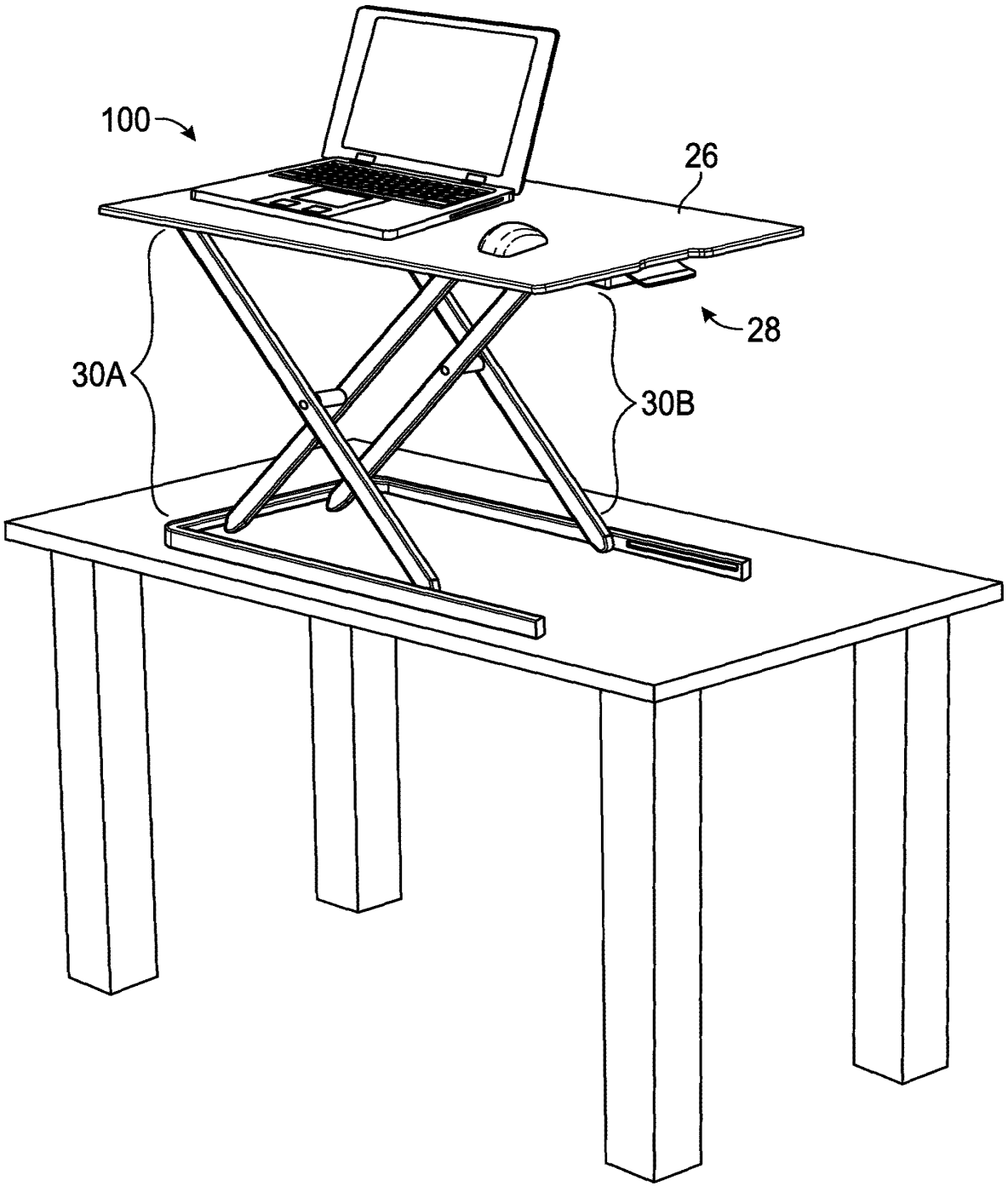


FIG. 2

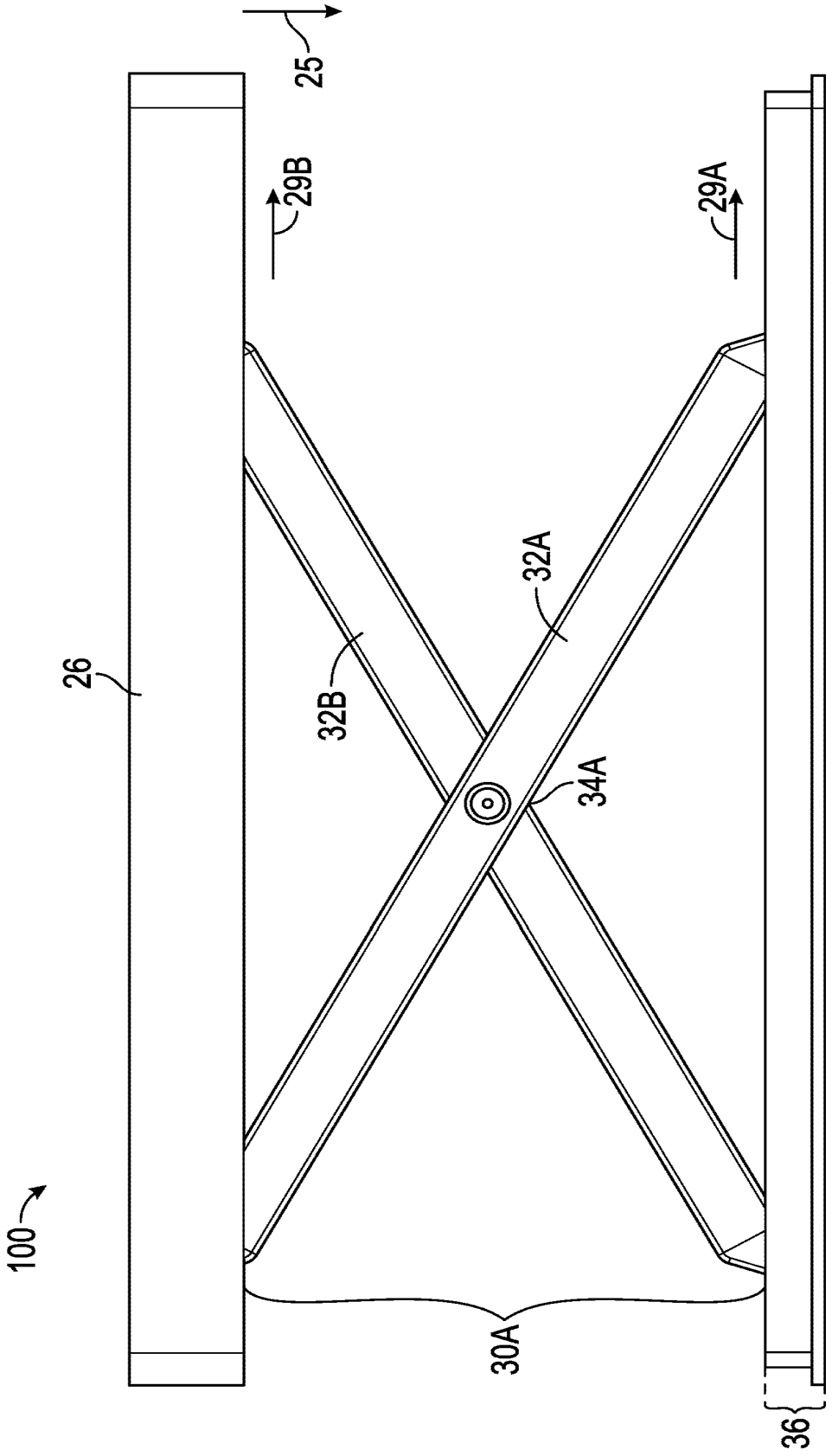


FIG. 3

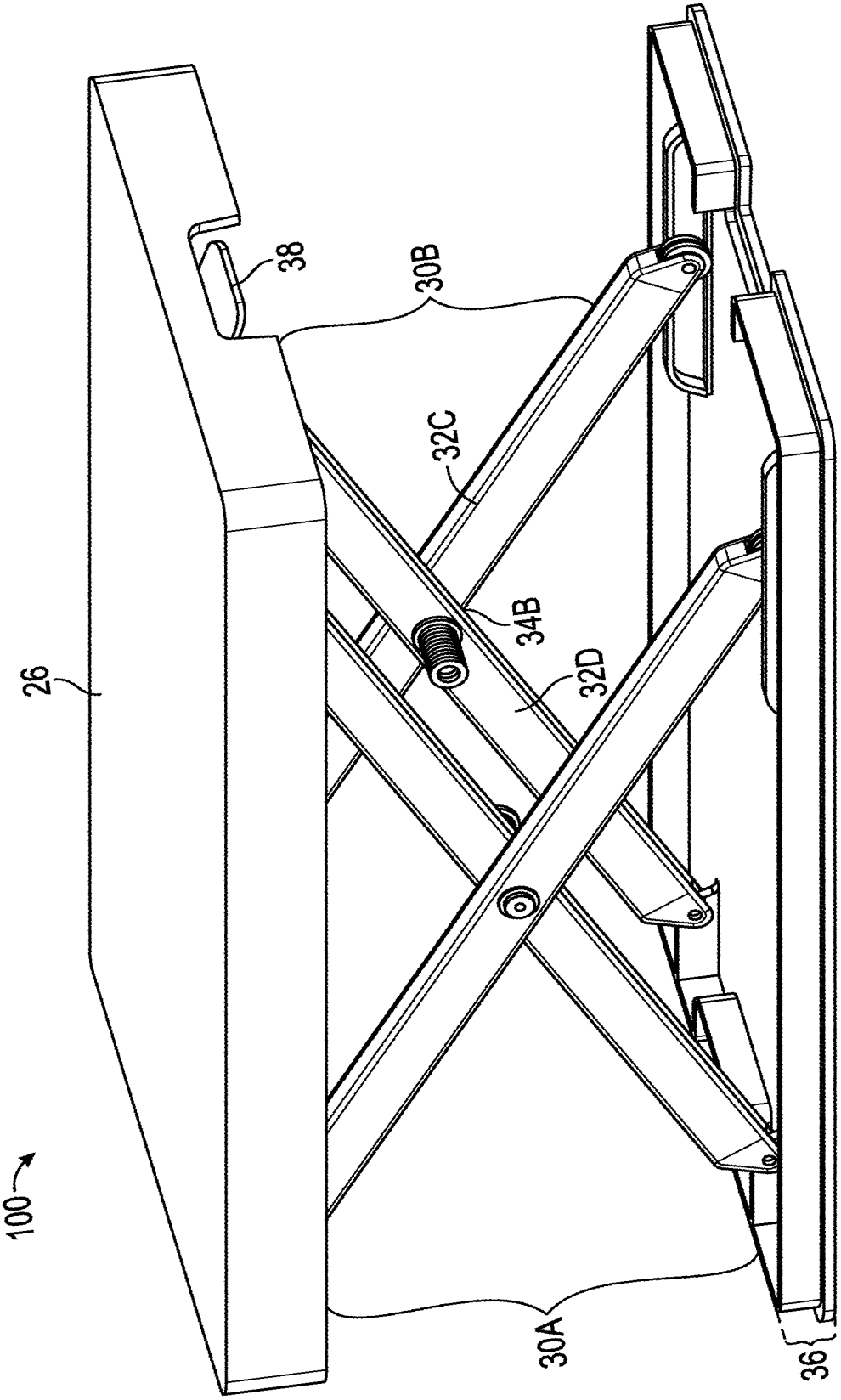


FIG. 4

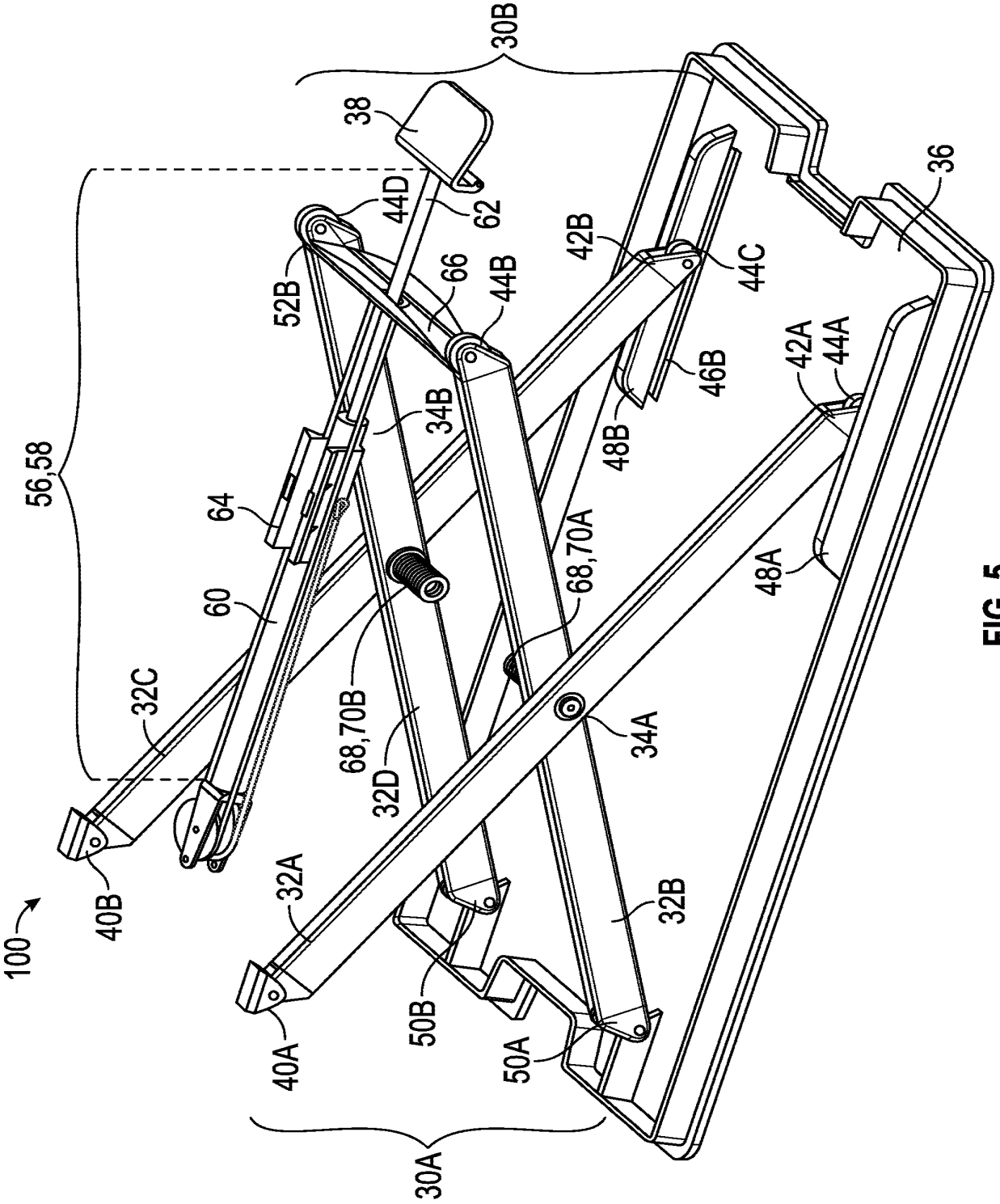

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44D
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52B
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44B
42B
44C
36
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34B
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44A
48B
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32D
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40B
32A
32B
50B
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40A
30A

FIG. 5

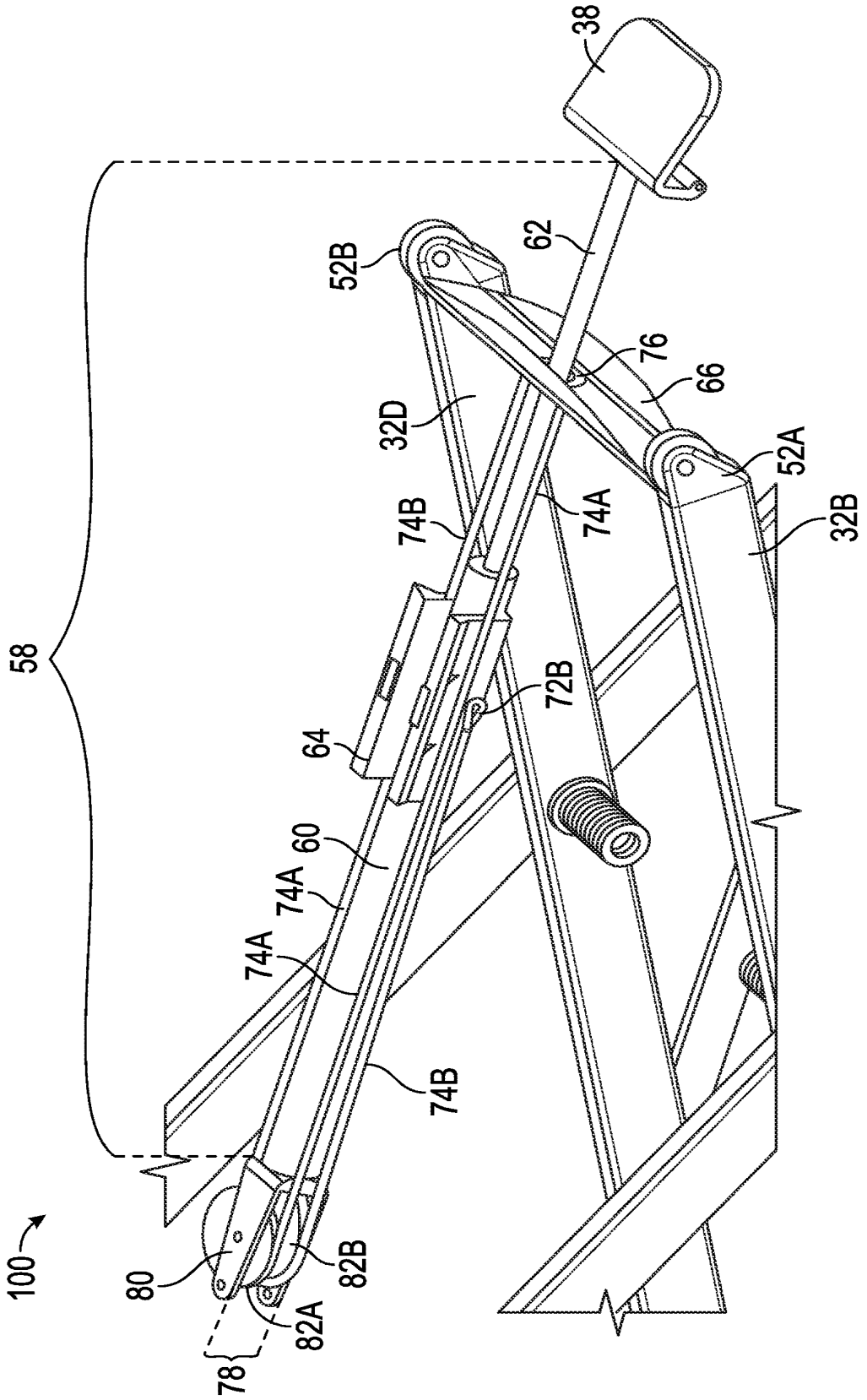

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32D
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78

FIG. 6

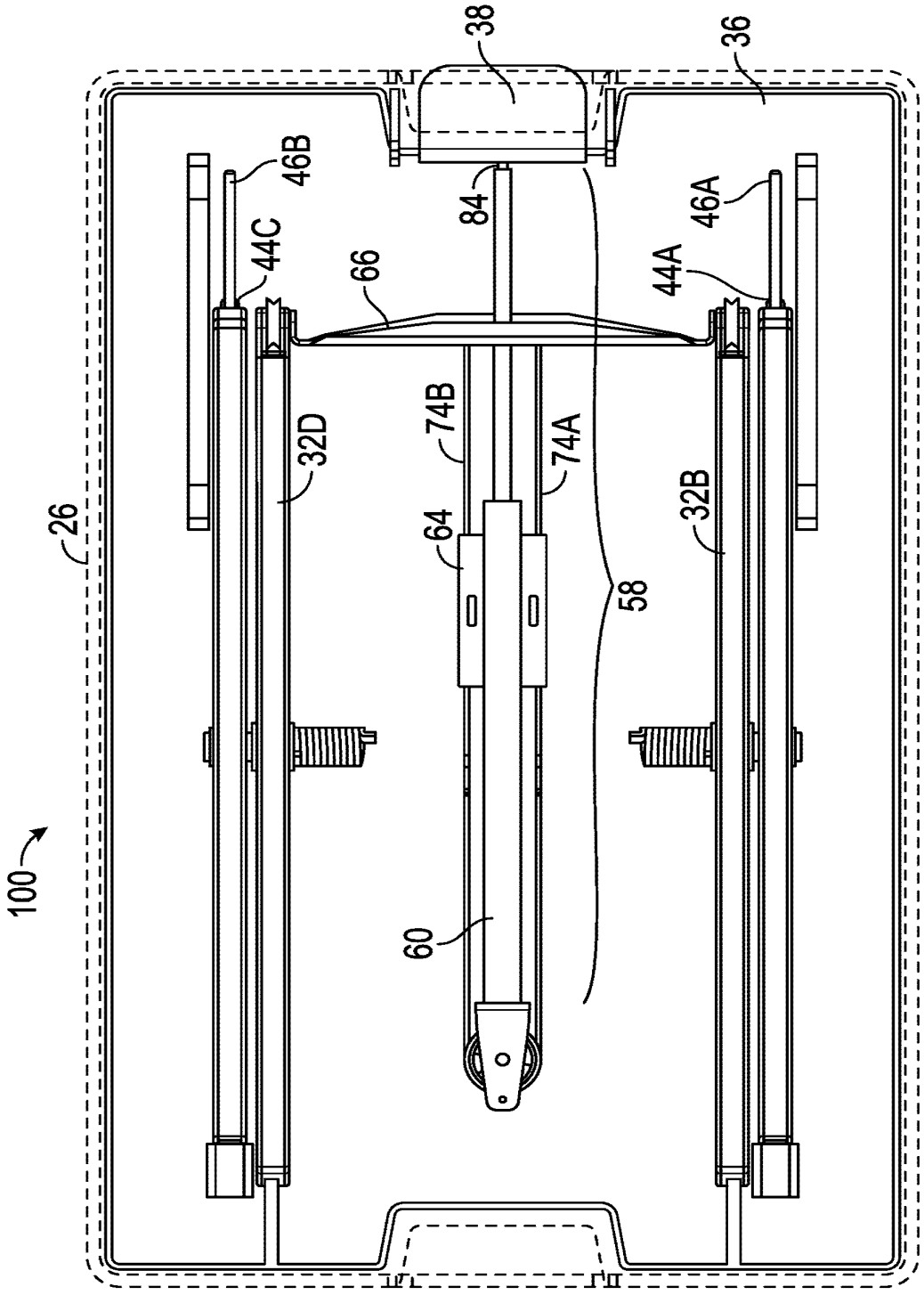


FIG. 7

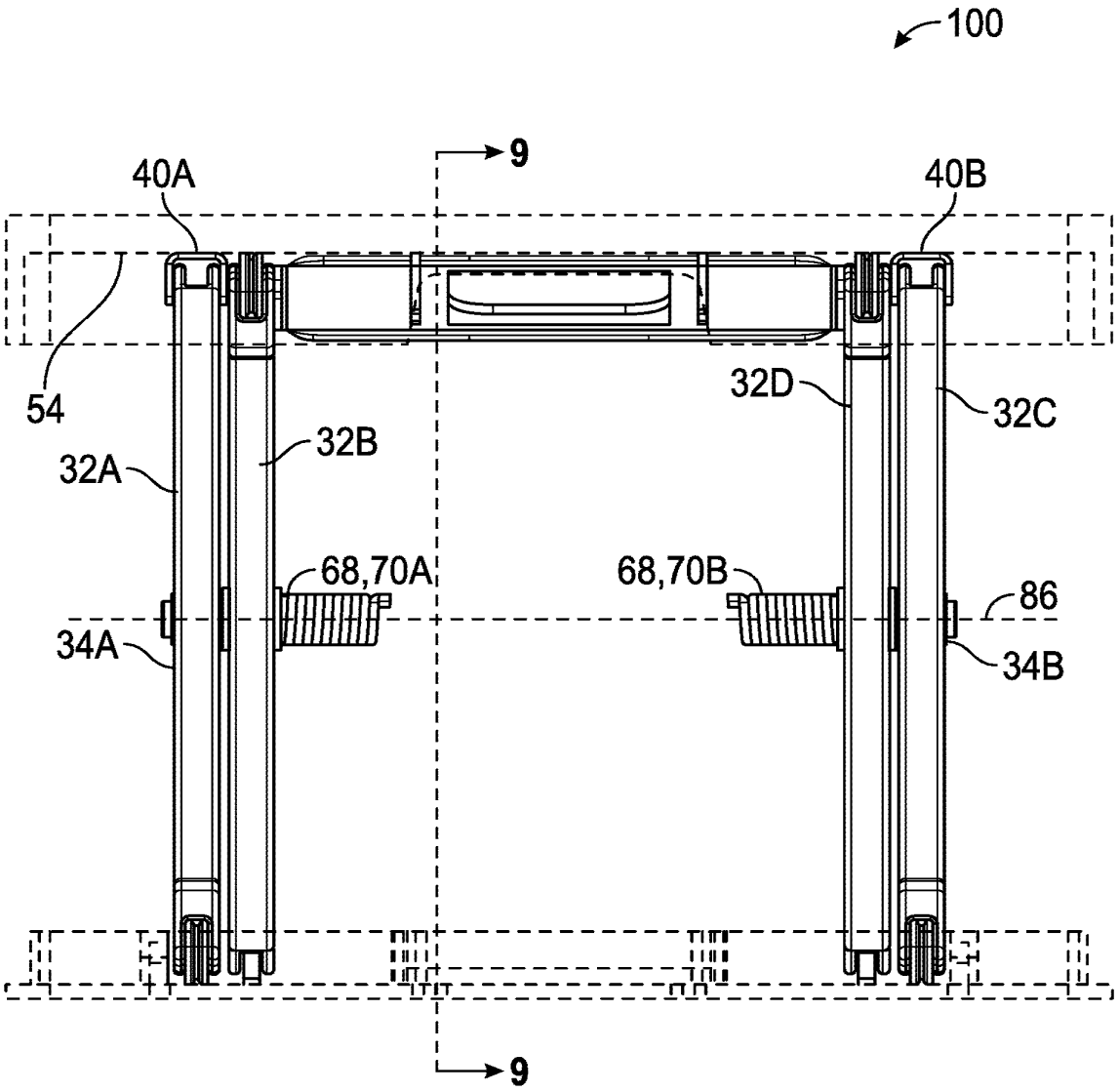


FIG. 8

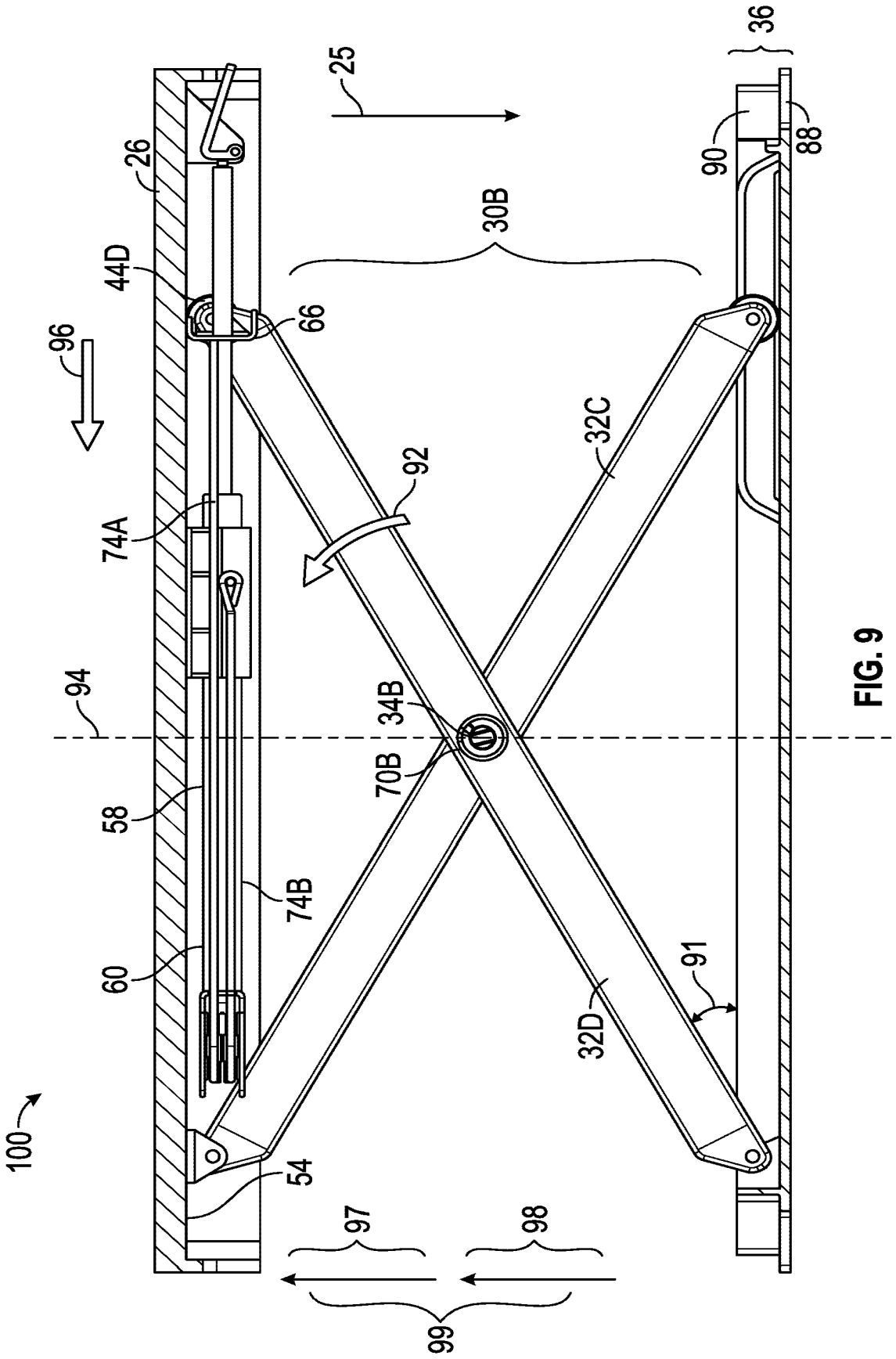

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32D
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FIG. 9

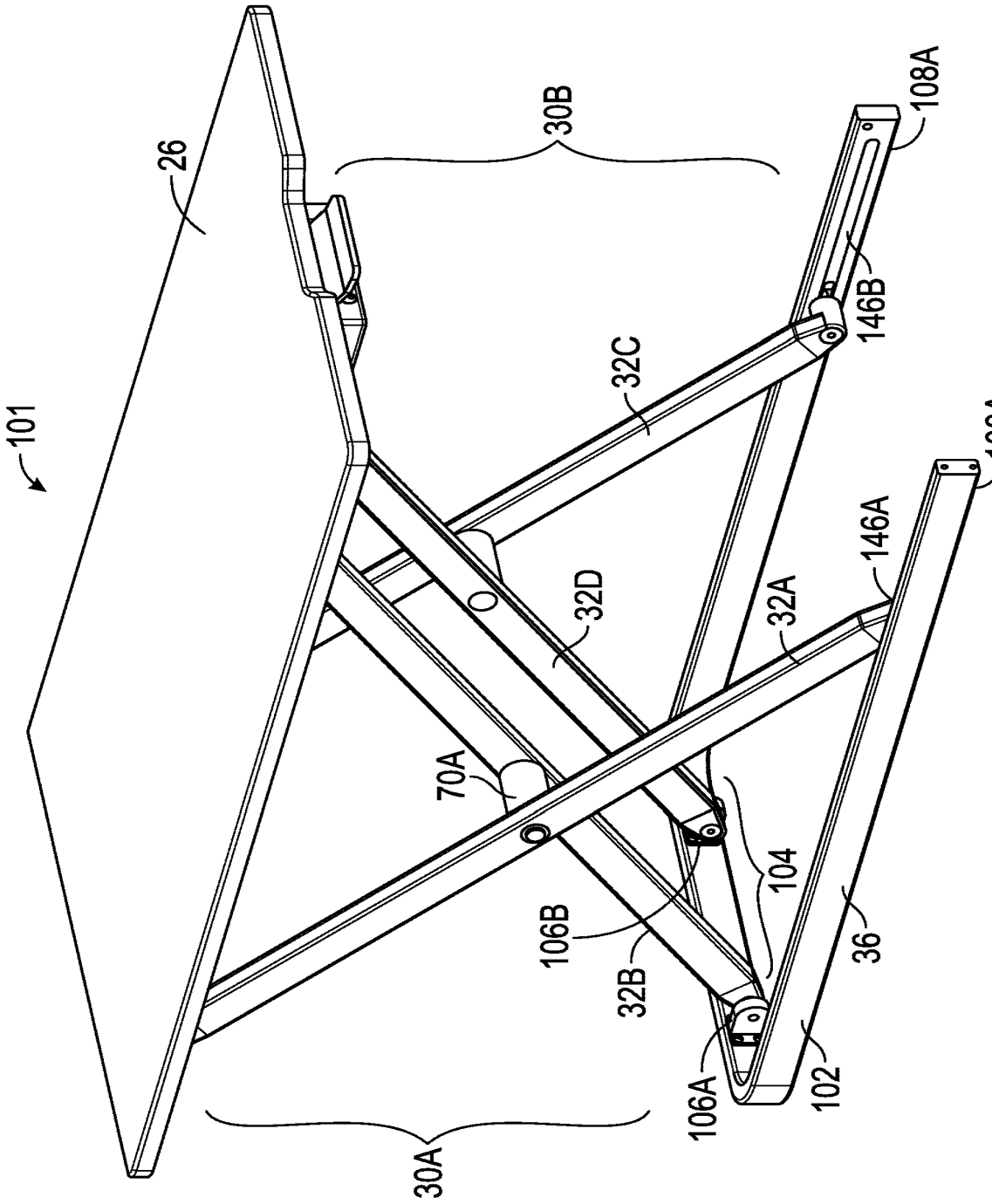

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FIG. 10

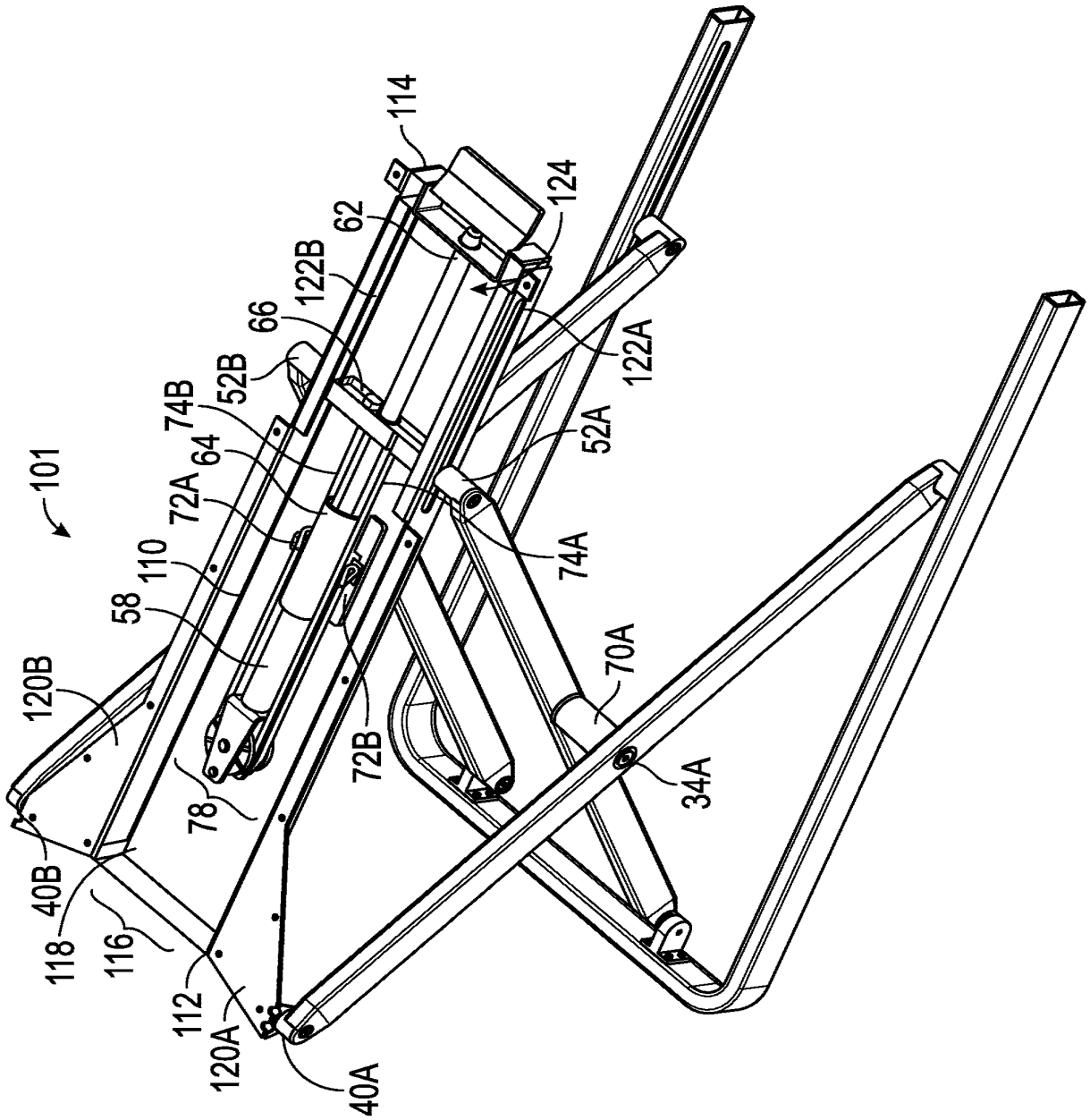

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FIG. 11

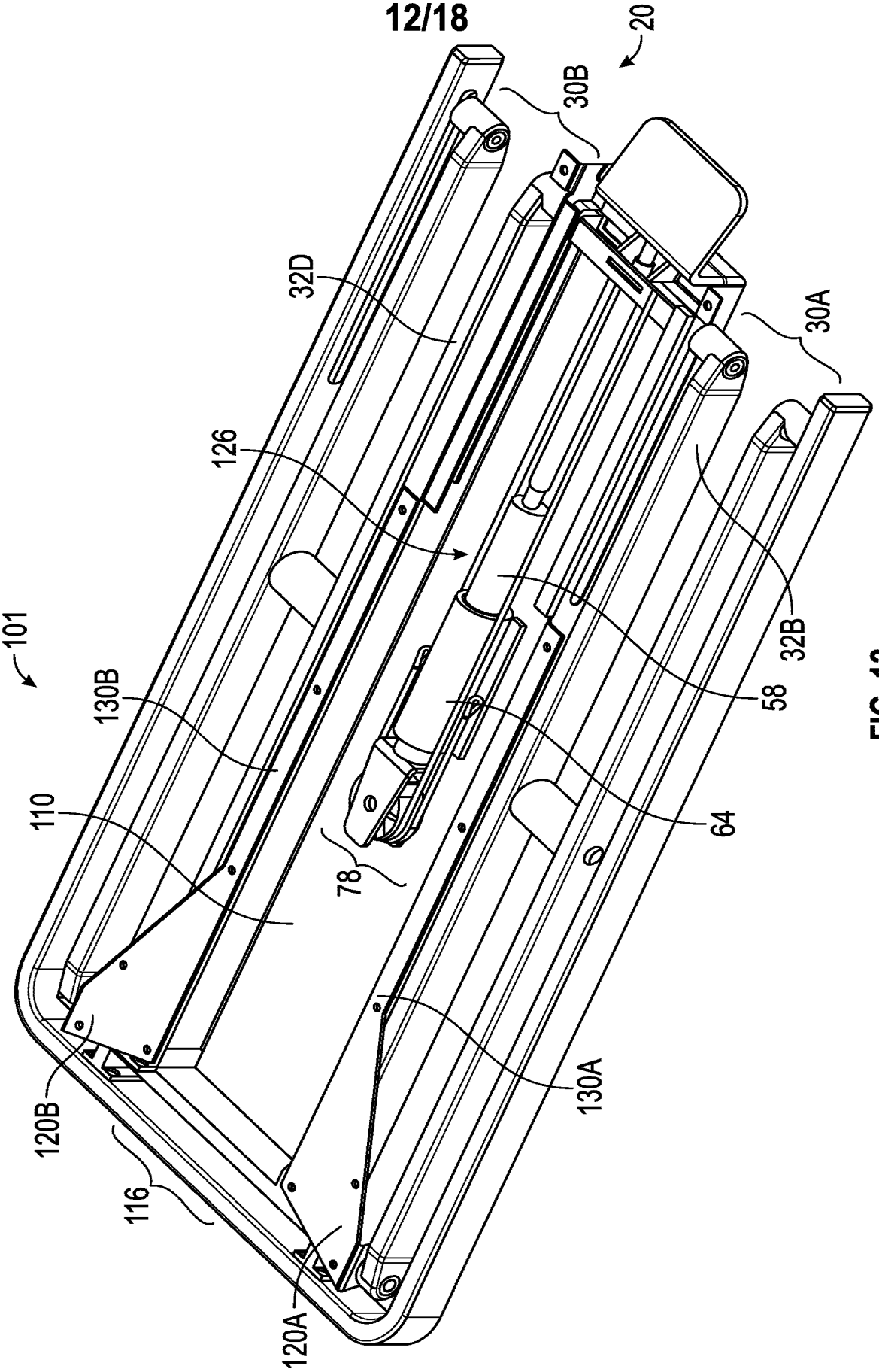


FIG. 12

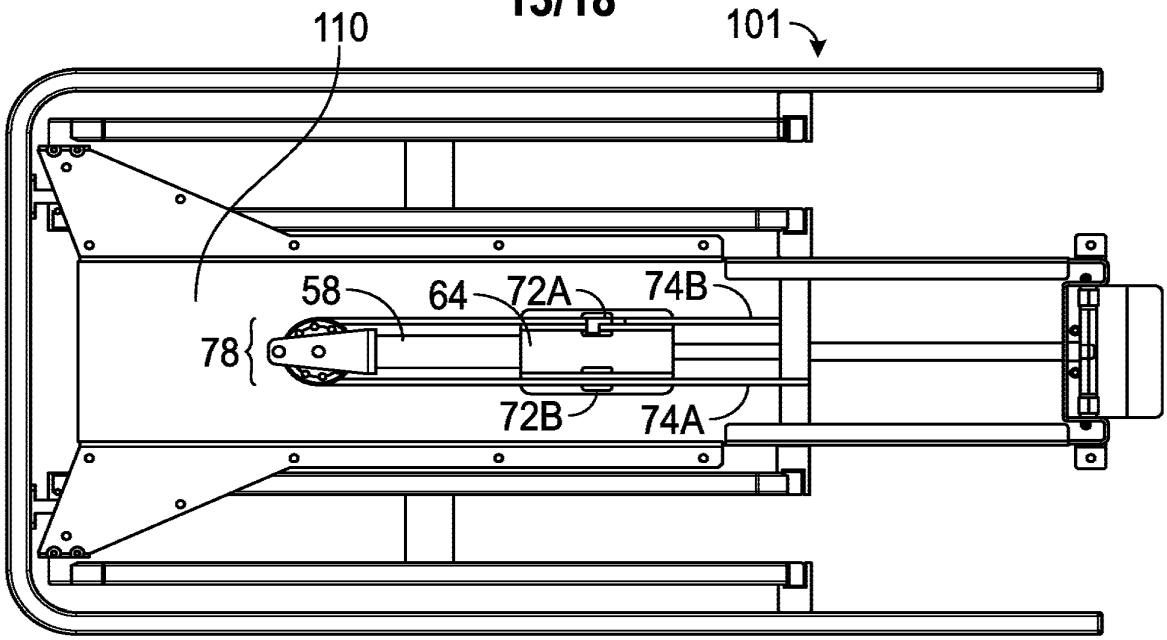

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72B
74A

FIG. 13

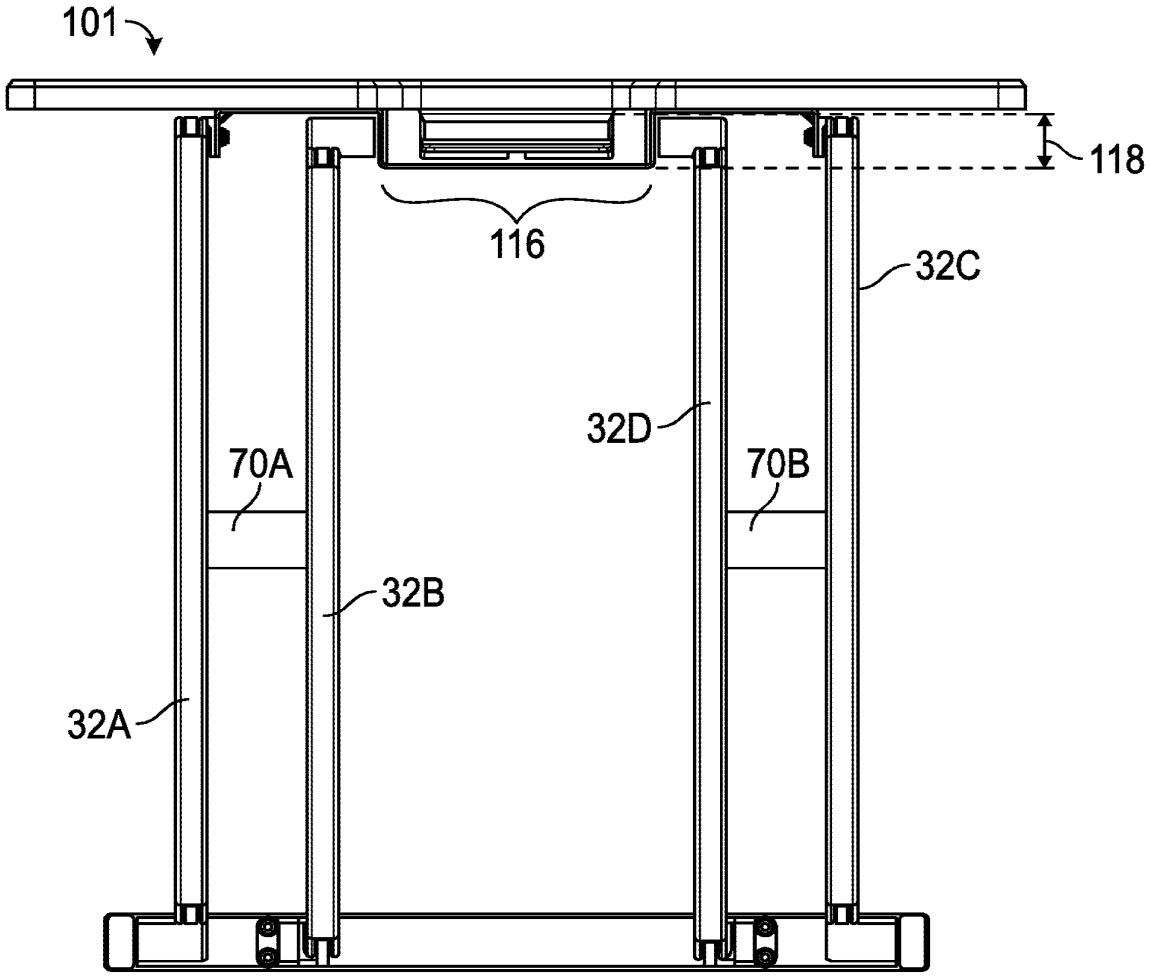

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32A

FIG. 14

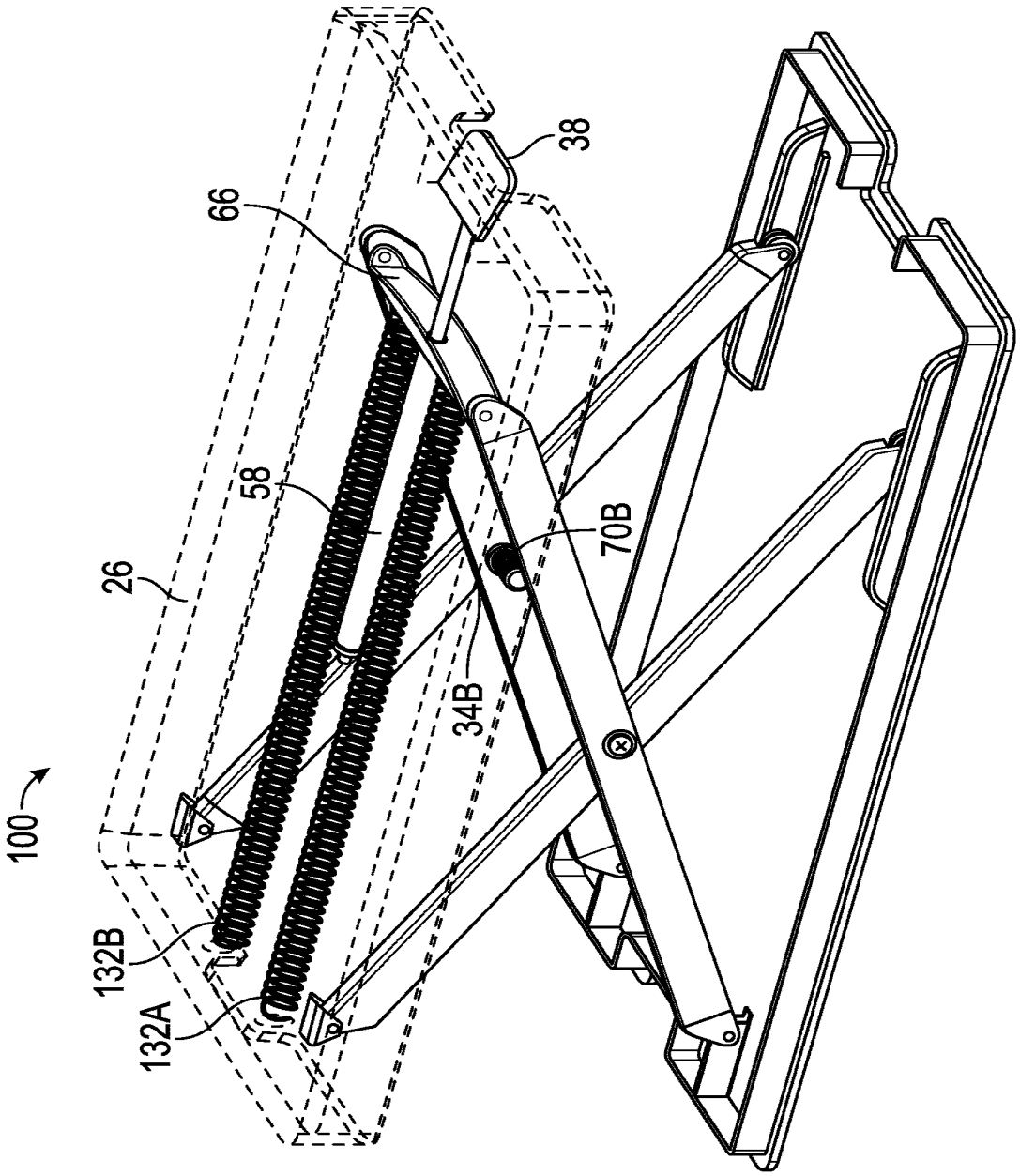


FIG. 15

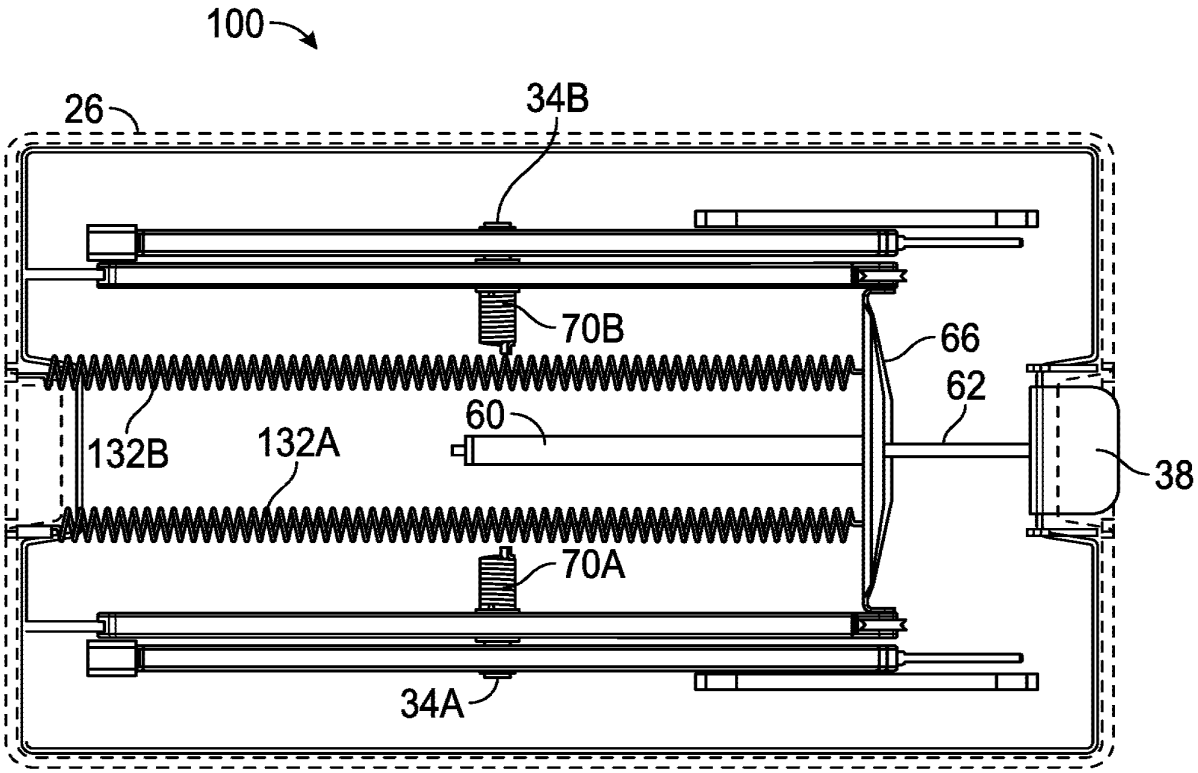


FIG. 16

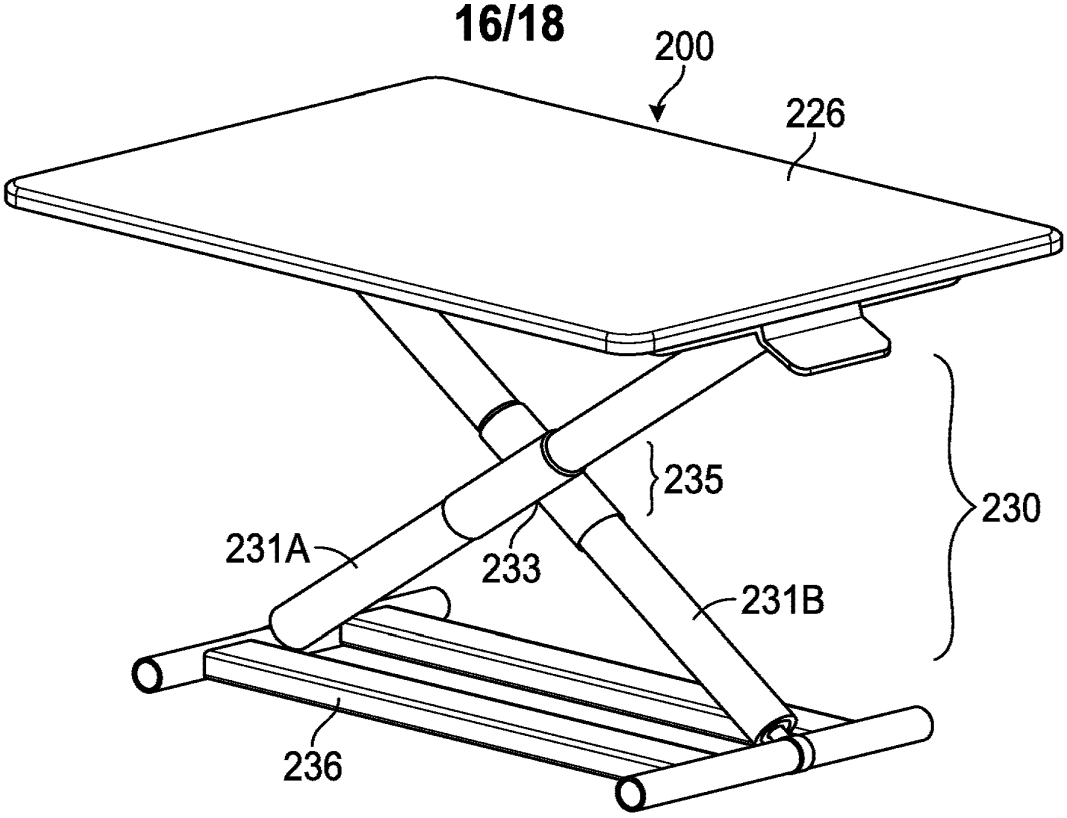

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231A
233
231B
236

FIG. 17

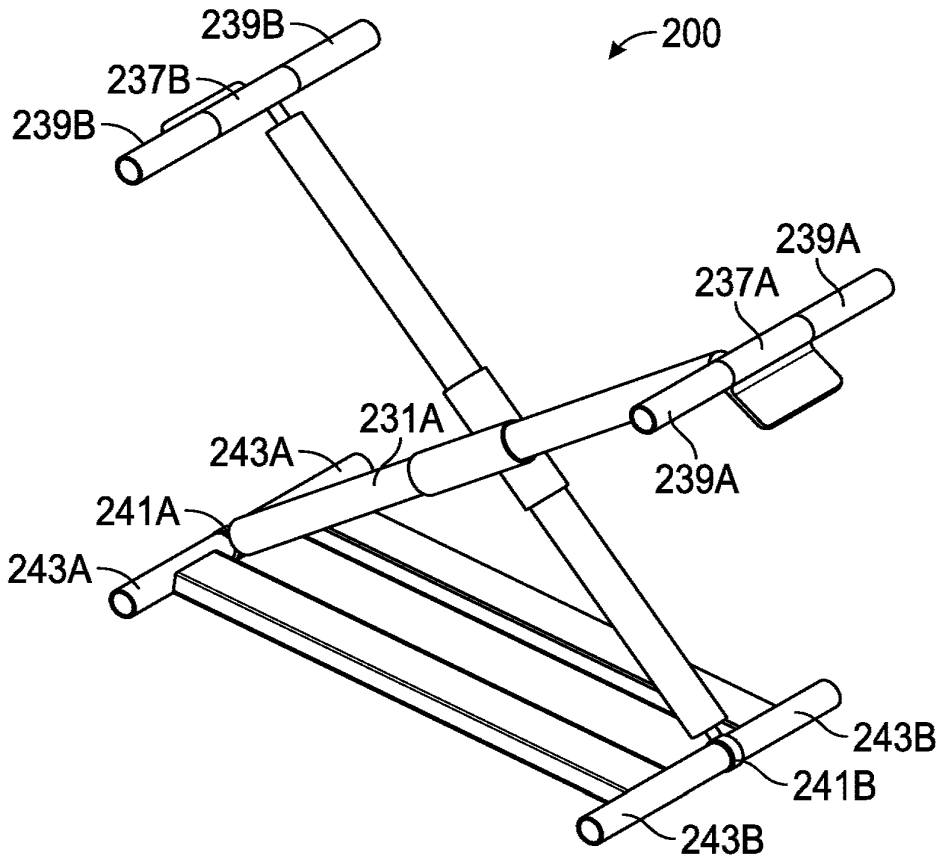

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239A
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243A
239A
241A
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243B
241B
243B

FIG. 18

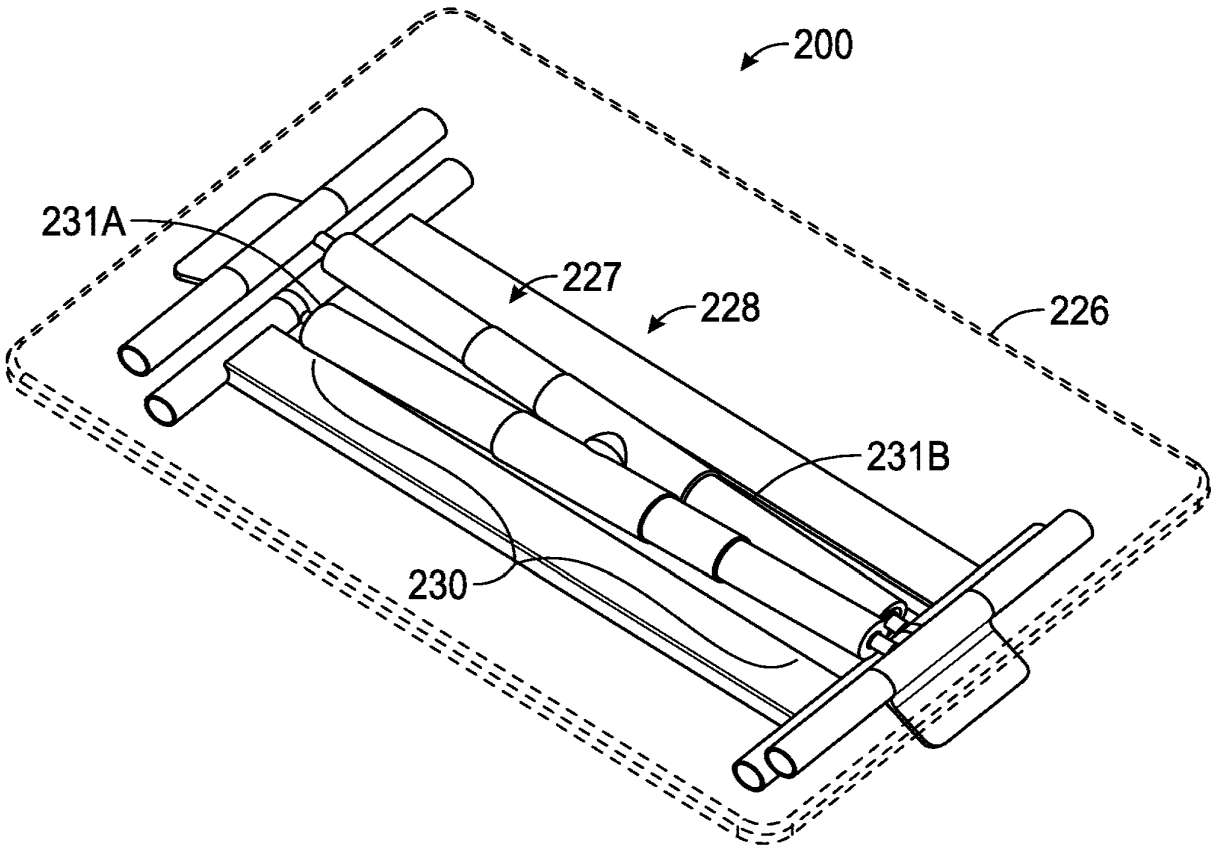

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FIG. 19

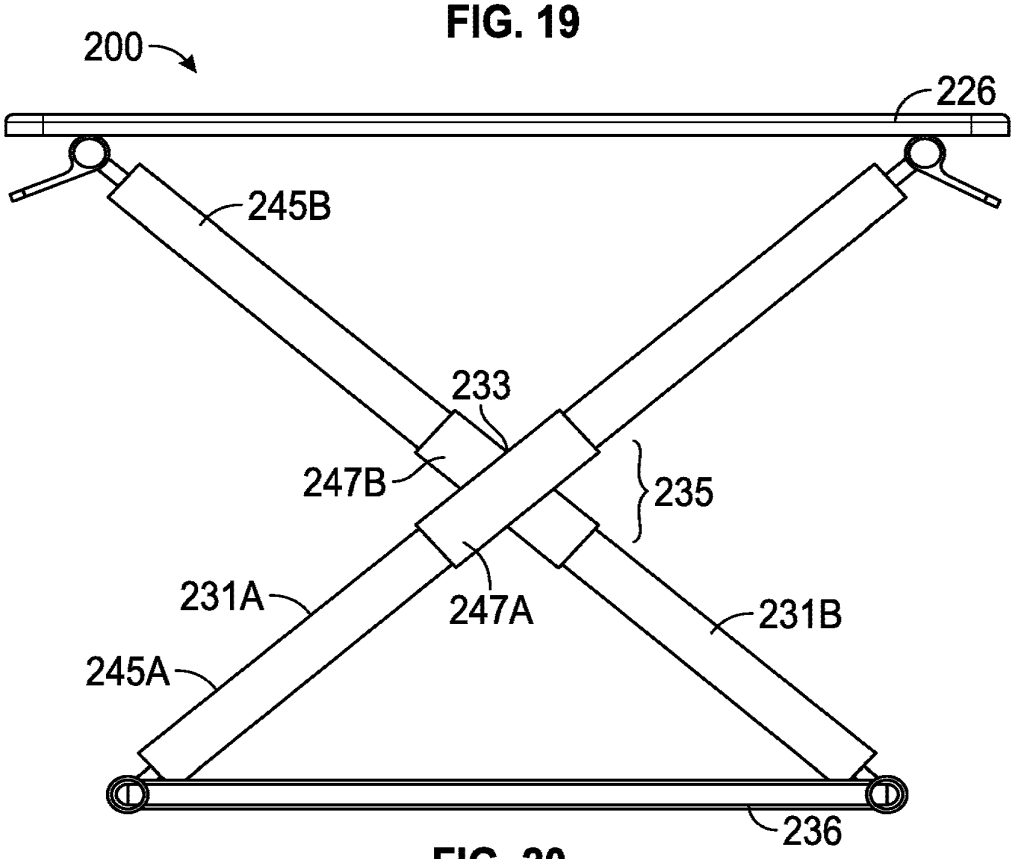

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236

FIG. 20

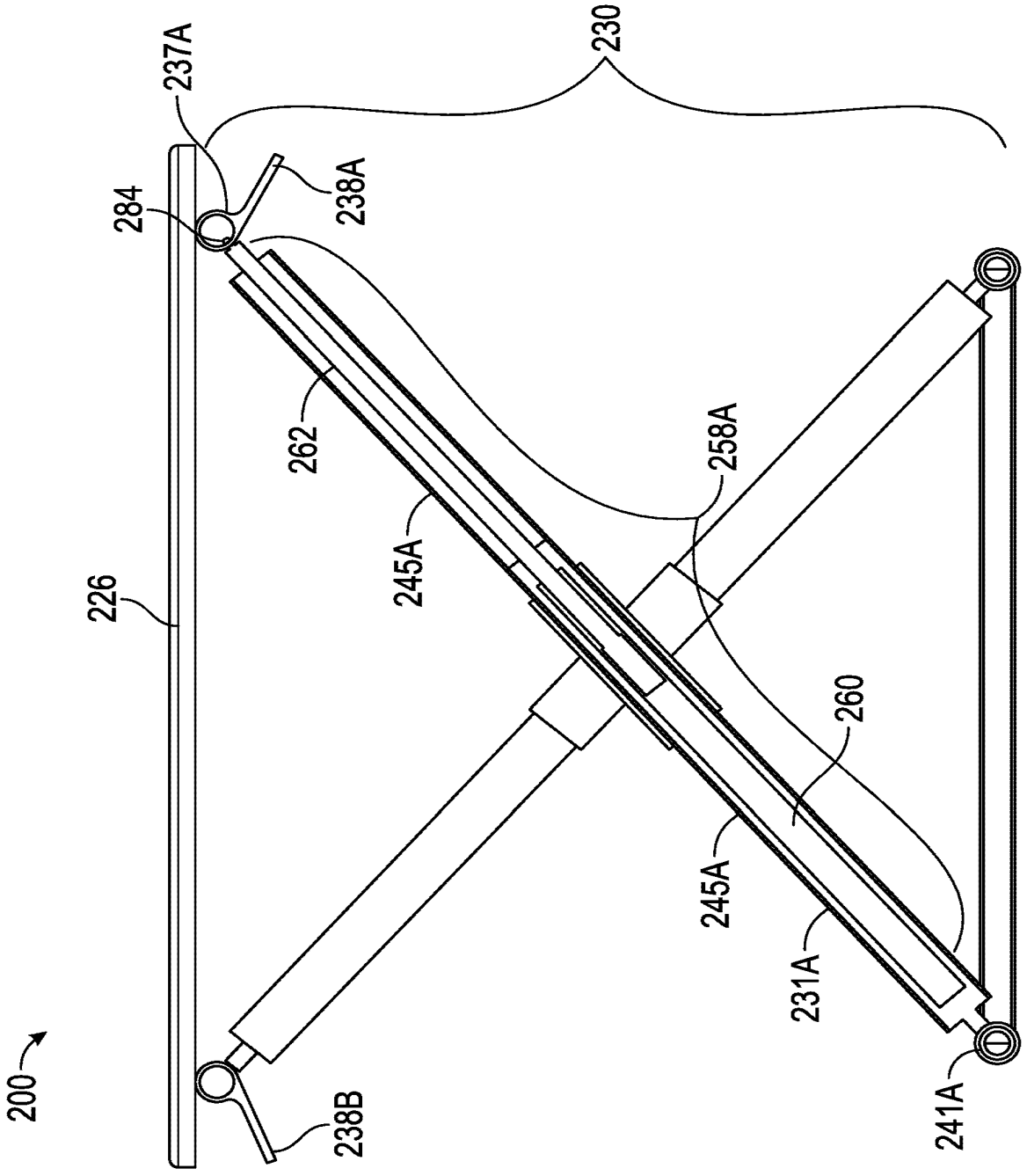

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238B
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FIG. 21

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2016/052233

A. CLASSIFICATION OF SUBJECT MATTER
INV. A47B9/16 A47B9/02
ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A47B B66F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y A	JP S58 61051 U (TENRYU KOGYO CO LTD) 25 April 1983 (1983-04-25) figures 2-3	1,5-7, 12-15 2,3,11, 17 8-10
Y	FR 1 093 171 A (G. G. TOORENS) 2 May 1955 (1955-05-02) figures 1,3,7,8	2,3,11, 17
Y	CN 202 681 006 U (HANGZHOU LANDA ARTS & CRAFTS PRODUCTS CO LTD) 23 January 2013 (2013-01-23) figures 1-2	2,3,11, 17
X Y	KR 101 527 121 B1 (SKE CO LTD) 10 June 2015 (2015-06-10) figures 2,5,7 paragraphs [0032] - [0034]	1,12-14, 16 2,3,11, 17

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
27 October 2016	12/01/2017

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	de Cornulier, P

1

Form PCT/ISA/210 (second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2016/052233

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-17

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-17

   Height adjustment via an horizontal acting energy storage member

   ---

2. claims: 18-20

   Height adjustment via elongation of legs

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/US2016/052233

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP S5861051 U	25-04-1983	NONE	
FR 1093171 A	02-05-1955	NONE	
CN 202681006 U	23-01-2013	NONE	
KR 101527121 B1	10-06-2015	JP 5950172 B1	13-07-2016
		JP 2016159140 A	05-09-2016
		KR 101527121 B1	10-06-2015
		US 2016249737 A1	01-09-2016
		WO 2016137119 A1	01-09-2016

Form PCT/ISA/210 (patent family annex) (April 2005)

(12) 특허협력조약에 의하여 공개된 국제출원

(19) 세계지식재산권기구
국제사무국

(43) 국제공개일
2016 년 8 월 18 일 (18.08.2016)

WIPO | PCT

(10) 국제공개번호
WO 2016/129971 A1

(51) 국제특허분류:
A47B 9/18 (2006.01) *A47B 21/02* (2006.01)
A47B 17/02 (2006.01) *A47B 9/10* (2006.01)

(21) 국제출원번호: PCT/KR2016/001477

(22) 국제출원일: 2016 년 2 월 15 일 (15.02.2016)

(25) 출원언어: 한국어

(26) 공개언어: 한국어

(30) 우선권정보:
10-2015-0022700 2015 년 2 월 13 일 (13.02.2015) KR
10-2015-0034083 2015 년 3 월 11 일 (11.03.2015) KR
10-2015-0157733 2015 년 11 월 10 일 (10.11.2015) KR
10-2015-0157737 2015 년 11 월 10 일 (10.11.2015) KR
10-2015-0157727 2015 년 11 월 10 일 (10.11.2015) KR
10-2015-0157731 2015 년 11 월 10 일 (10.11.2015) KR

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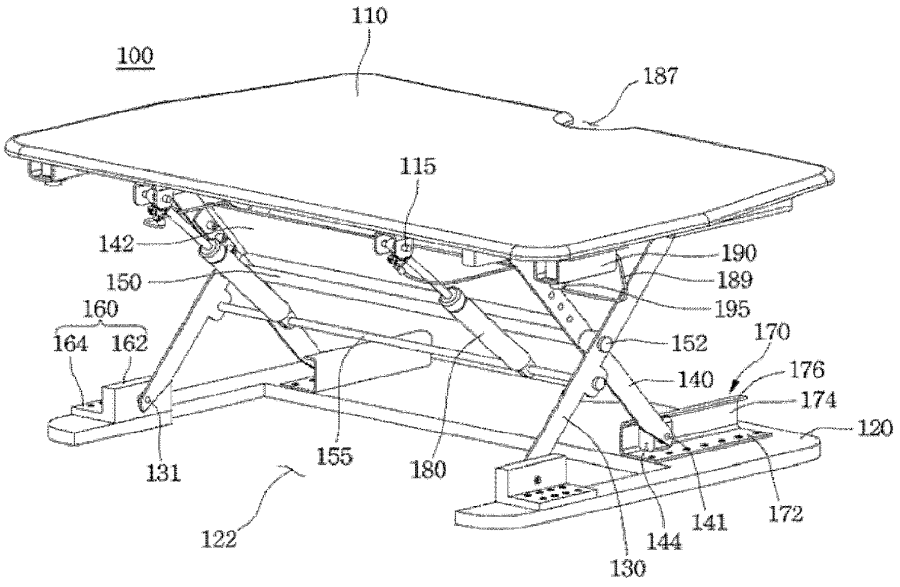
(81) 지정국 (별도의 표시가 없는 한, 가능한 모든 종류의 국내 권리의 보호를 위하여): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) 지정국 (별도의 표시가 없는 한, 가능한 모든 종류의 역내 권리의 보호를 위하여): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG,

[다음 쪽 계속]

(54) **Title**: HEIGHT-ADJUSTABLE DESK

(54) **발명의 명칭** : 높낮이 조절 가능한 책상



(57) **Abstract**: The present invention comprises: a base; an upper plate provided so as to be vertically lifted and lowered with respect to the base; a link device disposed between the base and the upper plate so as to support the upper plate such that the upper plate is lifted and lowered, and including a plurality of link members; a height-adjusting means formed to be extendable at desired lengths, and determining the height of the upper plate with respect to the base according to the length thereof; and an operating means for fixing the height-adjusting means such that the height-adjusting means maintains the desired length.

(57) 요약서:

[다음 쪽 계속]

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ZM, ZW), 유라시아 (AM, AZ, BY, KG, KZ, RU, TJ, TM), 유럽 (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

공개:

— 국제조사보고서와 함께 (조약 제 21 조(3))

— 청구범위 보정 기한 만료 전의 공개이며, 보정서를 접수하는 경우 그에 관하여 별도 공개함 (규칙 48.2(h))

본 발명은 베이스; 상기 베이스에 대해서 상하로 승강 가능하게 장착되는 상판과; 상기 베이스와 상판 사이에 배치되어 상기 상판을 승강 가능하게 지지하며, 복수 개의 링크 부재를 포함하는 링크 기구; 임의의 길이로 신축 가능하게 구성되고, 길이에 따라서 상기 베이스에 대한 상기 상판의 높이가 결정되는 높이조절수단; 및 상기 높이조절수단이 임의의 길이를 유지하도록 고정하는 조작 수단;을 포함한다.

명세서

발명의 명칭: 높낮이 조절 가능한 책상

기술분야

[1] 본 발명은 높낮이 조절 가능한 책상에 관한 것이다.

배경기술

[2] 회사나 학교 등에는 사람이 앉을 수 있는 의자와 함께, 컴퓨터와 책을 놓고 업무 또는 교육을 수행하기에 편리하도록 책상이 구비되어 있다. 이와 같은 기존의 책상들은 높이가 획일적으로 일정하게 만들어지므로 높낮이를 조절할 수 있는 별도의 기능이 없었다.

[3] 상기의 공간에서 근무를 하거나 수업을 받는 사람들은 대부분의 시간을 앉아서 생활하므로 척추가 휘어지는 척추 측만증이 발생하거나, 책상에 놓여진 책과 눈과의 거리 초점이 맞지 않아 눈이 쉽게 피로해지는 등의 정신적 육체적 스트레스가 쌓인다. 이로 인해, 건강한 정신과 육체의 성장에 좋지 못한 영향이 초래되므로 효율적인 업무를 수행하기 어려운 문제점이 있다.

[4] 최근에는 이를 고려하여, 컴퓨터와 책이 받쳐지는 상판의 저면에 길이가 상대적으로 긴 지지대를 결합하여, 서있는 상태에서 사용할 수 있는 책상이 보급되고 있다. 그러나, 일을 하기 위해 장 시간 서있는 것은 더욱 피곤하므로 이러한 책상으로 전술한 문제점을 해결하기에는 한계가 있다.

[5] 장시간 앉아있는 것으로부터 규칙적으로 스트레칭, 운동 등의 휴식을 취하는 것은 신체 또는 정신에 긍정적인 결과를 가져올 수 있으나, 과중한 업무를 수행하는 현대인의 상황을 고려할 때 제약이 많다. 따라서, 계속적인 업무가 수행될 수 있으면서도 사용자의 건강을 고려할 수 있는 인체 공학적인 책상이 요구되고 있다.

[6] 이러한 요구에 부응하여 최근에는 다양한 형태의 높이 조절 책상이 선보이고 있다. 이러한 높이 조절 책상 중 일부는 모터 등을 이용하여 책상 전체가 상하로 이동하도록 한 형태를 갖고 있으나, 이는 모터와 같은 액츄에이터를 필요로 하므로 제조비용이 상승하고, 구조가 복잡한 문제가 있다.

발명의 상세한 설명

기술적 과제

[7] 본 발명은 상기와 같은 문제점을 개선하기 위하여 제안된 것으로서, 종래에 비해서 구조가 간단하면서도 사용자가 상판의 높낮이를 간편하게 조절할 수 있는 책상을 제공하는 것을 목적으로 한다.

과제 해결 수단

[8] 상기와 같은 기술적 과제를 달성하기 위한 본 발명의 일측면에 의하면, 베이스; 상기 베이스에 대해서 상하로 승강 가능하게 장착되는 상판과; 상기 베이스와 상판 사이에 배치되어 상기 상판을 승강 가능하게 지지하며, 복수 개의 링크

부재를 포함하는 링크 기구; 임의의 길이로 신축 가능하게 구성되고, 길이에 따라서 상기 베이스에 대한 상기 상판의 높이가 결정되는 높이조절수단; 및 상기 높이조절수단이 임의의 길이를 유지하도록 고정하는 조작 수단;을 포함하는 높낮이 조절 가능한 책상이 제공된다.

도면의 간단한 설명

[9] 도 1은 본 발명의 제 1 실시예에 따른 높낮이 조절 가능한 책상이 도시된 사시도.

[10] 도 2는 상판과 베이스를 분리한 높낮이 조절 가능한 책상이 도시된 사시도.

[11] 도 3은 도 1의 A를 확대한 사시도.

[12] 도 4는 본 발명의 제 1 실시예에 따른 높이조절기구를 설명하기 위한 측면도.

[13] 도 5는 본 발명의 제 1 실시예에 따른 상판이 하부로 이동된 모습을 보인 사시도.

[14] 도 6은 본 발명의 제 1 실시예에 따른 높낮이 조절 가능한 책상에 고정다리를 결합한 모습을 보인 사시도.

[15] 도 7은 본 발명의 제 1 실시예에 따른 높낮이 조절 가능한 책상과 고정다리의의 분해 사시도.

[16] 도 8은 본 발명의 제 2 실시예에 따른 높낮이 조절 가능한 책상의 사시도.

[17] 도 9는 본 발명의 제 2 실시예에 따른 보조 받침대를 분리한 모습을 보인 사시도.

[18] 도 10은 본 발명의 제 3 실시예에 따른 높낮이 조절 가능한 책상이 도시된 사시도,

[19] 도 11은 본 발명의 제 3 실시예의 상판이 상승되었을 때의 측면도,

[20] 도 12는 본 발명의 제 3 실시예의 상판이 최저 높이로 하강되었을 때의 측면도,

[21] 도 13은 본 발명의 제 4 실시예의 상판이 스토퍼에 의해 상승 제한될 때의 단면도,

[22] 도 14는 본 발명의 제 4 실시예의 상판이 스토퍼에 의해 하강 제한될 때의 단면도.

[23] 도 15는 본 발명의 제 5 실시예에 따른 높낮이 조절 가능한 책상의 후방측 사시도,

[24] 도 16은 본 발명의 제 5 실시예의 수평 유지부가 확대 도시된 사시도,

[25] 도 17은 본 발명의 제 6 실시예의 높낮이 조절 가능한 책상이 도시된 사시도,

[26] 도 18은 본 발명의 제 7 실시예의 높낮이 조절 가능한 책상이 도시된 사시도,

[27] 도 19는 본 발명의 제 8 실시예의 높낮이 조절 가능한 책상의 상판이 상승되었을 때의 사시도,

[28] 도 20은 본 발명의 제 8 실시예의 높낮이 조절 가능한 책상의 상판이 하강되었을 때의 사시도,

[29] 도 21은 본 발명의 제 9 실시예의 높낮이 조절 가능한 책상이 도시된 사시도,

[30] 도 22는 본 발명의 제 9 실시예의 높낮이 조절 가능한 책상이 도시된 측면도,

[31] 도 23은 상기 제 10 실시예의 변형예를 도시한 사시도,

[32] 도 24는 본 발명의 제 11 실시예에 따른 책상의 사시도.

[33] 도 25는 본 발명의 제 12 실시예에 따른 책상의 사시도.

[34] 도 26는 도 25의 책상을 다른 각도에서 바라본 사시도.

[35] 도 27은 회동부와 지지부가 제 1 가스 스프링을 통해 결합된 모습을 보인 사시도.

[36] 도 28은 책상이 작업대로 사용될 때의 구성을 보인 사시도.

발명의 실시를 위한 형태

[37] 이하에서는 본 발명의 구체적인 실시예를 도면과 함께 상세히 설명하도록 한다.

[38] 이하, 첨부된 도면을 참조하여 본 명세서에 개시된 실시예를 상세히 설명하되, 도면 부호에 관계없이 동일하거나 유사한 구성요소는 동일한 참조 번호를 부여하고 이에 대한 중복되는 설명은 생략하기로 한다. 이하의 설명에서 사용되는 구성요소에 대한 접미사 "부"는 명세서 작성의 용이함만이 고려되어 부여되거나 혼용되는 것으로서, 그 자체로 서로 구별되는 의미 또는 역할을 갖는 것은 아니다. 또한, 본 명세서에 개시된 실시예를 설명함에 있어서 관련된 공지 기술에 대한 구체적인 설명이 본 명세서에 개시된 실시예의 요지를 흐릴 수 있다고 판단되는 경우 그 상세한 설명을 생략한다. 또한, 첨부된 도면은 본 명세서에 개시된 실시예를 쉽게 이해할 수 있도록 하기 위한 것일 뿐, 첨부된 도면에 의해 본 명세서에 개시된 기술적 사상이 제한되지 않으며, 본 발명의 사상 및 기술 범위에 포함되는 모든 변경, 균등물 내지 대체물을 포함하는 것으로 이해되어야 한다.

[39]

[40] 도 1은 본 발명의 제 1 실시예에 따른 높낮이 조절 가능한 책상이 도시된 사시도이고, 도 2는 상판과 베이스를 분리한 높낮이 조절 가능한 책상이 도시된 사시도이며, 도 3은 도 1의 A를 확대한 사시도 이다.

[41] 도 1 내지 도 3을 참조하면 본 발명의 제 1 실시예에 따른 높낮이 조절 가능한 책상(100)은 베이스(120)와, 상판(110)를 포함할 수 있다.

[42] 베이스(120)는 높낮이 조절 가능한 책상(100)의 하부를 형성할 수 있고, 하면이 지면 또는 바닥면에 접촉되어 높낮이 조절 가능한 책상(100)을 지지할 수 있다. 베이스(120)의 전방에는 후방을 향해 소정거리 함몰되는 함몰홈(122)이 형성될 수 있다. 함몰홈(122)은 사용자의 신체 중 일부를 수용할 수 있고, 사용자는 높낮이 조절 가능한 책상(100)의 전방에 위치할 경우 높낮이 조절 가능한 책상(100)에 보다 가까이 다가갈 수 있다.

[43] 상판(110)은 대략 판 형상으로 형성된다. 경우에 따라서, 상판(110)은 함몰홈(122)을 포함한 베이스(120)의 단면 형상과 대응되도록 형성될 수 있다.

상판(110)의 상면에는 사용자의 업무 또는 학습 도구들이 놓일 수 있다. 예를 들면, 상판(110)의 상면에는 모니터, 책, 키보드 등 다양한 도구들이 놓일 수 있다.

[44] 그리고, 상판(110)의 후방부에는 전방을 향해 함몰되는 배선 수용홈(187)이 형성될 수 있다. 배선 수용홈(187)은 상판(110)의 후방부 일부가 내측으로 함몰되어 상판(110)에 구비될 수 있다. 배선 수용홈(187)에는 상판(110)에 놓여지는 업무 도구 중 일부가 수용될 수 있다. 예를 들면, 상판(110)에 컴퓨터 모니터가 놓여질 경우, 컴퓨터 모니터로 전력을 제공하는 배선이 배선 수용홈(187)에 수용됨으로써 보다 깔끔하게 정돈될 수 있다.

[45] 높이 조절 가능한 책상은 상판(110)과 베이스(120)를 연결하며, 베이스(120)에 대한 상판(110)의 높이를 조절하기 위한 높이조절수단을 포함할 수 있다.

[46] 높이조절수단은 상판(110)의 아래에 위치되게 구비될 수 있다. 높이조절수단은 베이스(120)와 상판(110)의 사이에 배치될 수 있다.

[47] 높이조절수단은 베이스(120)와 상판(110) 사이에 배치되어 상판(110)을 승강 가능하게 지지하는 링크 기구를 포함할 수 있다. 높이조절수단은 사용자의 조작시 상판(110)을 상승시키는 방향으로 가압하는 구동원을 포함할 수 있다.

[48] 높이조절수단은 상판(110)을 베이스(120)에 대하여 상대 이동시키기 위한 복수의 연결부재(130,140)를 포함할 수 있다. 상기 연결부재는 상기 베이스(120)와 상기 상판(110)이 그 양단부에 각각 회전 가능하게 장착되는 막대 형태를 갖는다. 상기 복수의 연결부재(130,140)는 상판(110)과 베이스(120)와 거리가 변화되게 상판(110)을 승강시킬 수 있다.

[49] 복수의 연결부재(130,140)는 상판(110)과 베이스(120)의 사이에서 양 측에 각각 구비될 수 있다. 경우에 따라서, 상기 복수의 연결부재는 상기 상판(110)과 베이스(120)의 사이에서 전후면에 각각 구비될 수도 있다. 이에 대해서는 후술하도록 한다. 상기 복수의 연결부재(130, 140)는 상판(110)의 후방 측 저면으로부터 베이스(120)의 전방 측 상면을 향해 연장되는 제 1 연결부재(130)와, 상판(110)의 전방 측 저면으로부터 베이스(120)의 후방 측 상면을 향해 연장되는 제 2 연결부재(140)를 포함한다. 제 1 연결부재(130)와 제 2 연결부재(140)는 상판(110)과 베이스(120)의 사이에서 서로 교차되게 배치될 수 있다. 제 1 연결부재(130)와 제 2 연결부재(140)는 옆에서 볼 때, 대략 'X'자 형태를 이루게 배치될 수 있다.

[50] 제 1 연결부재(130)는 일단이 베이스(120)의 전방 측 상면에 구비되는 제 1 결합부(160)와 결합되고, 타단이 상판(110)의 후방 측 저면에 구비되는 제 1 슬라이드 가이드(165)에 슬라이딩 이동되는 제 1 이동부(169)와 결합된다. 제 1 결합부(160)와 제 1 슬라이드 가이드(165)는 제 1 연결부재(130)의 개수에 대응하여 베이스(120)의 상면 양측과 상판(110)의 저면 양측에 각각 구비된다.

[51] 제 1 결합부(160)는, 하면이 베이스(120)의 상면에 나사 또는 링크를 통해 결합되는 제 1 수평부(164)와, 제 1 수평부(164)의 일측으로부터 상방을 향해 연장되어 제 1 연결부재(130)의 일단이 결합되는 제 1 수직부(162)를 포함한다.

그리고, 제 1 수직부(162)의 측면에 제 1 연결부재(130)의 일단이 회동 가능하도록 힌지 결합된다. 즉, 제 1 연결부재(130)로부터 제 1 수직부(162)를 관통하는 힌지핀(131)에 의해 제 1 연결부재(130)의 일단이 회동 가능하도록 결합된다. 경우에 따라서는 상기 제1 연결부재(130)의 일단부는 상기 제1 결합부 없이 직접 상기 베이스에 힌지 결합될 수도 있다.

[52] 제 1 슬라이드 가이드(165)는 상판(110)의 후방 측 하면 양측에 각각 구비된다. 제 1 슬라이드 가이드(165)는, 상면이 상판(110)의 하면에 결합되는 제 1 상면부(166)와, 제 1 상면부(166)의 일측에서 하방을 향해 연장되는 제 1 측면부(167)와, 제 1 측면부(167)의 단부로부터 내측을 향해 연장되는 제 1 하면부(168)를 포함한다. 제 1 상면부(166)와 제 1 측면부(167) 와 상기 제 1 하면부(168)에 의해 제 1 슬라이드 가이드(165)의 단면 형상은 일측면이 개방된 상자 형상을 이룬다. 그리고, 제 1 슬라이드 가이드(165)의 제 1 상면부(166)와 제 1 측면부(167)와 제 1 하면부(168)에 의해 형성되는 공간에는 제 1 이동부(169)의 외면이 접하며 슬라이딩 이동될 수 있다.

[53] 제 1 이동부(169)의 측면에는 제 1 연결부재(130)의 타단이 힌지 결합되어, 제 1 이동부(169)가 제 1 슬라이드 가이드(165)를 따라서 슬라이할 경우 제 1 연결부재(130)의 기울기가 변경된다. 다시 말하면, 제 1 연결부재(130)는 제 1 수직부(162)와의 힌지 결합과 제 1 이동부(169)와의 힌지 결합을 통해, 상판(110) 및 베이스(120) 각각과 이루는 각도가 변경된다. 도 2 에 도시된 바와 같이, 제 1 연결부재(130)가 베이스(120)와 이루는 각도가 상대적으로 높을 경우에는 제 1 이동부(169)가 제 1 슬라이드 가이드(165)의 전방에 가깝게 위치하고, 제 1 연결부재(130)가 베이스(120)와 이루는 각도가 상대적으로 낮을 경우에는 제 1 이동부(169)가 제 1 슬라이드 가이드(165)의 후방에 가깝게 위치한다. 제 1 연결부재(130)의 타단이 슬라이딩 이동됨과 동시에 제 1 연결부재(130)의 일단은 제 1 결합부(160)를 통해 회동될 수 있다.

[54] 제 2 연결부재(140)는 일단이 상판(110)의 전방 측 하면에 구비되는 제 2 결합부(145)와 결합되고, 타단이 베이스(120)의 후방 측 상면에 구비되는 제 2 슬라이드 가이드(170)에 슬라이딩 이동되는 제 2 이동부(144)에 결합된다. 제 2 결합부(145)와 제 2 슬라이드 가이드(170)는 제 2 연결부재(140)의 개수에 대응하여 베이스(120)의 상면 양측과 상판(110)의 저면 양측에 각각 구비된다.

[55] 제 2 결합부(145)는, 상면이 상판(110)의 하면에 나사 또는 링크를 통해 결합되는 제 2 수평부(146)와, 제 2 수평부(146)의 일측으로부터 하방을 향해 연장되어 제 2 연결부재(140)의 일단이 결합되는 제 2 수직부(147)를 포함한다. 그리고, 제 2 수직부(147)의 측면에 제 2 연결부재(140)의 일단이 회동 가능하도록 힌지 결합될 수 있다. 즉, 제 2 연결부재(140)로부터 제 2 수직부(147)를 관통하는 힌지핀에 의해 제 2 연결부재(140)의 일단이 회동 가능하도록 결합될 수 있다.

[56] 제 2 슬라이드 가이드(170)는 베이스(120)의 후방 측 상면 양측에 각각

구비된다. 제 2 슬라이드 가이드(170)는 하면이 베이스(110)의 상면에 결합되는 제 2 하면부(172)와, 제 2 하면부(172)의 일측에서 상방을 향해 연장되는 제 2 측면부(174)와, 제 2 측면부(174)의 단부로부터 외측을 향해 연장되는 제 2 상면부(176)를 포함한다. 제 2 하면부(172)와 제 2 측면부(174)와 제 2 상면부(176)에 의해 제 2 슬라이드 가이드(165)의 단면 형상은 일측이 개방된 상자 형상을 이룬다. 그리고, 제 2 슬라이드 가이드(170)에는, 상기 제 2 하면부(172)와 상기 제 2 측면부(174)와 상기 제 2 상면부(176)에 의해 형성되는 공간을 슬라이딩 이동 하도록 제 2 이동부(144)가 구비된다.

[57] 제 2 이동부(144)의 측면에는 제 2 연결부재(140)의 타단이 힌지 결합되어, 제 2 이동부(144)가 제 2 슬라이드 가이드(170) 상을 슬라이딩 이동할 경우 제 2 연결부재(140)의 기울기가 변경된다. 다시 말하면, 제 2 연결부재(140)는 제 2 수직부(147)와의 힌지 결합과 제 2 이동부(144)와의 힌지 결합을 통해, 상판(110) 및 베이스(120)와 이루는 각도가 변경된다. 도 2 에 도시된 바와 같이, 제 2 연결부재(140)가 베이스(120)와 이루는 각도가 상대적으로 높을 경우에는 제 2 이동부(144)가 제 2 슬라이드 가이드(170)의 전방에 가깝게 위치하고, 제 2 연결부재(140)가 상기 베이스(120)와 이루는 각도가 상대적으로 낮을 경우에는 제 2 이동부(144)가 제 2 슬라이드 가이드(170)의 후방에 가깝게 위치한다. 제 2 연결부재(140)의 타단이 슬라이딩 이동됨과 동시에 제 2 연결부재의 일단은 제 2 결합부(145)를 통해 회동될 수 있다.

[58] 정리하면, 제 1 결합부(160)와 제 2 결합부(145)는 상판(110)의 하면과 베이스(120)의 상면에서 상호 대칭되도록 구비될 수 있고, 제 1 슬라이드 가이드(165)과 제 2 슬라이드 가이드(170)는 상판(110)의 하면과 베이스(120)의 상면에서 상호 대칭되도록 구비될 수 있다.

[59] 한편, 제 1 연결부재(130)와 제 2 연결부재(140)가 상호 교차하는 영역에는 회전 중심을 형상하는 회동축(150)이 끼워진다. 상세히, 회동축(150)의 양단부는 양측에 배치되는 복수의 연결부재(130, 140)이 서로 교차하는 영역에 각각 끼워질 수 있다. 이를 위하여, 제 1 연결부재(130)와 제 2 연결부재(140)가 교차하는 영역에는 회동축(150)이 끼워지도록 각각 상호 대응되는 관통홀(미도시)이 형성되고, 관통홀에 회동축(150)의 양단부가 끼워져 고정된다. 따라서, 회동축(150)을 통해 제 1 연결부재(130)와 제 2 연결부재(140)는 상대 회동될 수 있다. 다시 말하면, 회동축(150)은 제 1 연결부재(130)와 제 2 연결부재(140)에 의해 형성되는 'X'자 형상의 중심축을 형성할 수 있다.

[60] 한편, 상기 제 1 및 제 2 연결부재는 반드시 도시된 형태로 한정되는 것은 아니며, 두 개의 연결부재가 서로 평행하게 배치되는 예도 고려할 수 있다. 이 경우, 두 개의 연결부재는 양단부가 상판 및 베이스에 각각 힌지 결합되고, 상기 슬라이드 가이드는 생략된다.

[61] 그리고, 높낮이 조절 가능한 책상(100)의 양측에 각각 복수로 배치되는 제 1 연결부재(130)에는 복수의 제 1 연결부재(130)가 평행하게 동작될 수 있도록

복수개의 제 1 연결부재(130)를 연결하는 연결부재 커넥터(미도시)가 구비될 수 있다. 본 실시예는 복수개의 제 1 연결부재(130)의 내측면에 연결된 결합축(155)이 연결부재 커넥터로 기능할 수 있다.

[62] 또한, 높낮이 조절 가능한 책상(100)의 양측에 각각 복수로 배치되는 제 2 연결부재(140)에는 복수의 제 2 연결부재(140)가 평행하게 동작될 수 있도록 복수개의 제 2 연결부재(140)를 연결하는 커넥터(142)가 구비될 수 있다.

[63] 여기서, 상기 커넥터(142) 및 결합축(155)은 상기 한 쌍의 제1 및 제2 연결부재(130, 140)들 사이에서 양단이 결합되며, 그에 따라서 두 개의 제1 연결부재(130) 또는 제2 연결부재(140)의 이동을 동기화시켜서 상기 상판이 베이스에 대해서 평행한 상태를 유지하도록 한다. 또한, 상기 결합축 및 커넥터는 상기 링크 기구의 강성을 높이는 보강 부재로서도 기능할 수 있다.

[64] 그리고, 상기 실시예에서 한 쌍의 제 1 및 제 2 연결부재는 상판의 좌측면에, 다른 한 쌍의 제 1 및 제 2 연결부재는 우측면에 배치되어 있으나, 이와 달리 전후면에 배치되는 예도 고려할 수 있다.

[65] 아울러, 제1 및 제2 연결 부재가 모두 구비될 필요는 없으며, 이 중 하나를 생략하고 상기 높이조절기구가 생략된 연결 부재의 역할을 하도록 할 수 있다. 구체적으로, 제 2 연결부재를 생략하고 높이조절기구가 제 1 연결부재와 X자로 교차하도록 배치하는 예도 고려할 수 있다.

[66]

[67] 도 4는 본 발명의 제 1 실시예에 따른 높이조절기구를 설명하기 위한 측면도이다.

[68] 도 1 및 도 4를 참조하면, 높낮이 조절 가능한 책상(100)은 상판(110)의 높이가 가변되게 설치된 높이조절기구(180)를 포함할 수 있다. 높이조절기구(180)는 가스 실린더(스프링)과 유압 실린더 중 적어도 하나를 포함할 수 있다.

[69] 복수의 제 1 연결부재(130)는 서로 대향되게 위치될 수 있고, 복수의 제 1 연결부재(120)에는 결합축(155)의 양 단부가 끼워진다. 결합축(155)은 후술할 높이조절기구(180)의 단부가 결합되는 구성일 수 있고, 복수로 구비되는 제 1 연결부재(130)의 내측면 사이에 수평하게 배치될 수 있고, 복수의 제 1 연결부재(130)에 끼워져 고정된다.

[70] 그리고, 상판(110)의 전방 측 하면에는 높이조절기구(180)의 또 다른 단부가 끼워지는 높이조절기구 결합부(115)가 구비된다. 높이조절기구 결합부(115)는 상기 상판(110)의 하면 중 전단에 가깝도록 배치될 수 있다. 상세히, 높이조절기구 결합부(115)는 상판(110)의 하면에 결합되는 결합부 몸체(116)와, 결합부 몸체(116)의 일측으로부터 하방으로 연장되어 높이조절기구(180)의 단부가 통과되도록 축이 구비되는 결합부 연장체(117)를 포함할 수 있다. 높이조절기구 결합부(115)는 각각 중심에 대해 서로 대칭하여 복수로 구비될 수 있다.

[71] 그리고, 상판(110)의 높낮이를 조절하기 위하여 일단이 높이조절기구

결합부(115)에 끼워지고, 타단이 결합축(155)에 끼워지는 높이조절기구(180)가 구비된다. 도 4에 도시된 바와 같이, 상기 높이조절기구(180)은 중공의 튜브 형상의 실린더(181)와, 실린더(181) 안의 중공 부분에 삽입되는 피스톤 로드(182)를 포함한다. 그리고, 실린더(181)의 하부에 배치되는 결합부(184)에 홀(184a)이 형성되어, 결합축(155)이 홀(184a)을 관통함으로써 높이조절기구(180)의 타단을 고정시킨다. 또한, 피스톤 로드(182)의 상부에는 마찬가지로 결합부 연장체(117)에 구비된 축이 통과하도록 홀(182a)이 형성되며, 결합부 연장체(117)의 축이 홀(182a)을 통과함으로써 높이조절기구(180)의 일단을 고정시킨다.

[72] 한편, 높이조절기구(180)는 피스톤 로드(182)가 실린더(181) 내에서 슬라이드 하면서 실린더로부터 돌출된 길이가 가변될 수 있는 구성이다. 즉, 상기 실린더(181)의 내부에는 가스가 주입되고, 주입된 가스는 상기 피스톤 로드(182)에 압력을 가하여 피스톤 로드(182)의 움직임을 저지하는 댐핑력을 발휘한다. 도시되지는 않았으나 상기 피스톤 로드(182)의 상측에는 내부 가스를 선택적으로 개폐하기 위한 가스 개폐 핀과 가스 개폐 핀을 동작시키기 위한 개폐 가이드가 구비되고, 개폐 가이드에 케이블(189)의 일단이 연결된다. 따라서, 케이블(189)이 당겨지는 동작에 의해 높이조절기구(180) 내의 가스가 이동될 수 있는 상태가 되고, 이러한 상태에서는 상기 피스톤 로드(182)는 상하로 이동될 수 있다.

[73] 구체적으로, 상기 피스톤 로드 및 실린더의 내부에는 가스가 충전된 공간 및 상기 가스가 이동하도록 형성되는 가스 유로가 구비되어 있고, 상기 가스 개폐 핀의 위치에 따라서, 충전된 가스는 이동 가능한 상태가 되거나 정지된 상태를 유지하는 상태에 놓일 수 있게 된다. 상기 피스톤 로드가 이동하면 그에 따라 내부에 충전된 가스 또한 이동하여야 한다. 따라서, 가스가 이동 가능한 상태에서만 상기 피스톤 로드 또한 이동할 수 있게 되며, 가스가 정지된 상태를 유지하면 상기 피스톤 로드 또한 정지된 상태를 유지하게 된다. 따라서, 상기 가스 개폐 핀의 위치에 따라서 상기 피스톤 로드가 이동 가능한 상태 또는 정지된 상태에 있게 된다.

[74] 이때, 상기 실린더 내에 주입된 가스는 상기 피스톤 로드가 이동하는 과정에서 지속적으로 피스톤 로드에 압력을 가하게 된다. 따라서, 상기 케이블(189)이 당겨져서 피스톤 로드가 움직일 수 있는 상태가 되더라도, 피스톤 로드는 적정 정도의 댐핑력에 의해 지지되게 된다. 이러한 댐핑력은 상기 상판의 높이를 조절하는 과정에서, 상판에 거치된 각종 물품들의 하중을 지탱하게 된다. 이로 인해서, 상판의 높이를 조절하는 과정에서도 사용자가 자신의 힘으로 상판을 지지할 필요가 없어지게 되어, 큰 힘을 들이지 않고도 손쉽게 상판을 들어올리거나 내릴 수 있게 된다.

[75] 그리고, 케이블(189)이 당겨지는 힘이 해제되면, 상기 실린더 내의 가스는 이동이 불가능한 상태가 되어, 상기 피스톤 로드 또한 움직이지 않고 고정된

상태를 유지하게 된다.

[76] 여기서, 상기 실린더 내에 주입되는 가스의 압력은 상기 책상이 사용되는 용도 또는 책상의 크기 등에 따라 적절히 조정될 수 있다. 가령, 상기 상판이 클수록 거치되는 물품의 수도 늘어나고 허용 하중 또한 커지게 된다. 따라서, 이렇게 증가된 허용 하중에 따라 실린더 내의 압력도 커질 수 있다.

[77] 한편, 상기 실린더 내에는 가스만이 단독으로 주입될 수도 있으나, 가스와 오일이 함께 주입될 수도 있다. 가령, 상기 실린더 내에는 질소 가스 및 오일이 함께 충전될 수 있는데, 비압축성 유체인 오일을 혼용함으로써 상판에 힘을 가한 직후 또는 원하는 위치에서 상판을 정지시키는 경우에 상판의 진동을 최소화하는 역할을 하게 된다.

[78]

[79] 한편, 상기 케이블(189)은 상기 상판의 저면에 설치되는 버튼부(195)와 연결된다. 즉, 상기 버튼부(195)의 동작을 통해 케이블(189)이 당겨지게 되고, 그에 따라 상판은 높이 조절이 가능한 상태로 전환될 수 있다.

[80] 상기 버튼부(195)는 도시된 바와 같이 상기 상판(110)의 하부 양측에 각각 배치되는 조작부(190) 내에 구비된다. 도시된 예에서, 두 개의 높이조절기구(180)가 구비되어 있으므로, 상기 조작부 및 버튼부 또한 각각 두 개씩 구비되어 있다. 즉, 상기 조작부 및 버튼부는 상기 높이조절기구의 수와 동일한 개수로 구비될 수 있지만, 경우에 따라서는 두 개 이상의 케이블이 하나의 버튼부에 고정되는 예도 고려할 수 있다.

[81] 이하에서는, 높낮이 조절 가능한 책상(100)의 높낮이를 조절하는 과정에 대해 설명하기로 한다.

[82] 도 5는 본 발명의 제 1 실시예에 따른 상판이 하부로 이동된 모습을 보인 사시도이다.

[83] 도 1 및 도 5를 참조하면, 본 발명의 제 1 실시예에 따른 높낮이 조절 가능한 책상(100)은 상판(110)의 높이가 가변 된다. 사용 예로, 높낮이 조절 가능한 책상(100)은 다른 높낮이 조절 가능한 책상의 상면에 놓여 사용될 수 있다. 이 때, 상판(110)이 도 5에서와 같이 베이스(120)에 가깝게 위치할 경우 사용자는 앉은 상태에서 업무를 수행할 것이다. 그리고, 상판(110)이 도 1에서와 같이 상부로 이동될 경우에는 상판(110)의 눈높이에 맞추어 서있는 상태를 취할 수 있다.

[84] 조작과정을 상세히 설명하면, 사용자가 상기 버튼부(195)를 누르면, 상기 케이블(189)에 의해 가스 개폐 핀이 이동하게 된다. 그에 따라서, 상기 실린더 내의 가스 유로가 개방되어 가스가 이동 가능한 상태에 있게 되고, 그로 인해서 상기 피스톤 로드도 움직일 수 있게 된다. 따라서, 사용자는 상기 상판의 높이를 조절할 수 있게 된다.

[85] 구체적으로, 상기 상판(110)의 높이를 높이고자 하는 경우에는 상기 버튼부(195)를 누른 상태에서 상판(110)을 힘으로 들어올리게 된다. 이때, 상술한 바와 같이 상기 댐핑력이 상기 피스톤 로드에 인가되는 상태이기 때문에 상판의

하중 대부분은 상기 댐핑력에 의해 상쇄되므로 사용자는 적은 힘으로도 원활하게 상판을 들어올릴 수 있게 된다. 만일, 상판에 거치된 물품의 하중이 적거나 실린더 내의 가스 압력이 크게 설정된 경우에는 상기 버튼부를 누르기만 하더라도 상기 댐핑력에 의해 상판이 스스로 상승할 수도 있다.

[86] 한편, 높이를 낮출 경우에는 버튼부(195)를 누른 상태에서 상판(110)을 하방으로 누르게 된다. 이때에서, 상판은 상기 댐핑력에 의해 지지되고 있으므로, 사용자가 상판의 하중을 지탱할 필요가 없어, 손쉬운 이동이 가능해진다.

[87] 이러한 사용자의 동작에 의해, 높이조절기구(180)의 높낮이는 가변되고, 제 1 이동부(169)와 제 2 이동부(144)가 각각 제 1 슬라이드 가이드(165)와 제 2 슬라이드 가이드(170)에서 슬라이딩 이동될 수 있다. 상판(110)은 버튼부(195)에 가해지는 가압력을 해제할 경우, 이동 중에도 높이 조절이 정지될 수 있다. 따라서, 상판(110)의 높이는 도 1과 도 5에 도시된 높이 사이의 임의의 위치에서 고정될 수 있다.

[88] 상판(110)이 하방으로 이동되는 것을 예로 들면, 사용자의 하방으로 미는 힘에 의해, 높이조절기구(180)의 길이가 짧아지게 되고, 제 2 이동부(144)는 상기 제 2 슬라이드 가이드(170) 상에서 후방으로 슬라이딩 이동 될 것이다. 그리고, 제 1 연결부재(130)와 제 2 연결부재(140)는 베이스(120)와 형성하는 각도가 작아지도록 상측 단부가 하방으로 이동된다.

[89] 이처럼 높낮이 조절 가능한 책상(100)은 버튼부(195)의 조작을 통한 간단한 동작만으로 상판(110)의 높낮이를 조절할 수 있어, 사용자의 편의성이 증대되는 장점이 있다. 또한, 장시간 앉아 있는 사용자는 상판(110)의 높낮이를 다양하게 조절하여 보다 활동적인 업무를 수행할 수 있을 것이다.

[90] 아울러, 상술한 바와 같이 상판의 높이를 조절하기 위해서는 상판을 잡고 들어올리거나 누르는 작업이 필요한데, 상기 버튼부를 포함하는 조작부의 위치를 상판의 양측 하면에 배치함으로서 상판의 파지와 버튼부를 누르는 동작을 한번에 수행할 수 있다. 즉, 버튼부를 누르면서 동시에 상판을 파지하는 것이 가능하기 때문에, 사용자는 버튼부를 별도로 조작할 필요없이 상판을 들어올리거나 내리는 동작만으로 상판의 높이를 자유롭게 조절할 수 있다.

[91] 또한, 높이조절기구의 피스톤 로드와 조작부에 구비되는 버튼부가 케이블에 의해 연결되기 때문에, 조작에 필요할 각종 기구의 배치를 자유롭게 할 수 있다. 즉, 상기 버튼부와 피스톤 로드를 고정된 형태를 갖는 복수 개의 링크 등으로 고정할 경우 버튼부 위치에 제약이 있을 뿐만 아니라 구조도 복잡해지는 문제가 있을 수 있지만, 본 발명의 상기 실시예에서는 유연성 있는 케이블을 이용하여 버튼부와 피스톤 로드를 연결함으로써 버튼부의 배치 자유도를 향상시키고 구조도 단순화할 수 있게 된다.

[92] 또한, 제1 및 제2 연결 부재가 서로 X자를 이루도록 배치되고, 일측 단부가 슬라이드 되도록 고정되어 있으므로, 상판의 높이 조절과정에서 상판의

수평이동이 없어 사용편의성이 더욱 향상된다. 즉, 상판이 수직 방향을 따라 승강하는 과정에서도 전후 방향으로는 이동하지 않기 때문에, 다시 말해서 사용자에 대해서 전면 또는 후면으로 이동하지 않기 때문에, 상기 책상이 차지하는 공간 점유를 최소화할 수 있다. 가령, 상기 상판이 상승과정에서 전면으로 돌출된다면, 사용자도 그만큼 뒤로 물러날 수 있도록 여유 공간을 확보하여야 하지만, 본원의 상기 실시예에서는 그러한 여유 공간을 필요로 하지 않아 책상을 설치 및 사용하기 위해 필요한 공간이 최소화된다.

[93]

[94] 도 6은 본 발명의 제 1 실시예에 따른 높낮이 조절 가능한 책상에 고정다리를 결합한 모습을 보인 사시도이고, 도 7은 본 발명의 제 1 실시예에 따른 높낮이 조절 가능한 책상과 고정다리의의 분해 사시도 이다.

[95] 도 6 및 7을 참조하면, 베이스(120)의 하면에는 높낮이 조절 가능한 책상(100)을 지지하며 높낮이 조절 가능한 책상(100)을 지면으로부터 이격시키는 고정다리(200)가 구비될 수 있다. 전술한 바와 같이, 높낮이 조절 가능한 책상(100)은 다른 높낮이 조절 가능한 책상의 상면에 놓여 사용될 수 있으나 다른 높낮이 조절 가능한 책상이 필요하게 되므로, 고정다리(200)를 통해 높낮이 조절 가능한 책상(100)을 단독으로 사용할 수 있다. 즉, 상기 제1 실시예는 사용자가 기보유하고 있던 책상의 상판에 거치한 상태로 사용하도록 한 것이고, 도 6 및 7에 도시된 실시예의 경우에는 그러한 책상없이 단독으로 사용할 수 있도록 한 것이다.

[96] 고정다리(200)는 베이스(120)의 저면에 결합되는 베이스 결합부(202)와, 하면에 고정다리(200)를 지면으로부터 이격시키는 레그(210)가 결합되는 레그 결합부(209)와, 베이스 결합부(202)와 상기 레그 결합부(209)를 연결시키는 고정다리 몸체(205)를 포함한다.

[97] 베이스 결합부(202)의 단면 형상은 베이스(120)의 저면의 단면 형상에 대응되도록 형성되어 베이스(120)의 저면에 결합된다. 그리고, 상기 레그 결합부(209)의 하면에는 레그(210)가 구비되어 고정다리(200)가 지면으로부터 이격될 수 있다. 레그(210)는 레그 결합부(209)의 하면 네 모서리에 모두 구비될 수 있다.

[98] 고정다리 몸체(205)는 베이스 결합부(202)와 레그 결합부(209)를 연결하며, 길이 방향으로 연장되어 높낮이 조절 가능한 책상(100)의 높이를 형성한다. 고정다리 몸체(205)의 높이는 사용자의 의도와 목적에 맞게 다양하게 조절되어 제작될 수 있다.

[99] 따라서, 높낮이 조절 가능한 책상(100)의 하부에 고정다리(200)를 구비함으로써 높낮이 조절 가능한 책상(100)이 단독으로 사용될 수 있으며, 고정다리(200)가 결합된 상태에서도 상판(110)의 높낮이를 조절함으로써 사용자의 업무환경을 다양하게 변화시킬 수 있다.

[100]

[101] 도 8은 본 발명의 제 2 실시예에 따른 높낮이 조절 가능한 책상의 사시도 이고, 도 9는 본 발명의 제 2 실시예에 따른 보조 받침대를 분리한 모습을 보인 사시도 이다.

[102] 본 실시예는 다른 부분에 있어서는 제 1 실시예와 동일하고, 다만 보조 받침대에 있어서 차이가 있다. 따라서, 이하에서는 본 실시예의 특징적인 부분에 대해서만 설명하고 제 1 실시예와 동일한 부분은 제 1 실시예를 원용하기로 한다.

[103] 도 8 및 도 9를 참조하면, 본 실시예에 따른 높낮이 조절 가능한 책상(220)에는, 상판(110)의 하측에 배치되는 판 형상의 보조 받침대(230)를 더 포함할 수 있다. 보조 받침대(230)는 상면이 제 2 결합부(145) 중 제 2 수직부(147)의 하면에 결합된다.

[104] 상세히, 보조 받침대(230)에는 상면으로부터 하면을 관통하는 링크홀(231)이 형성될 수 있다. 링크홀(231)은 보조 받침대(230)의 후방에 인접하여 양측에 각각 형성된다. 그리고, 제 2 수직부(147)의 하면에는 보조 받침대(230)와 제 2 수직부(147)를 결합시키기 위한 링크부재(148)가 끼워지도록 링크홈(미도시)이 형성된다.

[105] 보조 받침대(230)의 결합은, 상판(110)의 하부 양측에 복수로 배치되는 제 2 수직부(147)의 하면에, 링크홀(231)과 링크홈이 서로 대응되도록 보조 받침대(230)가 맞대어, 링크부재(148)를 통해 이루어질 수 있다. 추가로 링크홀(231) 및 링크부재(148)의 개수를 늘림으로써 보다 견고하게 보조 받침대(230)를 상판(110)의 하측에 고정시키는 것도 가능하다.

[106] 따라서, 본 실시예에서는 높낮이 조절 가능한 책상(220)에 보조 받침대(230)를 추가로 구비함으로써 보다 많은 업무도구가 놓여질 수 있다. 일 예로 상판(110)의 상면에 컴퓨터 모니터가 배치될 경우 보조 받침대(230)의 상면에는 키보드를 구비함으로써, 상판(110)의 상면에 보다 넓은 여유 공간을 갖출 수 있다.

[107] 한편, 베이스(120)에는, 가장자리를 따라 베이스(120)의 상면이 가려지도록 측벽(125)이 구비될 수 있다. 측벽(125)은 베이스(120)의 상면 보다 높은 높이를 갖도록 형성되어 베이스(120)의 측면에 결합된다. 측벽(125)이 결합될 경우, 상기 베이스(120)의 상면에 먼지, 이물질 등이 쌓이는 것을 방지할 수 있고, 높낮이 조절 가능한 책상(220)의 외관을 보다 세련되게 형성할 수 있는 장점이 있다.

[108] 도 10은 본 발명의 제 3 실시예에 따른 높낮이 조절 가능한 책상이 도시된 사시도이고, 도 11은 본 발명의 제 3 실시예의 상판이 상승되었을 때의 측면도이며, 도 12는 본 발명의 제 3 실시예의 상판이 최저 높이로 하강되었을 때의 측면도이다.

[109] 도 10 내지 도 12을 참고하면, 높낮이 조절 가능한 책상은 베이스(120)와; 상판(110)과; 베이스(120)와 상판(110) 사이에 배치되어 상판(110)을 승강 가능하게 지지하는 링크 기구(L)를 포함할 수 있다.

[110] 상판(110)은 탑 플레이트(111)와, 탑 플레이트(111)의 하부에 결합된 상부

프레임(112)을 포함할 수 있다.

[111] 탑 플레이트(111)는 판체 형상으로 형성될 수 있고, 사용자는 탑 플레이트(111)의 상면에 모니터나 전화기나 각종 서류 등을 올려놓을 수 있다.

[112] 상부 프레임(112)은 복수개가 탑 플레이트(111) 하부에 배치될 수 있다. 이 경우, 복수개의 상부 프레임(112)는 탑 플레이트(111) 하부에 좌우 방향으로 이격되게 위치될 수 있다. 복수개의 상부 프레임(112)는 탑 플레이트(111)의 좌측부 아래에 배치되는 좌측 상부 프레임과, 탑 플레이트(111)의 우측부 아래에 배치되는 우측 상부 프레임을 포함할 수 있다.

[113] 상부 프레임(112)은 한 쌍의 링크(L1)(L2) 중 어느 하나와 힌지 결합될 수 있고, 한 쌍의 링크(L1)(L2) 중 다른 하나를 안내할 수 있다. 상부 프레임(112)는 탑 플레이트(111)의 저면에 위치되게 탑 플레이트(111)에 체결될 수 있다. 상부 프레임(112)은 탑 플레이트(111)에 스크류 등의 체결부재나 후크 등의 걸이부에 의해 장착될 수 있다. 상부 프레임(112)은 탑 플레이트(111)에 체결되는 상판부와, 상판부에서 수직하게 절곡된 측판부를 포함할 수 있다.

[114] 상판(110)은 탑 플레이트(111)와 이격되는 로어 플레이트(113)를 더 포함할 수 있다. 로어 플레이트(113)은 탑 플레이트(111)와 높이차를 갖게 배치될 수 있다. 사용자는 로어 플레이트(113) 상면에 키보드나 마우스 등을 올려놓을 수 있다.

[115] 로어 플레이트(113)은 플레이트 커넥터(114)를 통해 탑 플레이트(111)와 상부 프레임(112) 중 적어도 하나에 연결될 수 있다. 플레이트 커넥터(114)는 탑 플레이트(111)와 로어 플레이트(113)가 단차를 갖고 위치되게 설치될 수 있고, 로어 플레이트(113)는 플레이트 커넥터(114)에 매달려서 유지될 수 있다. 로어 플레이트(113)는 플레이트 커넥터(114)의 하부에 스크류 등의 체결부재나 후크 등의 걸이부에 의해 장착될 수 있다.

[116] 플레이트 커넥터(114)는 복수개가 탑 플레이트(111) 하부에 배치될 수 있다. 복수개의 플레이트 커넥터(114)는 탑 플레이트(111) 하부에 좌우 방향으로 이격되게 위치될 수 있다. 복수개의 플레이트 커넥터(114)는 탑 플레이트(111)의 좌측부 아래에 배치되는 좌측 플레이트 커넥터와, 탑 플레이트(111)의 우측부 아래에 배치되는 우측 플레이트 커넥터를 포함할 수 있다.

[117] 로어 플레이트(113)은 좌측 플레이트 커넥터와 우측 플레이터 커넥터에 연결될 수 있다.

[118] 베이스(120)는 하부 프레임(121)을 포함할 수 있다. 하부 프레임(121)은 상판(110)과 상하 방향으로 이격되게 위치될 수 있다. 하부 프레임(121)은 복수개가 이격되게 배치될 수 있다. 복수개의 하부 프레임(121)은 상판(110)의 좌측 아래에 위치하는 좌측 하부 프레임과, 상판(110)의 우측 아래에 위치하는 우측 하부 프레임을 포함할 수 있다. 좌측 하부 프레임과 우측 하부 프레임은 좌우 방향으로 이격되게 위치될 수 있다.

[119] 베이스(120)는 복수개의 하부 프레임을 연결하는 프레임 커넥터(123)을 더 포함할 수 있다. 좌측 하부 프레임과 우측 하부 프레임은 프레임 커넥터(123)에

의해 연결될 수 있다. 좌측 하부 프레임은 상판(110)의 아래에 전후 방향으로 길게 배치될 수 있고, 우측 하부 프레임은 상판(110)의 아래에 전후 방향으로 길게 배치될 수 있으며, 좌측 하부 프레임과 우측 하부 프레임은 좌우 방향으로 이격될 수 있다. 프레임 커넥터(123)는 좌측 하부 프레임과 우측 하부 프레임을 잇게 좌우 방향으로 길게 배치될 수 있고, 좌측부가 좌측 하부 프레임에 연결될 수 있고, 우측부가 우측 하부 프레임에 연결될 수 있다.

[120] 링크 기구(L)는 좌측 하부 프레임과 좌측 상부 프레임을 잇는 좌측 링크 기구와, 우측 하부 프레임과 우측 상부 프레임을 잇는 우측 링크기구를 포함할 수 있다.

[121] 링크 기구(L)는 회동 축(150)으로 회전 가능하게 연결된 한 쌍의 링크(L1)(L2)를 포함할 수 있다. 좌측 링크 기구와 우측 링크 기구는 동일한 구조로 구성될 수 있고, 탑 플레이트(111)의 하측에 좌, 우 대칭되게 배치될 수 잇다. 좌측 링크 기구와 우측 링크 기구 각각은 회동 축(150)으로 회전 가능하게 한 쌍의 링크(L1)(L2)를 포함할 수 있다. 이하, 좌측 링크 기구와 우측 링크 기구가 동일 구조로 이루어지므로, 이하 중복된 설명을 피하기 위해 링크 기구(L)로 칭하여 설명한다.

[122] 한 쌍의 링크(L1)(L2) 중 적어도 하나는 상판(110)의 최대 하강시 상판(110)과 베이스(120) 사이에 설정 높이의 틈(G)을 형성하는 틈 형성부(130A)(140A)를 포함할 수 있다.

[123] 본 실시예는 한 쌍의 링크(L1)(L2) 자체가 상판(120)과 베이스(110) 사이에 설정 높이의 틈을 형성할 수 있는 구조로 이루어지는 것이 바람직하고, 이를 위해 한 쌍의 링크(L1)(L2)는 적어도 1회 절곡된 구조로 이루어질 수 있다.

[124] 한 쌍의 링크(L1)(L2) 각각은 상기 틈 형성부(130A)(140A)에 의해서 양단부 사이에서 높이차를 갖게 된다. 이로 인해서, 상기 상판(110)이 최대로 하강되었을 때, 둘 중 하나가 다른 하나 보다 더 높게 위치될 수 있고, 이러한 높이 차에 의해 상판(110)은 베이스(120)와 접촉되지 못하고, 상판(110)과 베이스(120)의 사이에는 설정 높이의 틈이 형성될 수 있다.

[125] 여기서, 상기 한 쌍의 링크(L1)(L2) 각각은 틈 형성부(130A)(140A)와, 틈 형성부(130A)(140A)와 둔각을 갖도록 배치되며 상기 베이스(120)와 상판(110) 중 어느 하나에 힌지 연결된 제 1 링크부(130B)(140B)와; 틈 형성부(130A)(140A)와 둔각을 갖고 베이스(120)와 상판(110) 중 다른 하나에 의해서 안내되는 이동부(169)(144)가 설치된 제 2 링크부(130C)(140C)를 포함한다.

[126] 상기 틈 형성부(130A)(140A)에는 회동 축(150)이 회전 가능하게 관통되는 회동 축 관통공이 형성될 수 있고, 틈 형성부(130A)(140A)는 한 쌍의 링크(L1)(L2) 중 회동 축(150)이 연결되는 회동 축 연결부가 될 수 있다.

[127] 여기서, 한 쌍의 링크(L1)(L2) 각각은 상기 제1 실시예에서의 제1 및 제2 연결부재로서 기능하게 된다. 따라서, 한 쌍의 링크(L1)(L2) 중 어느 하나 또는 양자 모두에 피스톤 로드(182)가 연결된 높이조절기구(180)가 체결된다. 상기

높이조절기구는 상기 제1 실시예에서의 높이조절기구와 동일하므로 그에 대한 상세한 설명은 생략한다. 다만, 상기 실시예에서는 상기 제 1 실시예와 같은 결합축(155) 없이, 높이조절기구(180)가 한 쌍의 링크(L1)(L2) 중 다른 하나(L2)에 직접 연결될 수 있다. 한 쌍의 링크(L1)(L2) 중 다른 하나(L2)에는 힌지 축(184b)이 회전 가능하게 지지되는 힌지 홀(140E)이 형성될 수 있다.

[128] 한편, 상기 실시예에서는 상기 제1 실시예에 구비된 버튼부를 대신하여 상판(110)의 저면에 회전 가능하게 연결된 조작 레버(295)를 구비한다. 상기 조작 레버(295)는 상술한 피스톤 로드(182)의 케이블과 연결되어 케이블의 단부에 연결되는 가스 개폐 핀을 작동시키도록 구성된다.

[129] 구체적으로, 상기 조작 레버(295)는 상판(110)에 수평 회전축을 중심으로 회전되게 설치될 수 있고, 사용자가 조작 레버(295)를 잡고 상측으로 회동시킬 때 케이블이 작동되어 높이조절기구(180)을 조작시킬 수 있다. 이를 위해, 상기 상판(110)에는 상기 수평 회전축을 회전 가능하게 지지하는 수평 회전축 지지부(118)가 구비된다. 도 11에서 상기 수평 회전축 지지부(118)는 상판의 저면에 구비되어 있으나, 경우에 따라서는 상기 상부 프레임(112)과 플레이트 커넥터(114) 중 어느 하나에 구비될 수 있다.

[130] 한편, 상판(110)의 상부 프레임(112)은 한 쌍의 링크(L1)(L2) 중 다른 하나(L2)가 힌지 연결되는 힌지 연결부(112A)와, 한 쌍의 링크(L1)(L2) 중 어느 하나(L1)가 안내되는 가이드부(112B)가 함께 형성될 수 있고, 이를 위해 전후 방향으로 길게 형성될 수 있다. 여기서, 힌지 연결부(112A)는 본 발명 제 1 실시예의 제 2 결합부(145)와 대응되는 구성일 수 있고, 가이드부(112B)는 본 발명 제 1 실시예의 제 1 슬라이드 가이드(165)와 대응되는 구성일 수 있다.

[131] 베이스(120)의 하부 프레임(121)은 한 쌍의 링크(L1)(L2) 중 어느 하나(L1)가 힌지 연결되는 힌지 연결부(121A)와, 한 쌍의 링크(L1)(L2) 중 다른 하나(L2)가 안내되는 가이드부(121B)가 함께 형성될 수 있고, 이를 위해 전후 방향으로 길게 형성될 수 있다. 여기서, 힌지 연결부(121A)는 본 발명 제 1 실시예의 제 1 결합부(160)와 대응되는 구성일 수 있고, 가이드부(121B)는 본 발명 제 1 실시예의 제 2 이동 프레임(170)과 대응되는 구성일 수 있다.

[132] 본 실시예의 작용을 설명하면 다음과 같다.

[133] 먼저, 사용자는 조작 레버(295)를 손으로 잡고 상측 방향으로 올릴 수 있고, 이에 따라 상기 조작 레버(295)는 수평 회전축 지지부(118)에 지지된 수평 회전축을 중심으로 상측 방향으로 회전될 수 있다. 조작 레버(295)의 회전시, 조작 레버(295)에 연결된 케이블은 상기 제1 실시예에서 설명한 바와 같이 상기 피스톤 로드가 이동 가능한 상태에 있게 하여 상판의 높이를 조절할 수 있게 된다.

[134] 가령, 사용자가 도 11에 도시된 상태에서 상판(110)의 높이를 낮추고자 하는 경우에 도 11에 도시된 바와 같이, 상승되어 고정된 상태에서, 높낮이 조절 가능한 책상을 사용할 수 있다.

[135] 사용자는 상판(110)의 높이를 낮추고자 할 경우, 조작 레버(295)를 손으로 잡고 상측 방향으로 올릴 수 있고, 그에 따라 상기 피스톤 로드는 이동 가능한 상태로 전환된다. 그 후, 사용자가 상판을 누르면 상판이 하강을 시작한다.

[136] 이 때, 상기 제 1 링크(L1)와 제 2 링크(L2)는 상술한 바와 같이 상기 틈 형성부에 의해서 도 12과 같이 상판(110)과 베이스(120)의 사이에 설정 높이의 틈(G)이 형성되는 위치에서 정지될 수 있고, 그에 따라 상기 상판(110)과 베이스 사이에 틈이 형성된다.

[137] 이로 인해서, 하강시에 부주의로 인해서 상판(110)과 베이스(120) 사이에 사용자의 손가락이 끼이는 것을 막을 수 있고, 상판(110)과 베이스(120) 사이에 사용자의 손가락이 끼이는 안전사고를 예방할 수 있다.

[138] 여기서, 상기 틈 형성부재는 반드시 도시된 형태에 한정되는 것은 아니며, 임의의 형태를 갖도록 변형될 수 있다. 예를 들어, 상기 높낮이 조절 가능한 책상은 상기 상판(110)과 베이스(120) 중 어느 하나에 설치되는 스페이서를 상기 틈 형성부재로서 포함할 수 있다. 즉, 상기 별도의 스페이서는 상판(110)과 베이스(120) 중 다른 하나에 접촉되어, 상판의 최소 높이를 제한함으로써 상기 상판(110)과 베이스(120) 사이에 희망하는 높이의 틈(G)을 형성할 수 있다.

[139] 상기 스페이서는 별도의 부재가 상기 한 쌍의 링크 중 하나 또는 상기 상판 및 베이스 중 어느 하나에 부착된 형태를 가질 수도 있고, 상기 한 쌍의 링크 중 하나 또는 상기 상판과 베이스 중 어느 하나에 일체로 형성되는 돌기부의 형태를 가질 수도 있다.

[140] 또한, 상기 스페이서는 서로 척력을 가하는 한 쌍의 자석으로 구비될 수도 있다. 즉, 상판과 베이스에 각각 동일한 극이 대향하도록 한 쌍의 자석을 배치하여 자력에 의해 상판이 베이스로부터 이격되도록 할 수도 있다. 물론, 상기 한 쌍의 링크 각각에 한 쌍의 자석이 배치되도록 할 수도 있다.

[141]

[142] 도 13은 본 발명의 제 4 실시예의 상판이 스토퍼에 의해 상승 제한될 때의 단면도이고, 도 14는 본 발명의 제 4 실시예의 상판이 스토퍼에 의해 하강 제한될 때의 단면도이다.

[143] 본 실시예는 하부 프레임(121)에 한 쌍의 링크(L1)(L2) 중 하나(L2)가 걸리는 스토퍼(500)가 설치될 수 있다. 스토퍼(500)는 한 쌍의 링크(L1)(L2) 중 하나의 이동 경로(P1부터 P2까지) 상에 위치 가변되게 설치될 수 있다. 본 실시예는 스토퍼(500) 이외의 구성 및 작용이 본 발명 제 1 실시예 내지 제 3 실시예 중 어느 하나와 동일하거나 유사하고, 그에 대한 상세한 설명은 생략한다. 편의를 위해 제 3 실시예와 동일한 구성에 대해서 제 3 실시예와 동일 도면부호를 사용하고 그에 대한 상세한 설명은 생략한다.

[144] 스토퍼(500)가 설치되지 않을 경우, 한 쌍의 링크(L1)(L2) 중 하나의 이동부(144)는 하부 프레임(121)의 이동 경로(P1부터 P2까지)를 따라 전후 안내될 수 있다.

[145] 스토퍼(500)가 설치되지 않을 경우, 이동부(144)는 전방 방향(F)으로 최대 전진되는 위치인 최전방 위치(P1)와, 후방 방향(R)로 최대 후퇴되는 위치인 최후방 위치(P2)로 이동될 수 있다.

[146] 스토퍼(500)는 이동부(144)가 최전방 위치(P1)를 향해 전진될 때, 도 13에 도시된 바와 같이, 이동부(144)가 최전방 위치(P1)로 도달되기 이전에 구속되게 하부 프레임(121)에 설치될 수 있고, 최전방 위치(P1)를 향해 전진되던 이동부(144)는 스토퍼(500)에 전방 방향(F)으로 걸려 더 이상 전방 방향으로 전진되지 못할 수 있다.

[147] 반대로, 스토퍼(500)는 이동부(144)가 최후방 위치(P2)를 향해 후퇴될 때, 도 14에 도시된 바와 같이, 이동부(144)가 최후방 위치(P2)로 도달되기 이전에 구속되게 하부 프레임(121)에 설치될 수 있고, 최후방 위치(P2)를 향해 후퇴되던 이동부(144)는 스토퍼(500)에 후방 방향(R)으로 걸려 더 이상 후방 방향으로 후퇴되지 못할 수 있다.

[148] 스토퍼(500)는 이동부(144)의 이동 방향으로 이동부(144)의 전방과 후방에 설치될 수 있고, 그 설치 위치에 따라 이동부(144)의 실제 이동 경로를 가변시킬 수 있다.

[149] 이동부(144)의 이동 가능 경로는 최전방 위치(P1)와 최후방 위치(P2) 사이인데, 스토퍼(500)가 도 13과 같이, 최전방 위치(P1) 보다 후방인 위치에 이동부(144) 보다 전방에 위치되게 설치되면, 이동부(144)의 실제 이동 가능 경로는 스토퍼(500)의 후단인 위치(P3)와 최후방 위치(P2)의 사이일 수 있고, 스토퍼(500)가 도 14과 같이, 최후방 위치(P2) 보다 전방인 위치에 이동부(144) 보다 후방에 위치되게 설치되면, 이동부(144)의 실제 이동 가능 경로는 스토퍼(500)의 선단인 위치(P4)와 최전방 위치(P1)의 사이일 수 있다.

[150] 높낮이 조절 가능한 책상은 스토퍼(500)에 의해 상판(110)의 최대 상승 높이를 스토퍼(500)가 설치되지 않는 경우 보다 낮게 제한할 수 있고, 상판(110)의 최대 하강 높이를 스토퍼(500)가 설치되지 않는 경우 보다 높게 제한할 수 있다.

[151] 한편, 스토퍼(500)는 이동부(144)를 제한하는 것에 의해 이동부(144)가 하부 프레임(121)을 따라 미끄러지는 것을 방지할 수 있고, 높이조절기구(180)과 함께 높낮이 조절 가능한 책상 높이를 유지시키는 기능을 할 수 있다.

[152] 스토퍼(500)는 그 설치 위치를 용이하게 변경할 수 있는 구조로 이루어지는 것이 바람직하고, 베이스(120)의 외부에서 손으로 잡기 용이한 구조로 이루어지는 것이 바람직하다.

[153] 스토퍼(500)는 이동부(144)의 이동 경로(P1부터 P2까지)에 위치되어 이동부(144)와 접촉되고 이동부(144)를 구속하는 이동부 접촉부재(502)를 포함할 수 있다. 스토퍼(500)는 사용자가 손으로 잡고 돌일 수 있는 손잡이부재(504)를 더 포함할 수 있다. 손잡이부재(504)는 이동부 접촉부재(502)와 분리 가능하게 결합될 수 있고, 하부 프레임(121)의 외부에 위치될 수 있게 이동부 접촉부재(502)와 결합될 수 있다. 스토퍼(500)는

손잡이부재(504)와 이동부 접촉부재(502)를 연결하는 연결부재(506)을 더 포함할 수 있다. 연결부재(506)는 손잡이부재(504)와 이동부 접촉부재(502) 중 어느 하나에 돌출되게 장착되거나 일체로 돌출되게 형성될 수 있고, 이 경우 손잡이부재(504)와 이동부 접촉부재(502) 중 다른 하나에는 연결부재(506)의 적어도 일부가 내삽되는 연결부재 결합공이 형성될 수 있다. 연결부재(506)는 연결부재 결합공에 끼움되어 결합되는 것이 가능하고, 나사 결합되는 것도 가능함은 물론이다.

[154] 연결부재(506)는 손잡이부재(504)와 이동부 접촉부재(502) 중 어느 하나에 수평 방향으로 돌출되게 배치될 수 있다.

[155] 한편, 하부 프레임(121)에는 연결부재(506)가 관통될 수 있는 슬릿(121C)가 형성될 수 있다. 슬릿(121C)은 하부 프레임(121)에 전후 방향으로 길게 형성될 수 있고, 연결부재(506)는 슬릿(121C)의 선단(121D)과 슬릿(121C)의 후단(121E) 사이의 소정 위치에 위치될 수 있다.

[156]

[157] 도 15는 본 발명의 제 5 실시예에 따른 높낮이 조절 가능한 책상의 후방측 사시도이고, 도 16은 본 발명의 제 5 실시예의 수평 유지부가 확대 도시된 사시도이다.

[158] 본 실시예의 높낮이 조절 가능한 책상은 베이스(120); 상판(110)과; 베이스(120)와 상판(110) 사이에 배치되어 상판(110)을 승강 가능하게 지지하는 링크 기구(L)를 포함할 수 있고, 링크 기구(L)는 베이스(120)와 상판(110) 중 어느 하나에 힌지 연결됨과 아울러 베이스(120)와 상판(110) 중 다른 하나에 안내되어 상판(110)을 승강시키고 좌우 방향으로 이격된 좌측 링크와 우측 링크와, 상판(110)이 수평을 유지하면서 승강되도록 좌측 링크와 우측 링크가 서로 평행을 유지하면서 동작되게 연결된 수평유지부(600)를 포함할 수 있다.

[159] 본 실시예는 수평유지부(600) 이외의 기타 구성이 본 발명 제 1 실시예 내지 제 4 실시예 중 하나와 동일하거나 유사할 수 있고, 동일한 구성에 대해서는 동일 부호를 사용하고 그에 대한 상세한 설명은 생략한다. 편의를 위해 제 3 실시예 및 제 4 실시예와 동일한 구성에 대해서는 제 3 실시예 및 제 4 실시예와 동일 도면부호를 사용하고 그에 대한 상세한 설명은 생략한다.

[160] 좌측 링크와 우측 링크 각각은 베이스(120)와 상판(110) 중 어느 하나에 힌지 연결된 연결부재(140)와, 연결부재(140)에 회전 가능하게 연결되어 베이스(120)와 상판(110) 중 다른 하나에 안내되는 이동부(144)를 포함할 수 있다.

[161] 본 실시예의 좌측 링크는 본 발명 제 3 실시예의 한 쌍의 제 2 링크(L2) 중 좌측에 위치하는 링크일 수 있고, 이하, 설명의 편의를 위해, 본 발명 제 3 실시예와 상이한 도면부호인 L22를 사용하여 설명한다.

[162] 본 실시예의 우측 링크는 본 발명 제 3 실시예의 한 쌍의 제 2 링크(L2) 중 우측에 위치하는 링크일 수 있고, 이하, 설명의 편의를 위해, 본 발명 제 3

실시예와 상이한 도면부호인 L21 및 L22를 사용하여 설명한다.

[163] 수평 유지부(600)는 이동부(144)와 커플러(602)로 연결된 평행축(610)을 포함할 수 있다. 평행축(610)은 좌측 링크(L21)와 우측 링크(L22) 사이에 수평 방향으로 길게 위치될 수 있다. 평행축(610)은 좌측 링크(L21)의 하단과 우측 링크(L22)의 하단 사이의 거리 보다 짧게 형성될 수 있다. 커플러(602)는 평행축(610)의 좌측과 연결되는 좌측 커플러와, 평행축(610)의 우측과 연결되는 우측 커플러를 포함할 수 있다. 평행축(610)은 좌측 링크(L21)의 이동부(144)와, 우측 링크(L22)의 이동부(144)를 연결하는 이동부 커넥터일 수 있고, 좌측 링크(L21)의 이동부(144)와 우측 링크(L22)의 이동부(144)와 함께 회전되면서 좌측 링크(L21)의 이동부(144)와 우측 링크(L22)의 이동부(144) 중 어느 하나가 다른 하나 보다 빠르게 회전되면서 안내되는 것을 막을 수 있다.

[164] 평행축(610)의 좌측단은 좌측 링크(L21)의 우측에 위치하는 좌측 커플러와 연결될 수 있고, 평행축(610)의 우측단은 우측 링크(L22)의 좌측에 위치하는 우측 커플러에 연결될 수 있다. 높낮이 조절 가능한 책상은 좌우 방향으로 좌측 링크(L21)와, 좌측 커플러와, 평행축(610)과, 우측 커플러와, 우측 링크(L22)의 순서일 수 있다.

[165] 좌측 링크(L21)의 이동부(144)와 우측 링크(L22)의 이동부(144)에는 회전 축(149A)이 돌출될 수 있다.

[166] 좌측 링크(L21)의 이동부(144)에 돌출된 회전 축(149A)은 좌측 링크(L21)의 연결부재(140)을 관통하여 좌측 커플러에 연결될 수 있고, 우측 링크(L22)의 이동부(144)에 돌출된 회전 축(149A)은 우측 링크(L22)의 연결부재(140)을 관통하여 우측 커플러에 연결될 수 있다.

[167] 좌측 링크(L21)의 이동부(144)와 우측 링크(L22)의 이동부(144) 중 어느 하나가 회전되면, 좌측 링크(L21)의 이동부(144)와 우측 링크(L22)의 이동부(144)는 커플러(602) 및 평행축(610)에 의해 일체로 회전될 수 있고, 좌측 링크(L21)의 이동부(144)와 우측 링크(L22)의 이동부(144)는 동일 속도로 회전되게 유도될 수 있다.

[168] 좌측 링크(L21)의 이동부(144)와 우측 링크(L22)의 이동부(144)가 서로 상이한 속도로 회전될 경우, 좌측 링크(L21)의 이동부(144)와 우측 링크(L22)의 이동부(144)는 전후 방향의 위치가 서로 상이할 수 있고, 이 경우 상판(110)은 좌우 중 일측으로 편심되게 쏠리면서 기울어질 수 있다.

[169] 한편, 상기와 같이, 좌측 링크(L21)의 이동부(144)와 우측 링크(L22)의 이동부(144)가 평행축(610)에 의해 일체로 동일 속도로 회전되면, 상판(110)은 전체적으로 수평을 유지하면서 승강될 수 있다.

[170] 수평유지부(600)는 좌측 링크(L21) 및 우측 링크(L22)에 각각 연결된 링크 커넥터(142)를 포함할 수 있다. 링크 커넥터(142)는 좌측 링크(L21) 및 우측 링크(L22)가 일체로 동작되게 좌측 링크(L21)의 연결부재와 우측 링크(L22)의 연결부재를 연결할 수 있다.

[171] 수평유지부(600)는 이동부(144)와 함께 회전하도록 결합되는 피니언 기어(149B)와, 피니언 기어(149B)가 전후 방향으로 이동되게 치합된 랙 기어(121F)를 포함할 수 있다. 여기서, 상기 커플러(602) 내에는 상기 피니언 기어의 회전을 저지하는 완충부, 예를 들어 오일 등이 봉입된 완충수단 등이 구비될 수 있고, 이를 통해서 상기 이동부의 이동 또는 유동을 일정 수준 내에서 저지할 수 있게 된다. 이로 인해서, 상기 상판이 보다 안정적으로 지지될 수 있게 된다.

[172] 랙 기어(121F)는 이동부(144)가 안내되는 베이스(120) 또는 상판(110)에 형성될 수 있다.

[173] 랙 기어(121F)는 하부 프레임(121)에 전후 방향으로 길게 형성될 수 있고, 이동부(144)는 하부 프레임(121) 내부에 랙 기어(121F)를 따라 전후 방향으로 회전되게 위치될 수 있다. 피니언 기어(149B)와 랙 기어(121F)는 이동부(144)의 회전시 이동부(144)가 옆 방향으로 뒤틀리는 것을 막을 수 있고, 이동부(144)는 흔들림이 최소화되면서 전후 방향으로만 진퇴될 수 있다.

[174] 이동부(144)가 랙 기어(121F)를 따라 회전될 때, 피니언 기어(149B)와 랙 기어(121F)는 이동부(144)의 옆 방향으로 뒤틀리는 것을 방지하면서 이동부(144)가 보다 부드럽게 회전되는 것을 도울 수 있다. 상판(110)은 전체적으로 부드럽게 승강될 수 있다.

[175] 수평유지부(600)는 링크 커넥터(142), 피니언 기어(149B) 및 랙 기어(121F) 없이, 평행축(610)가 단독으로 상판(110)의 수평을 유지시키는 것이 가능하다.

[176] 수평유지부(600)는 링크 커넥터(142) 없이, 평행축(610), 피니언 기어(149B) 및 랙 기어(121F)의 조합으로 구성되어 상판(110)의 수평을 유지시키는 것이 가능하다. 이 경우, 상판(110)은 흔들림 없이 보다 안정적으로 수평을 유지하면서 승강 동작될 수 있다.

[177] 수평유지부(600)는 평행축(610), 피니언 기어(149B) 및 랙 기어(121F) 없이, 링크 커넥터(142)가 단독으로 상판(110)의 수평을 유지시키는 것이 가능하다.

[178] 수평유지부(600)는 평행축(610) 없이, 링크 커넥터(142), 피니언 기어(149B) 및 랙 기어(121F)의 조합으로 구성되어 상판(110)의 수평을 유지시키는 것이 가능하다. 이 경우, 상판(110)은 흔들림 없이 보다 안정적으로 수평을 유지하면서 승강 동작될 수 있다.

[179] 수평유지부(600)는 평행축(610)과, 링크 커넥터(142), 링크 커넥터(142), 피니언 기어(149B) 및 랙 기어(121F)의 조합으로 구성되어 상판(110)의 수평을 유지시키는 것이 가능하다. 이 경우, 상판(110)은 가장 안정적으로 수평을 유지하면서 승강 동작될 수 있다.

[180]

[181] 도 17은 본 발명의 제 6 실시예의 높낮이 조절 가능한 책상이 도시된 사시도이다.

[182] 본 실시예는 베이스(120); 상판(110)과; 베이스(120)와 상판(110) 사이에

배치되어 상판(110)을 승강 가능하게 지지하는 링크 기구(L)를 포함하고, 링크 기구(L)는 베이스(120)와 상판(110) 사이에 전후 방향으로 이격되고 서로 평행하게 배치된 한 쌍의 링크(L3)(L4)를 포함한다. 본 실시예는 베이스(120)에 회전 가능하게 연결되고 한 쌍의 링크(L3)(L4) 중 하나에 피스톤 로드(182)가 연결된 높이조절기구(180)을 더 포함할 수 있다.

[183] 본 실시예는 베이스(120)의 좌측부와 상판(110)의 좌측부 사이의 좌측 한 쌍의 링크와, 좌측 한 쌍의 링크 중 어느 하나에 피스톤 로드가 연결된 좌측 높이조절기구를 포함할 수 있다. 본 실시예는 베이스(120)의 우측부와 상판(110)의 우측부 사이의 우측 한 쌍의 링크를 포함할 수 있고, 우측 한 쌍의 링크 중 어느 하나에 피스톤 로드가 연결된 우측 높이조절기구를 포함할 수 있다.

[184] 한 쌍의 링크(L3)(L4)와 높이조절기구(180)는 두 셋트가 베이스(120)와 상판(110) 사이에 좌우 방향으로 이격되게 배치될 수 있다.

[185] 베이스(120)는 하부 프레임을 포함할 수 있다. 베이스(120)는 좌측 하부 프레임과 우측 하부 프레임을 포함할 수 있고, 좌측 하부 프레임과 우측 하부 프레임은 프레임 커넥터(123)으로 연결될 수 있다.

[186] 좌측 하부 프레임과 우측 하부 프레임은 그 각각이 전후 방향으로 길게 배치될 수 있고, 서로 평행하게 배치될 수 있다. 좌측 하부 프레임과 우측 하부 프레임은 좌,우 대칭되는 구조이고, 이하 동일한 구성에 대해서는 하부 프레임으로 칭하여 설명한다.

[187] 하부 프레임은 전후 방향으로 길게 형성된 하판부(121G)와, 한 쌍의 링크(L3)(L4) 각각이 연결된 로어 연결부(121J)와, 높이조절기구(180)가 힌지 연결된 높이조절기구 연결부(121K)를 포함할 수 있다.

[188] 로어 연결부(121J)는 하판부(121G)의 전방부에 수직하게 절곡 형성될 수 있다. 그리고, 높이조절기구 연결부(121K는 하판부(121G)의 후방부 또는 프레임 커넥터(123)에 수직하게 절곡 형성될 수 있다.

[189] 상판(110)는 상부 프레임을 포함할 수 있다. 상부 프레임은 상판(110) 중 탑 플레이트(111) 아래에 배치되게 설치될 수 있다. 상부 프레임은 한 쌍의 링크(L3)(L4) 각각이 연결된 어퍼 연결부(112G)를 포함할 수 있다.

[190] 한 쌍의 링크(L3)(L4)는 하부가 로어 연결부(121J)에 서로 이격되게 연결될 수 있다. 한 쌍의 링크(L3)(L4)는 하부가 로어 연결부(121J)에 서로 상이한 힌지축을 중심으로 회전 가능하게 연결될 수 있다. 한 쌍의 링크(L3)(L4)는 상부가 어퍼 연결부(112G)에 연결될 수 있다. 한 쌍의 링크(L3)(L4)는 상부가 어퍼 연결부(112G)에 서로 상이한 힌지축을 중심으로 회전 가능하게 연결될 수 있다.

[191] 한 쌍의 링크(L3)(L4)는 상판(110)의 승강시 상판(110)을 따라 동일한 기울기로 회전되면서 상판(110)을 안내할 수 있다.

[192] 높이조절기구(180)은 하부가 높이조절기구 연결부(121K)에 힌지 연결될 수 있고, 피스톤 로드(182)가 한 쌍의 링크(L3)(L4) 중 하나에 힌지 연결될 수 있다.

높이조절기구(180)는 상판(110)의 상승시 대략 전방 상측을 향하는 방향으로 경사지게 배치되면서 피스톤 로드(182)가 한 쌍의 링크(L3)(L4) 중 하나를 향하는 방향으로 전진될 수 있다.

[193] 높이조절기구(180)은 상판(110)의 하강시 피스톤 로드(182)가 대략 수평한 방향으로 배치되면서 피스톤 로드(182)가 높이조절기구(180)의 내부로 삽입되는 방향으로 후퇴될 수 있다.

[194] 본 실시예는 본 발명 제 3 실시예와 같이, 조작 레버(295)의 조작시 높이조절기구(180)가 작동되면서 상판(110)의 위치를 유지시킬 수 있다.

[195] 도 18은 본 발명의 제 7 실시예의 높낮이 조절 가능한 책상이 도시된 사시도이다.

[196] 본 실시예의 높낮이 조절 가능한 책상은 베이스(120)을 지지하는 고정다리(200)를 더 포함할 수 있다. 베이스(120)는 고정다리(200) 상측에 올려지게 설치될 수 있고, 고정다리(200)에 고정될 수 있다.

[197] 베이스(120)는 고정다리(200)에 의해 지면으로부터 이격되게 위치될 수 있다. 베이스(120)는 고정다리(200)에 스크류 등의 체결부재나 후크 등의 걸이부에 의해 고정될 수 있다.

[198] 고정다리(200)는 높이 조절 가능한 책상의 일부 구성이 될 수 있고, 하부 프레임 또는 레그로 기능할 수 있다. 본 실시예는 고정 다리(200)가 베이스(120), 상판(110) 및 링크기구(L)와 함께 높낮이 조절 가능한 책상을 구성할 수 있고, 이 경우 높낮이 조절 가능한 책상은 일종의 테이블 책상이 될 수 있다.

[199]

[200] 도 19는 본 발명의 제 8 실시예의 높낮이 조절 가능한 책상의 상판이 상승되었을 때의 사시도이고, 도 20은 본 발명의 제 8 실시예의 높낮이 조절 가능한 책상의 상판이 하강되었을 때의 사시도이다.

[201] 본 실시예의 높낮이 조절 가능한 책상(100)은 식탁으로 사용될 수 있다. 높낮이 조절 가능한 책상(100)은 상판(110)에 하측에 설치되어 링크 기구(L)의 좌측을 덮는 좌측 안전 커버(710)와 상판(110)의 하측에 링크 기구(L)의 우측을 덮는 우측 안전 커버(720)를 더 포함할 수 있다.

[202] 좌측 안전 커버(710) 및 우측 안전 커버(720) 각각은 그 상단이 상판(110)에 스크류 등의 체결부재나 후크 등의 걸이부에 의해 고정될 수 있다.

[203] 좌측 안전 커버(710) 및 우측 안전 커버(720) 각각의 높이는 링크기구(L)가 최대로 펼쳐졌을 때의 링크기구(L) 높이 보다 높게 형성될 수 있다. 좌측 안전 커버(710) 및 우측 안전 커버(720) 각각은 베이스(120)와 고정다리(200)의 경계 옆을 덮는 높이로 형성될 수 있다.

[204] 좌측 안전 커버(710) 및 우측 안전 커버(720)는 상판(110)의 하강시, 상판(110)과 함께 하강될 수 있다.

[205] 좌측 안전 커버(710)는 유아 등의 사용자 손이 좌측 안전 커버(710) 좌측에서 한 쌍의 링크 사이로 진입되지 않게 막을 수 있고, 우측 안전 커버(720)는 유아 등의

사용자 손이 우측 안전 커버(720) 우측에서 한 쌍의 링크 사이로 진입되지 않게 막을 수 있으며, 높낮이 조절 가능한 책상(100)의 안전성은 향상될 수 있다.

[206] 여기서, 상기 안전 커버는 반드시 도시된 형태에 한하지 않으며, 안전 커버를 대체하여 링크 기구의 측면 또는 전후좌우면 모두를 가릴 수 있는 임의의 형태의 판재 또는 시트 등을 포함할 수 있다. 아울러, 상기 안전 커버는 소위 '블라인드'로 알려진 가림막, 즉 롤 형태로 말려서 보관되며 필요시 외부로 인출되는 형태의 것을 채용할 수 있다.

[207] 본 실시예는 베이스(120), 상판(110), 링크기구(L) 등의 기타 구성 및 작용이 본 발명 제 3 실시예 내지 제 10 실시예 중 어느 하나와 동일하거나 유사하므로 동일 부호를 사용하고 그에 대한 상세한 설명은 생략한다. 아울러, 상기 좌측 및 우측 안전 커버들은 상술한 다수의 실시예에도 적용될 수 있음은 물론이다.

[208]

[209] 도 21은 본 발명의 제 9 실시예의 높낮이 조절 가능한 책상이 도시된 사시도이고, 도 22은 본 발명의 제 9 실시예의 높낮이 조절 가능한 책상이 도시된 측면도이다.

[210] 높낮이 조절 가능한 책상(100)은 고정 다리(200)와; 고정 다리(200) 상측에 배치된 베이스(120); 베이스(120)와 이격된 상판(110)과; 베이스(120) 및 상판(110)에 연결되어 상판(110)을 승강 가능하게 지지하는 링크 기구(L)를 포함할 수 있고, 상판(110)은 탑 플레이트(111)와; 탑 플레이트(111) 상측에 배치되고 탑 플레이트(111) 보다 크기가 작은 보조 받침대(113')를 포함할 수 있다.

[211] 보조 받침대(113')는 복수개의 수직판(113A)과, 복수개의 수직판(113A) 상측에 탑 플레이트(111)와 나란하게 배치된 수평판(113B)을 포함할 수 있다.

[212] 사용자는 보조 받침대(113') 상측에 모니터(M)나 각종 책 등을 올려 놓을 수 있고, 사용자는 가장 이상적인 각도, 예를 들면 목이 편안한 각도로 모니터를 바라볼 수 있게 상판(110)의 높이를 조절할 수 있다.

[213] 도 22를 참조하면, 사용자의 눈(E)부터 모니터(M)의 중앙으로의 하향 경사진 각도는 눈(E) 아래 방향으로 20도 내지 30도 가 적정할 수 있고, 사용자는 상판(110) 높이를 조절하는 것에 의해 모니터(M) 높이를 조절할 수 있고, 사용자가 앉는 의자 높이만을 조절할 때 보다, 눈(E)이 모니터(M)를 주시하는 각도(X)를 보다 다양하게 가변할 수 있다.

[214] 한편, 상기 도 21 및 도 22에 도시된 제 10 실시예에서 상기 탑 플레이트(111)와 보조 받침대(113')는 반드시 도시된 형태로 국한되는 것은 아니며 임의의 형태를 갖도록 할 수 있다.

[215] 도 23은 상기 제 10 실시예에서의 탑 플레이트 및 보조 받침대를 도 10에 도시된 실시예의 것으로 대체한 형태를 도시한 것이다. 따라서, 도 23에 도시된 예는 기본적으로 상기 탑 플레이트 및 보조 받침대를 제외한 나머지 구성요소는 상기 제 9 실시예의 것과 동일하다.

[216] 도시된 바와 같이, 상기 탑 플레이트는 전면측에 오목부(113A)가 형성된다. 상기 오목부(113A)는 사용자의 배 부분과 대향하는 부분으로서, 이로 인해서 사용자는 모니터 등이 거치될 수 있는 보조 받침대에 보다 가깝게 접근할 수 있게 된다. 아울러, 상기 탑 플레이트의 양측에는 날개부(113B)가 배치된다. 상기 날개부(113B)는 상기 탑 플레이트에 의해 제공되는 수납 공간을 좌우로 확장시키며, 탑 플레이트와는 소정 간격을 두고 이격되도록 배치된다.

[217] 상기 간격은 링크 기구 또는 프레임 등이 통과할 수 있는 공간을 제공하여, 상기 책상의 최소 높이를 더욱 작게 할 수 있다.

[218] 상기 보조 받침대는 평면도 상으로 대략 'ㄷ'자 형태를 갖는다. 이로 인해서, 상기 보조 받침대의 양측 단부(111A)는 상기 탑 플레이트의 전면부를 향하여 돌출된 형태를 갖게 되고, 상기 돌출된 부분은 상기 탑 플레이트와 날개부 사이의 간극을 덮어 보다 미려한 외관을 갖도록 할 뿐만 아니라 보조 받침대의 수납 공간을 확장시키는 역할도 겸하게 된다.

[219] 도 24는 본 발명의 제 11 실시예에 따른 책상의 사시도 이다.

[220] 본 실시예는 다른 부분에 있어서는 제 1 실시예와 동일하고, 다만 가스 스프링의 결합위치에 있어서 차이가 있다. 따라서, 이하에서는 본 실시예의 특징적인 부분에 대해서만 설명하고 제 1 실시예와 동일한 부분은 제 1 실시예를 원용하기로 한다.

[221] 도 24를 참조하면, 본 발명의 제 11 실시예에 따른 책상(600)은 상기 상판(110)의 높이를 유지하기 위한 상기 가스 스프링(610)이, 일단은 상기 상판(110)의 전방 측 하면에 구비되는 가스 스프링 결합부(115)에 결합되고, 타단은 상기 고정다리(200)의 고정부재 결합부(207)와 결합된다.

[222] 상세히, 제 1 실시예와의 차이점을 기준으로 설명하면, 상기 가스 스프링(610)의 타단은 상기 결합축(155, 도 1참조)에 결합되지 않고, 상기 고정다리(200)의 평행을 유지하기 위한 상기 고정부재 결합부(207)와 결합된다. 이를 위해, 상기 제 1 실시예에 구비되는 가스 스프링 보다 상대적으로 길이가 긴 가스 스프링(610)이 채용될 수 있다.

[223] 그리고, 상기 고정부재 결합부(207)에는 상기 가스 스프링(610)의 타단이 결합되기 위한 연결 브라켓(620)이 구비된다. 상기 연결 브라켓(620)의 일측에는 상기 가스 스프링(610)의 타단이 힌지 결합되기 위한 힌지핀(621)이 구비되고, 상기 힌지핀(621)에 상기 가스 스프링(610)의 타단이 힌지 결합되어 회동될 수 있다. 한편, 상기 가스 스프링(610)의 작용 및 조작과정은 제 1 실시예를 원용하기로 한다.

[224] 도 25는 본 발명의 제 12 실시예에 따른 책상의 사시도 이고, 도 26은 도 25의 책상을 다른 각도에서 바라본 사시도 이다.

[225] 본 실시예는 다른 부분에 있어서는 제 1 실시예와 동일하고, 다만 상판의 구조에 있어서 차이가 있다. 따라서, 이하에서는 본 실시예의 특징적인 부분에 대해서만 설명하고 제 1 실시예와 동일한 부분은 제 1 실시예를 원용하기로

한다.

[226] 도 25 및 26을 참조하면, 본 실시예에 따른 책상(700)은, 베이스(120)의 상부에 구비되는 상판(701)이 복수의 판으로 구성되어 어느 일판의 각도가 조절된다.

[227] 상세히, 상기 상판(701)은 지지부(720)와, 상기 지지부(720)의 일단에 힌지 결합되어 상기 지지부(720)와 이루는 각도가 가변되도록 상대 회전하는 회동부(710)를 포함한다.

[228] 상기 회동부(710)의 상면에는 책, 노트북 등이 놓이는 안착면이 형성되고, 상기 안착면의 일측에는 책, 노트북 등과 일면이 접하여 상기 안착면 상에 지지되기 위한 걸림턱(712)이 형성된다. 즉, 상기 걸림턱(712)은 상기 회동부(710)의 상면에 놓이는 물체의 미끄러짐을 방지한다.

[229] 상기 지지부(720)는 상기 지지부(720)의 둘레 중 일부가 상방으로 돌출되어 내측에 상기 회동부(710)가 안착되는 안착홈(724)을 형성하는 둘레부(722)와, 상기 안착홈(724)에서 상기 지지부(720)의 상, 하면을 관통하여 형성되어 후술할 유지부재(730)가 끼워지기 위한 끼움홀(725)을 포함한다.

[230] 상기 지지부(720)와 상기 회동부(710)는, 각각 상기 지지부(720)의 상면 일측과 상기 회동부(710)의 하면 일측에 각각 결합되어 상기 회동부(710)을 상대 회전시키기 위한 힌지부(740)를 통해 결합된다. 그리고, 상기 회동부(710)와 상기 지지부(720)의 사이에는, 상기 회동부(710)의 회전 상태가 유지되기 위한 유지부재(730)가 구비된다.

[231] 상기 유지부재(730)는, 일단이 상기 회동부(710)의 배면에 결합되는 힌지 결합부(714)에 힌지 결합되는 프레임(732)과, 상기 프레임(732)의 타단에 형성되어 상기 끼움홀(725)에 끼워져 상기 지지부(720)에 대하여 상기 회동부(710)의 회전 상태를 유지시키기 위한 끼움부(735)를 포함한다. 상기 프레임(732)이 복수로 구비될 경우, 평행 상태를 유지하도록 상기 복수의 프레임(732) 사이에는 연결축(734)이 추가로 구비될 수 있다.

[232] 따라서, 상기 지지부(720)에 대하여 상기 회동부(710)가 상기 힌지부(740)를 통해 상대 회전되고, 사용자가 원하는 각도로 상기 회동부(710)의 회전이 완료되면 상기 유지부재(730)의 끼움부가 상기 끼움홀(725)에 끼워져 상기 회동부(710)의 위치를 고정시킬 수 있다. 한편, 상기 회동부(710)는 상기 지지부(720)에 대하여 다양한 각도를 이룰 수 있으므로, 상기 끼움홀(725)은 상기 지지부(720) 상에서 상기 프레임(732)의 회전 방향에 대응하도록 전, 후 방향으로 복수로 형성될 수 있다.

[233] 이를 통해, 사용자는 업무 도구가 놓이는 상기 회동부(710)의 각도를 다양하게 변환시킬 수 있어 보다 편리하게 업무를 수행할 수 있다.

[234] 한편, 상기 유지부재(730) 대신 가스 스프링을 통해 상기 회동부(710)의 회전위치를 고정시킬 수 있다.

[235] 도 27은 회동부와 지지부가 제 1 가스 스프링을 통해 결합된 모습을 보인 사시도 이다.

[236] 도 27을 참조하면, 상기 유지부재(730)는 일단이 상기 회동부(710)에 힌지 결합되고, 타단이 상기 지지부(720) 또는 상기 베이스(120)에 결합되어 길이가 가변됨에 따라 상기 회동부(710)의 경사각을 조절하는 가스 스프링(750)일 수 있다.

[237] 도 27을 참조하면, 상기 제 1 가스 스프링(750) 으로 상기 회동부(710)의 회전 위치를 고정시킬 수 있다. 상기 제 1 가스 스프링(750)은 제 1 실시예에서의 가스 스프링과 같이 버튼부(770)의 조작을 통해 피스톤 로드(752)의 높이를 조절하는 구성(Lock type Gas spring)으로써, 사용자는 상기 버튼부(770)를 조작하여 상기 제 2 가스 스프링(750)의 길이를 조절하게 되고, 이에 따라 상기 회동부(710)는 상기 지지부(720)와 다양한 각도를 이루며 위치가 변경될 수 있다. 따라서, 상기 제 1 가스 스프링(750)으로 유지부재를 구성할 경우 상기 회동부(710)의 각도를 다양하게 조절할 수 있는 장점이 있다. 경우에 따라서는 상기 가스 스프링을 Free type gas spring, 즉 피스톤 로드가 중간에서 고정되지 않고 최소로 신축되거나 최대로 신장된 두 개의 위치에서만 고정되는 타입으로 변경할 수도 있다.

[238] 도 28은 책상이 작업대로 사용될 때의 구성을 보인 사시도 이다.

[239] 전술한 바와 같이 상판(110)의 상면에는 모니터, 책, 키보드 등 다양한 도구들이 놓일 수 있다. 도 29에서는 책상(900)이 공작 작업에 필요한 바이스를 설치하고 공구나 공작물을 진열하여 손수 작업을 할 수 있는 작업대로서 활용될 수 있는 것을 예로 들고 있다. 이를 위해 상판(110)은 상면이 일반 책상 보다 강도가 강한 재료로 표면처리(110c) 될 수 있고, 두께도 두껍게 구성될 수 있다.

[240] 또한, 하부에는 베이스(120)를 지지하도록 하부 구조물(910)이 구비되어, 보다 견고하게 상기 상판(110) 및 베이스(120)를 지지할 수 있다.

[241] 이상 제 1 실시예 내지 제 12 실시예의 따른 높낮이 조절 가능한 책상에 대하여 설명하였지만 당업자는 상기 제 1 실시예 내지 제 12 실시예를 적절하게 조합할 수 있으며, 이러한 조합도 본 발명의 보호범위에 속한다.

청구범위

[청구항 1] 베이스;
상기 베이스에 대해서 상하로 승강 가능하게 장착되는 상판과;
상기 베이스와 상판 사이에 배치되어 상기 상판을 승강 가능하게 지지하며, 복수 개의 링크 부재를 포함하는 링크 기구;
임의의 길이로 신축 가능하게 구성되고, 길이에 따라서 상기 베이스에 대한 상기 상판의 높이가 결정되는 높이조절수단; 및
상기 높이조절수단이 임의의 길이를 유지하도록 고정하는 조작 수단;을 포함하는 높낮이 조절 가능한 책상.

[청구항 2] 제1항에 있어서,
상기 링크 기구는 서로 이격되도록 배치되는 한 쌍의 제1 연결부재 및 서로 이격되도록 배치되는 한 쌍의 제2 연결부재를 포함하고,
상기 제1 및 제2 연결부재는 서로 교차하도록 배치되는 높낮이 조절 가능한 책상.

[청구항 3] 제2항에 있어서,
상기 제1 및 제2 연결부재의 일측 단부는 상기 베이스와 상판 중 어느 하나에 회전 가능하게 장착되고,
타측 단부는 상기 베이스와 상판 중 다른 하나에 슬라이드 가능하게 장착되는 높낮이 조절 가능한 책상.

[청구항 4] 제 2 항에 있어서,
상기 제1 및 제2 연결부재는 대향하는 제1 및 제2 연결부재와 상기 상판의 좌우측 방향을 따라 이격되어 배치되는 높낮이 조절 가능한 책상.

[청구항 5] 제 2 항에 있어서,
상기 제1 및 제2 연결부재는 대향하는 제1 및 제2 연결부재와 상기 상판의 전후측 방향을 따라 이격되어 배치되는 높낮이 조절 가능한 책상.

[청구항 6] 제1항에 있어서,
상기 링크 기구는 서로 이격되도록 배치되는 한 쌍의 제1 연결부재 및 서로 이격되도록 배치되는 한 쌍의 제2 연결부재를 포함하고,
상기 제1 및 제2 연결부재는 서로 평행하게 배치되는 높낮이 조절 가능한 책상.

[청구항 7] 제2항에 있어서,
서로 이격된 제1 연결부재 및/또는 제2 연결부재가 양단에 각각 결합되는 커넥터 부재를 추가적으로 포함하는 높낮이 조절 가능한 책상.

[청구항 8] 제 1 항에 있어서,
상기 높이조절수단은
내부에 압력 유체가 충전되는 실린더; 및
상기 실린더에 슬라이드 가능하게 장착되며, 상기 실린더 내에 충전된

압력유체 만에 의해 지지되는 피스톤 로드;를 포함하는 높낮이 조절 가능한 책상.

[청구항 9] 제 8 항에 있어서,
상기 조작 수단을 통해 상기 높이조절수단은 상기 피스톤 로드가 이동 가능한 상태 및 고정된 상태 중 어느 하나의 상태를 유지하는 높낮이 조절 가능한 책상.

[청구항 10] 제 9 항에 있어서,
상기 조작 수단은 버튼부 또는 일단이 상기 상판 또는 링크 기구에 회동 가능하게 장착되는 레버를 포함하는 높낮이 조절 가능한 책상.

[청구항 11] 제10항에 있어서,
상기 버튼부 또는 상기 레버와 일단이 연결되고, 타단은 상기 피스톤 로드에 연결되는 케이블을 추가적으로 포함하고,
상기 케이블은 상기 실린더 내의 가스 유로를 개폐하는 높낮이 조절 가능한 책상.

[청구항 12] 제 1 항에 있어서,
상기 상판은,
상기 링크 기구와 연결되는 탑 플레이트; 및
상기 탑 플레이트에 연결되는 보조 받침대;를 포함하는 높낮이 조절 가능한 책상.

[청구항 13] 제12항에 있어서,
상기 보조 받침대는 상기 탑 플레이트 보다 작은 면적을 갖는 높낮이 조절 가능한 책상.

[청구항 14] 제 1 항에 있어서,
상기 베이스의 하면은 상기 책상이 놓이는 바닥면과 접촉하는 접촉면을 갖는 높낮이 조절 가능한 책상.

[청구항 15] 제 1 항에 있어서,
상기 베이스의 하면에는 상기 베이스를 설정된 높이로 지면에 대해 고정하는 다리를 포함하는 높낮이 조절 가능한 책상.

[청구항 16] 제 15 항에 있어서,
상기 다리는 상기 베이스의 하면에 착탈 가능하게 장착되는 높낮이 조절 가능한 책상.

[청구항 17] 제 3 항에 있어서,
상기 베이스 및/또는 상기 상판에는 상기 제1 및 제2 연결부재의 슬라이드 거리를 제한하는 스토퍼 수단이 구비되는 높낮이 조절 가능한 책상.

[청구항 18] 제 17 항에 있어서,
상기 스토퍼 수단은,
상기 제1 및 제2 연결부재의 슬라이드 단부와 접촉하여 슬라이드 이동량을 제한하는 스토퍼; 및

상기 스토퍼를 고정하는 고정 수단;을 포함하는 높낮이 조절 가능한 책상.

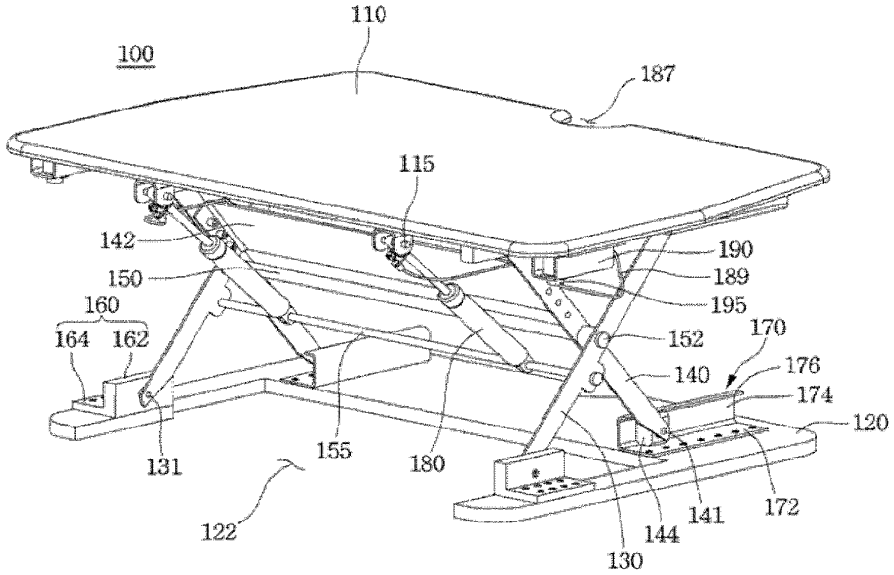
[청구항 19] 제 2 항에 있어서,
상기 제1 및/또는 제2 연결부재는 양단부가 서로 평행하게 배치되도록 절곡되어 형성되는 틈 형성부를 포함하는 높낮이 조절 가능한 책상.

[청구항 20] 제 1 항에 있어서,
상기 링크 기구로의 접근을 제한하는 차단 부재가 구비되는 높낮이 조절 가능한 책상.

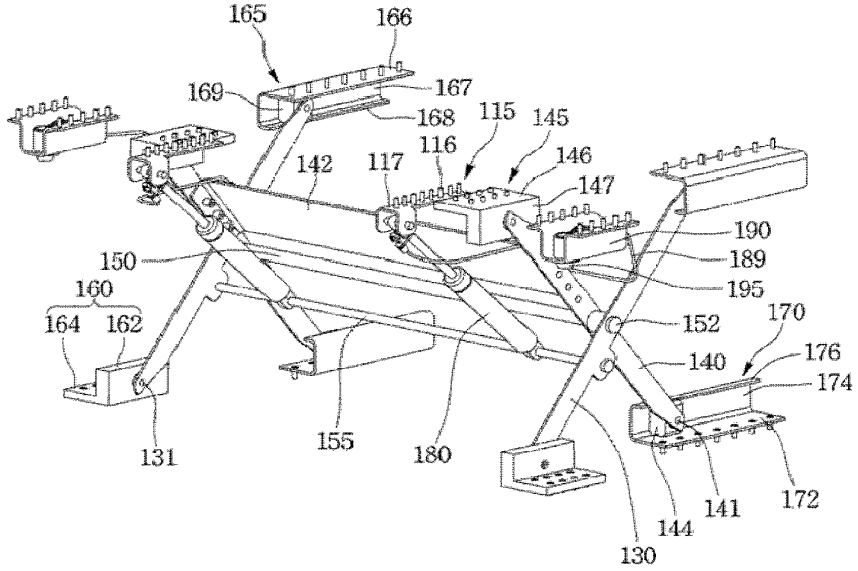
[청구항 21] 제 20 항에 있어서,
상기 차단 부재는 상기 링크 기구와 인접하여 배치되는 판재 형상을 갖는 높낮이 조절 가능한 책상.

[청구항 22] 제 3 항에 있어서,
상기 제1 및/또는 제2 연결부재는 양단부가 서로 평행하게 배치되도록 절곡되어 형성되는 틈 형성부를 포함하는 높낮이 조절 가능한 책상.

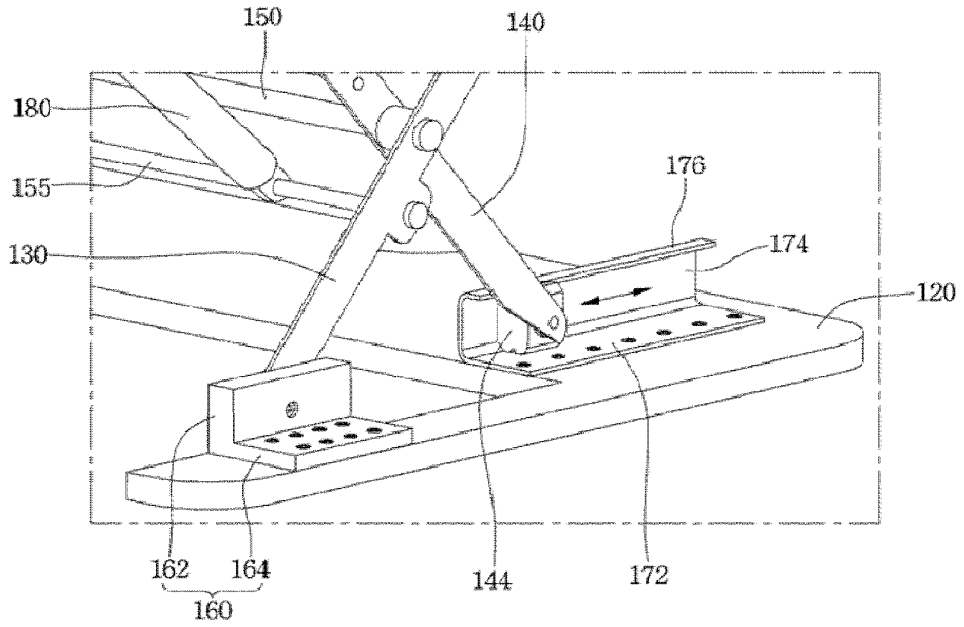
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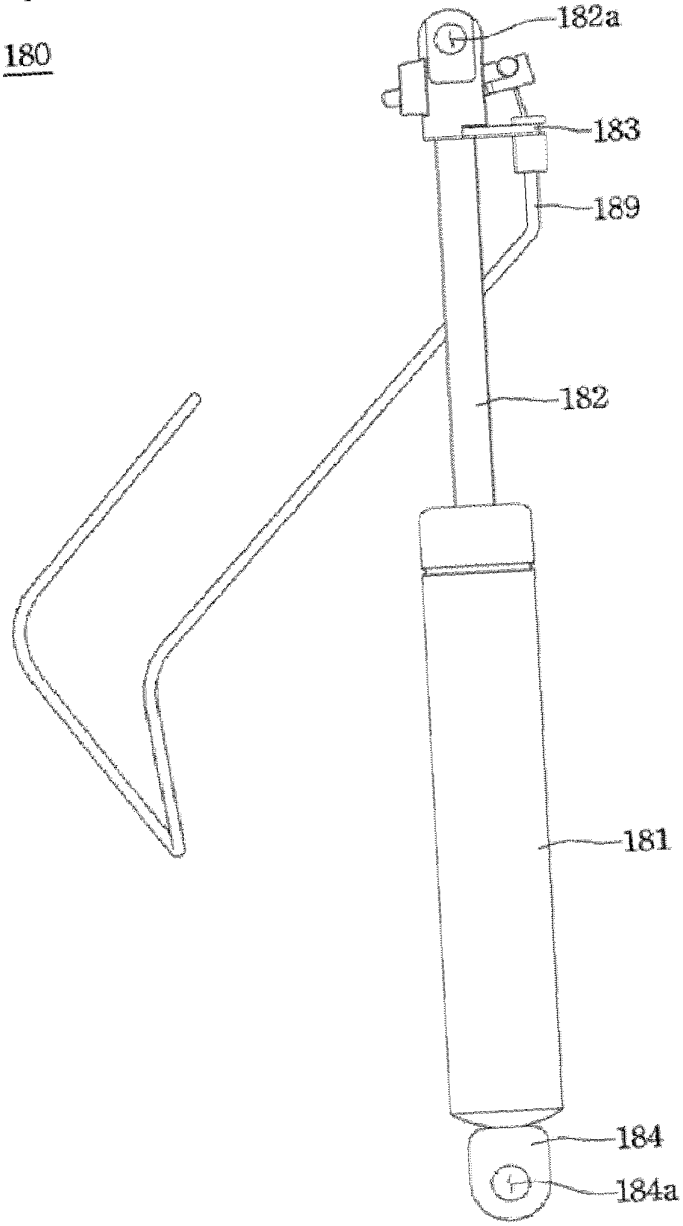
[도2]


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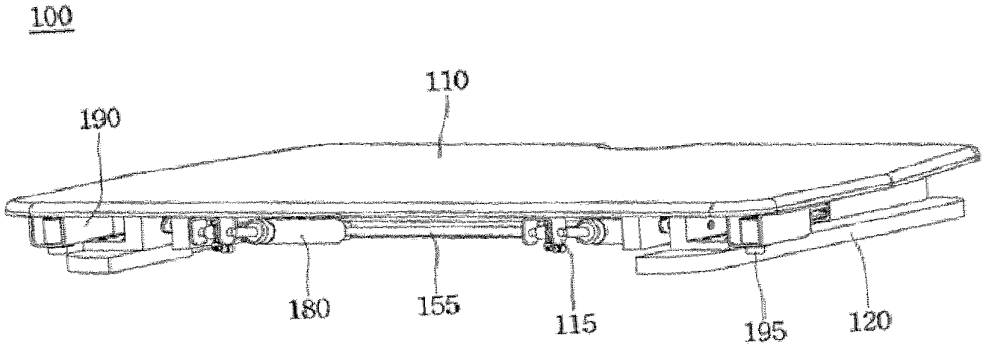
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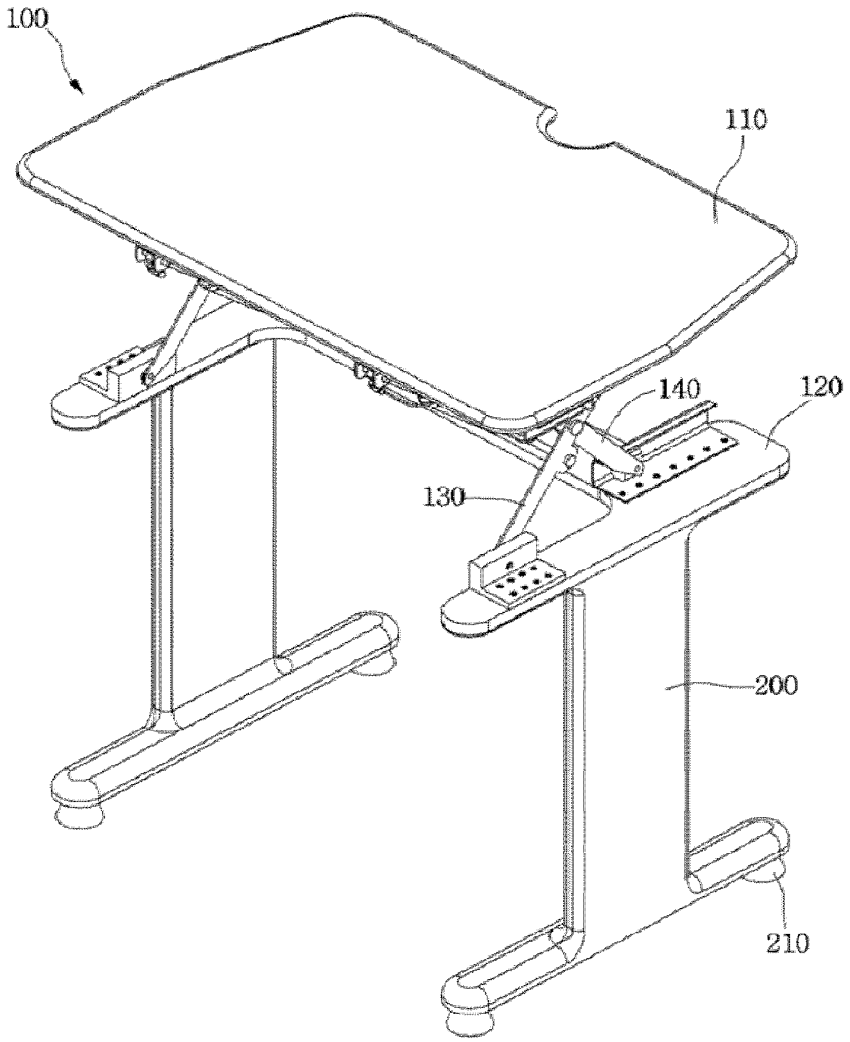
[도4]


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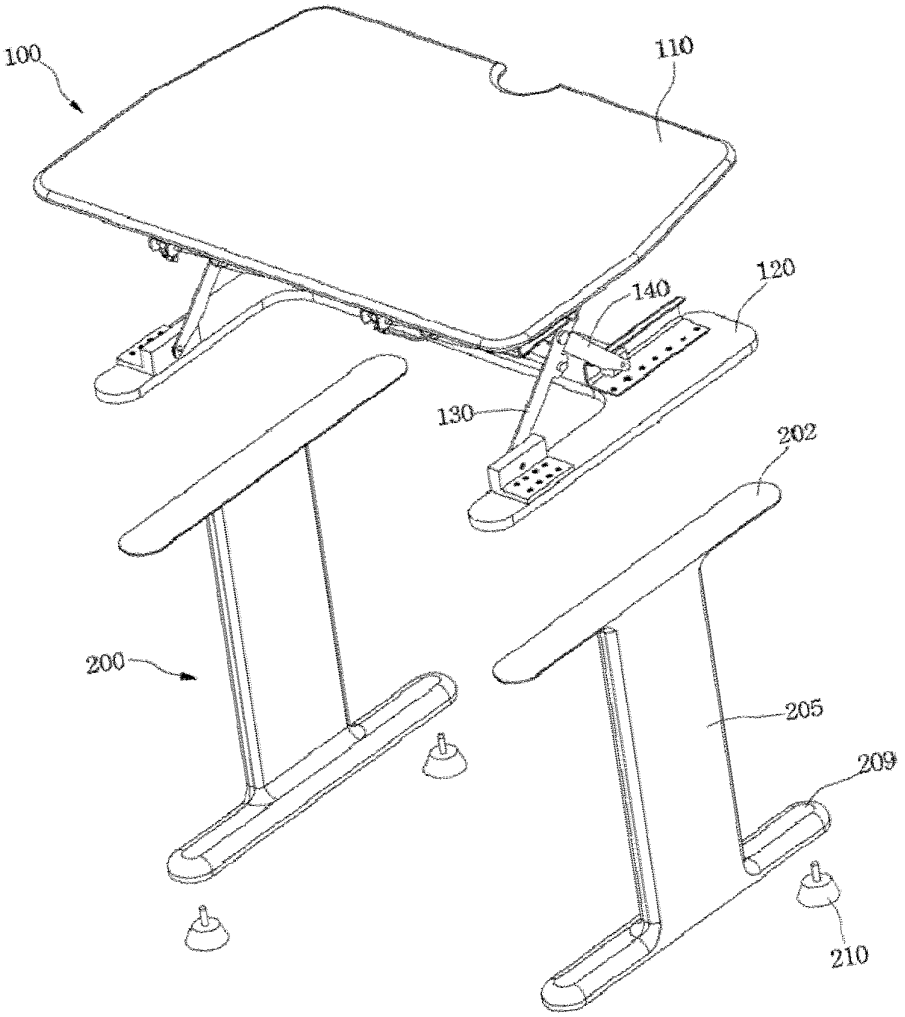
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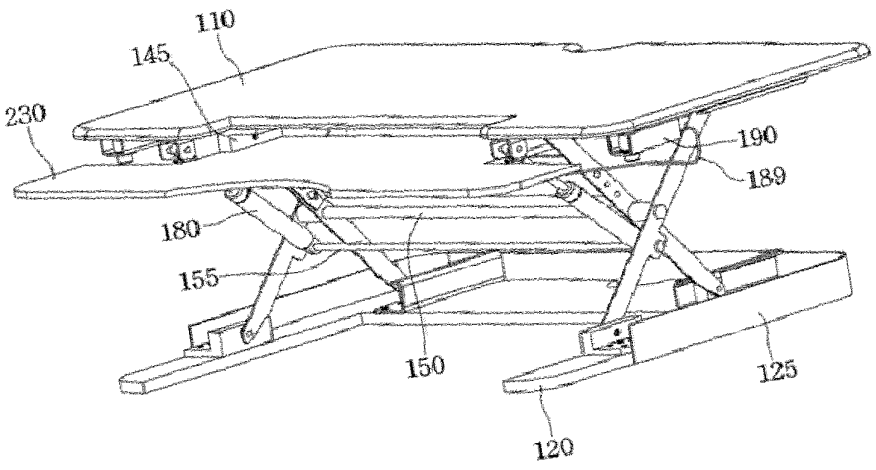
[도6]



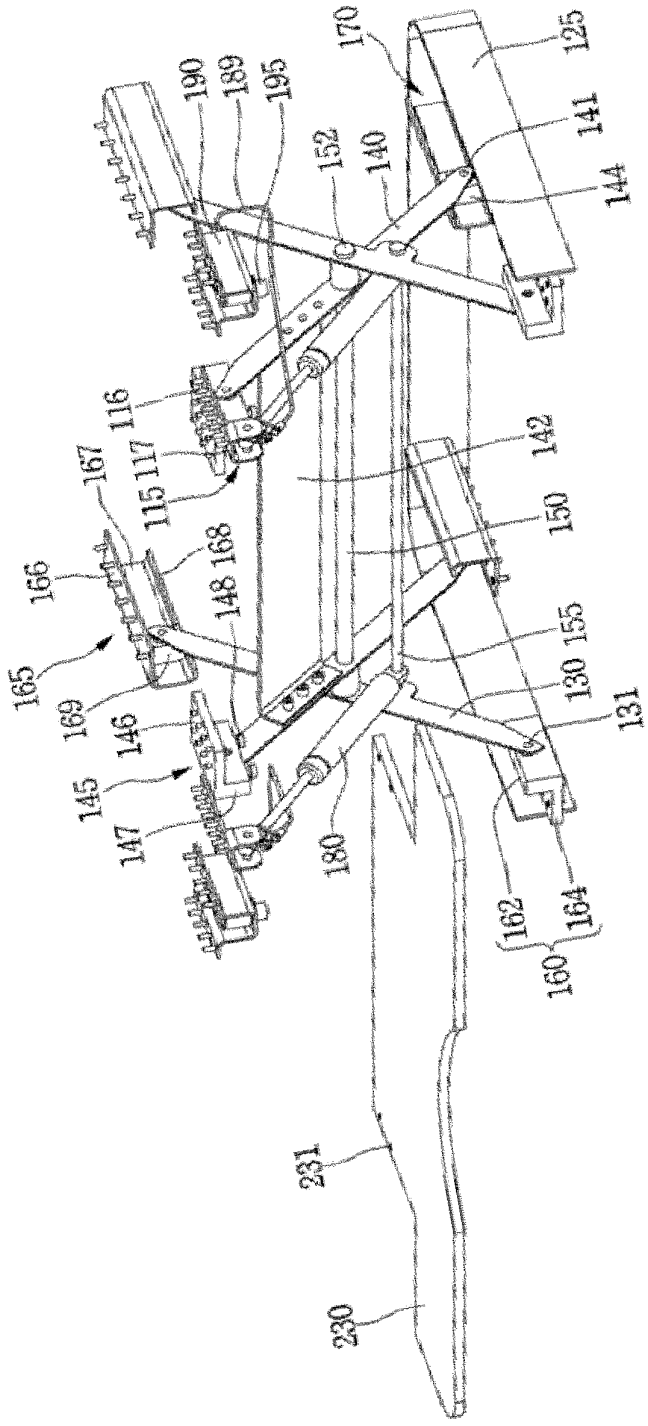
[도7]


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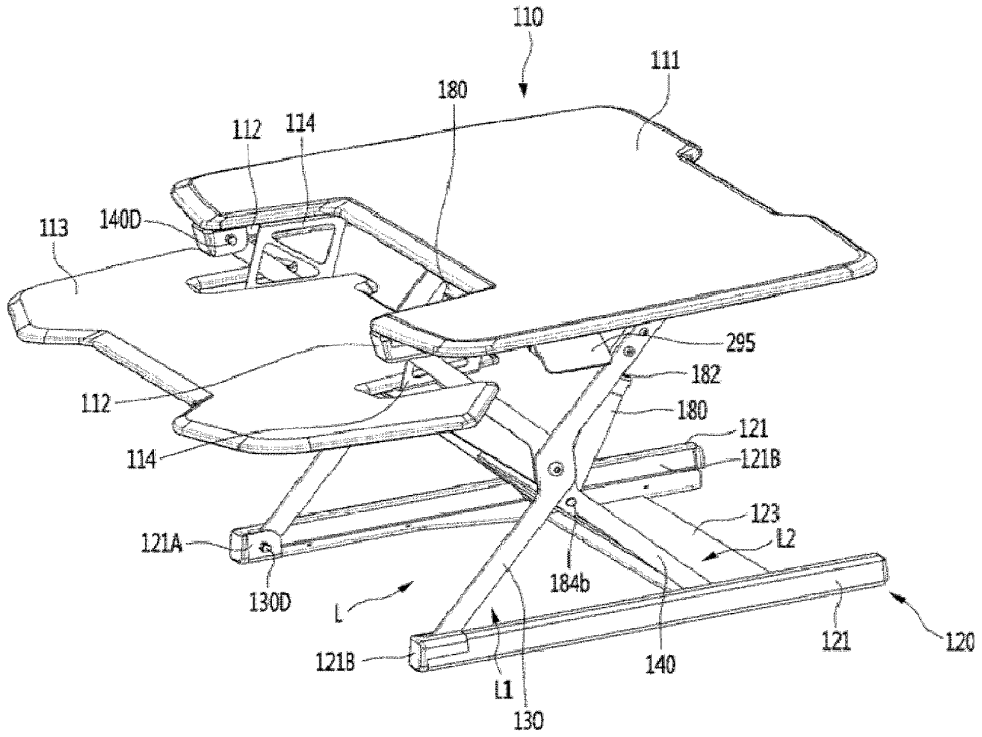
[도8]


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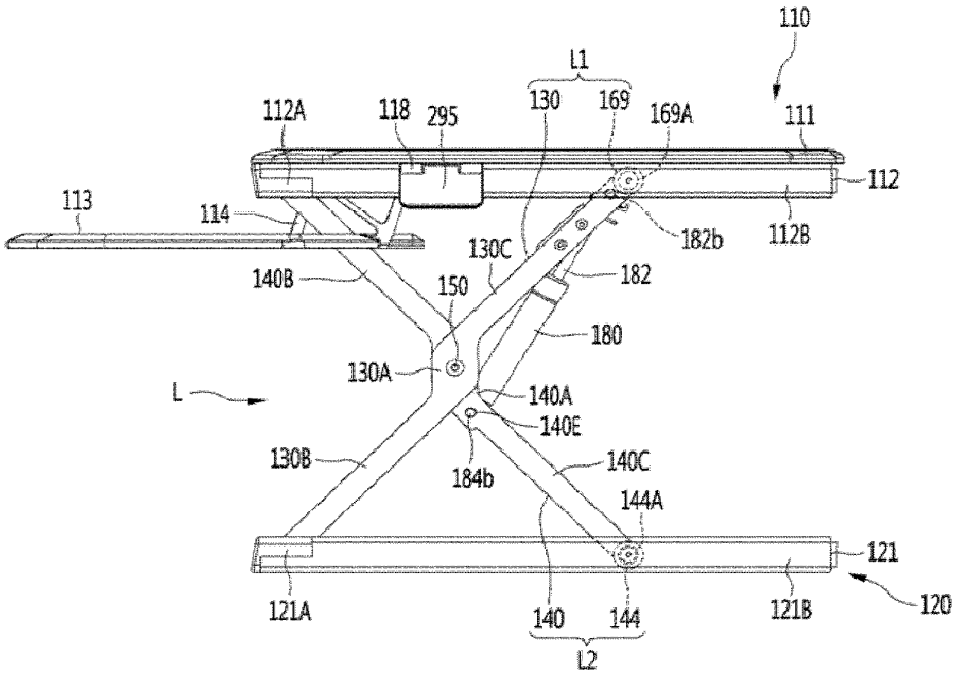
[도9]


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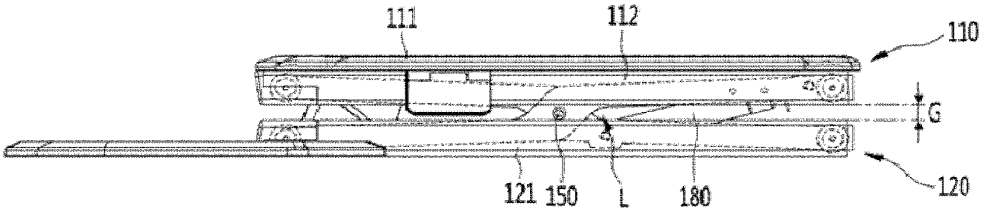
[도10]


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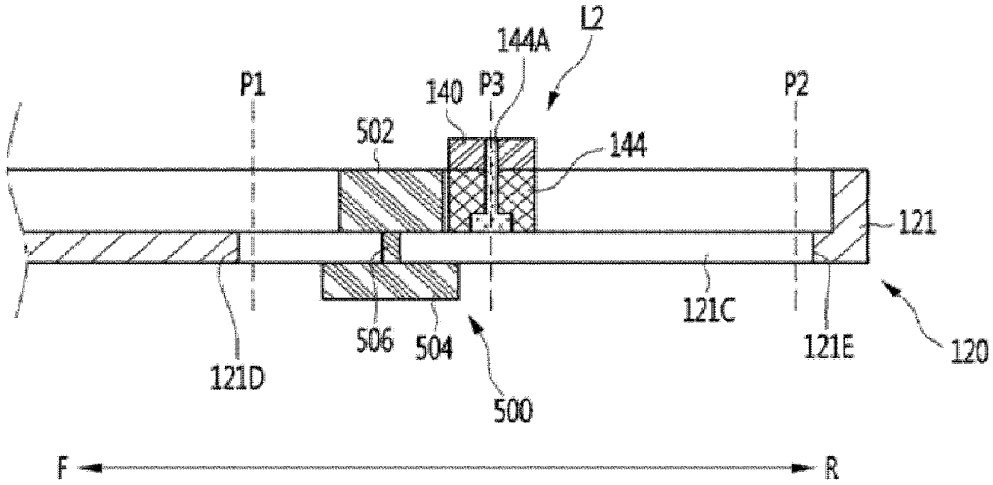
[도11]


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184b
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121B
L2

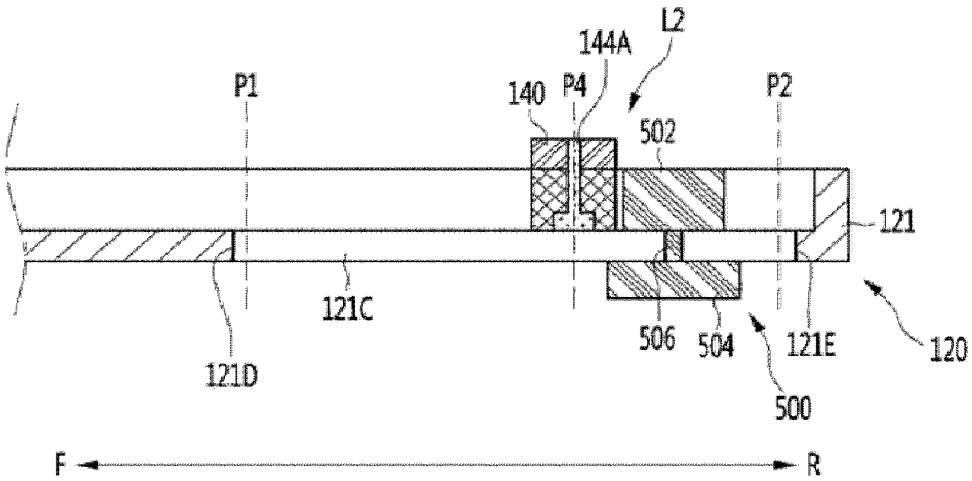
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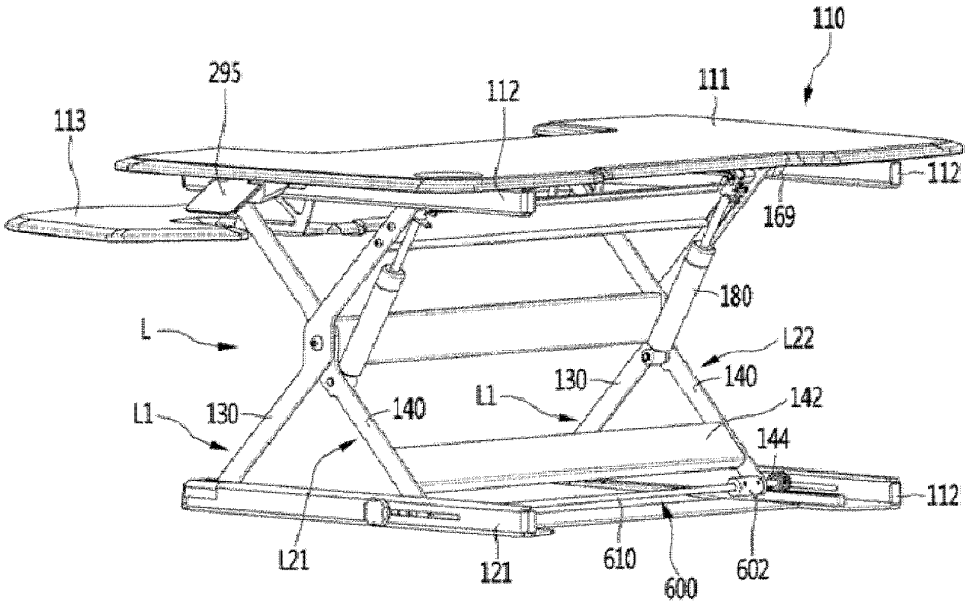
[도13]


L2
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P1
140
P3
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502
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121
121C
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121E
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121D
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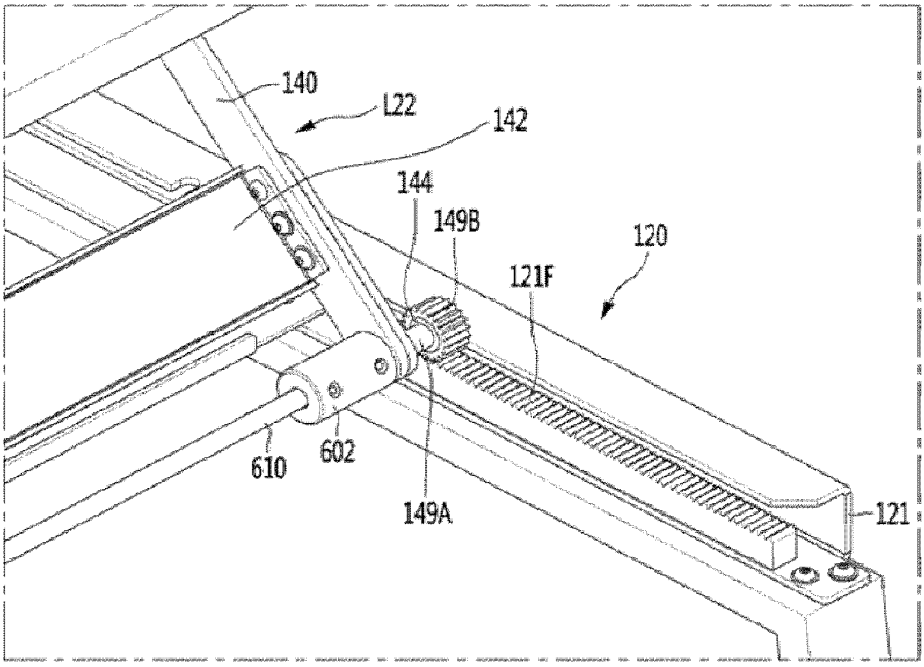
[도14]


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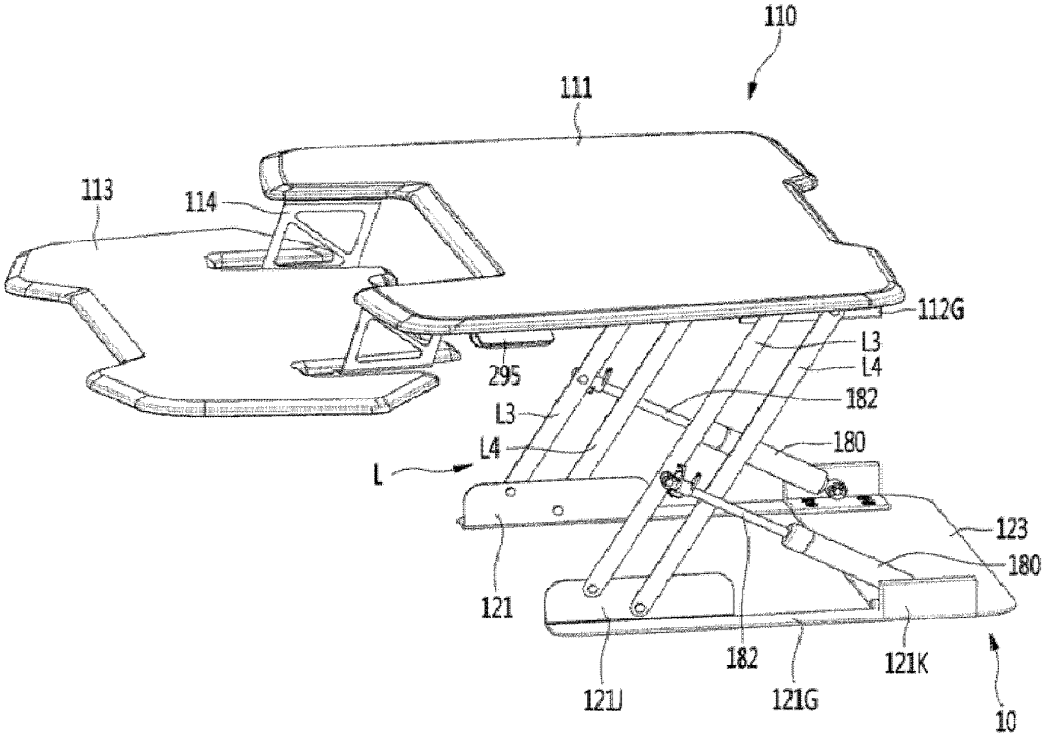
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L1
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L1
144
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L21
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602

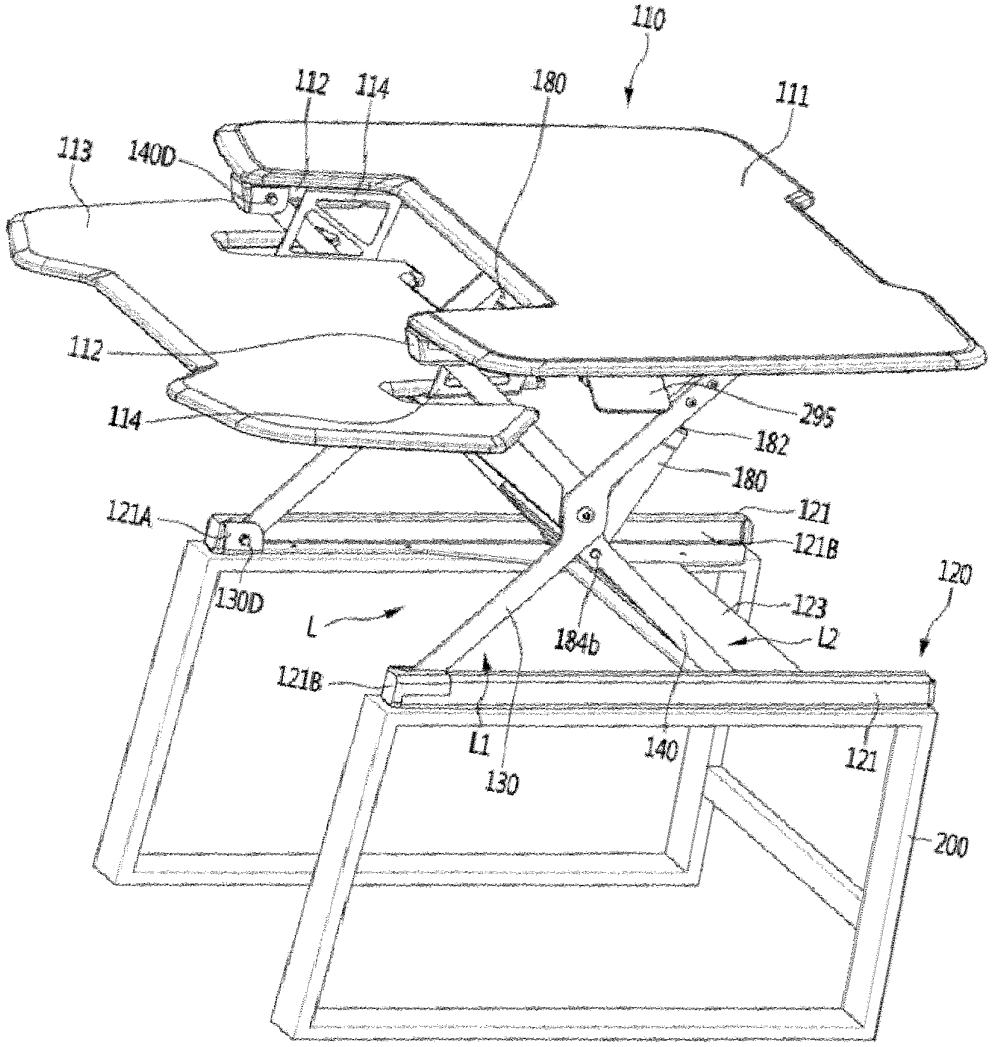
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149A
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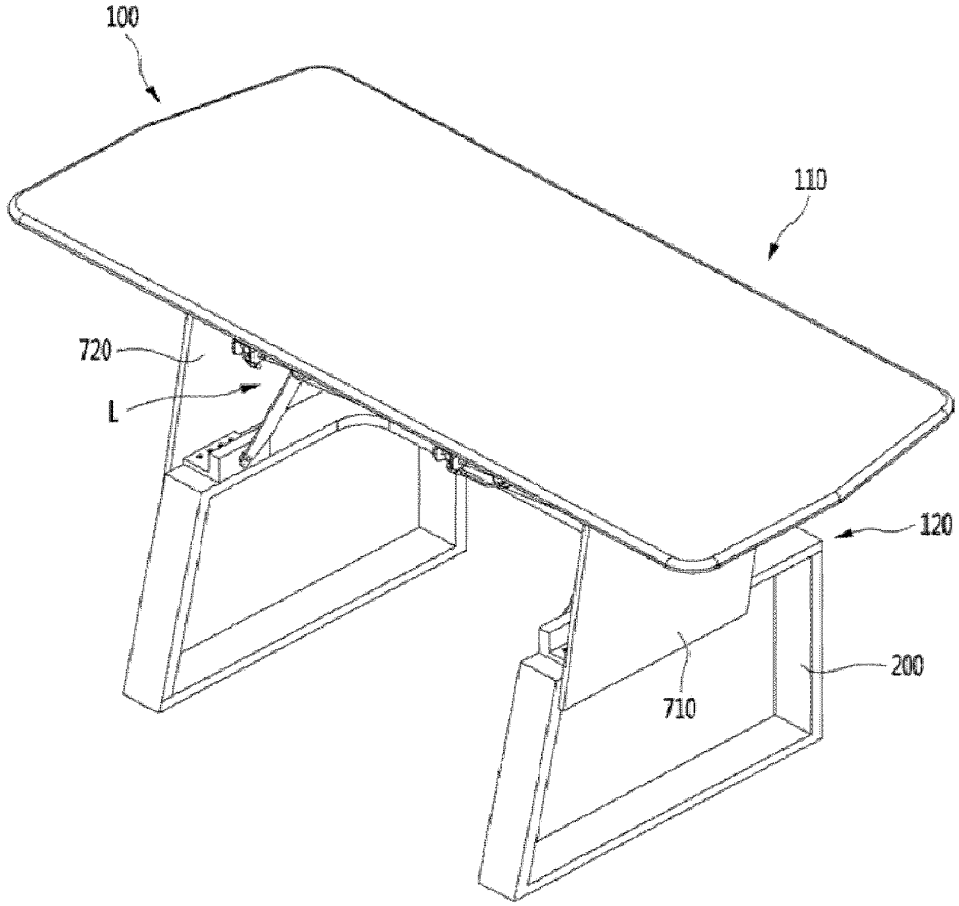
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121K
121J
121G
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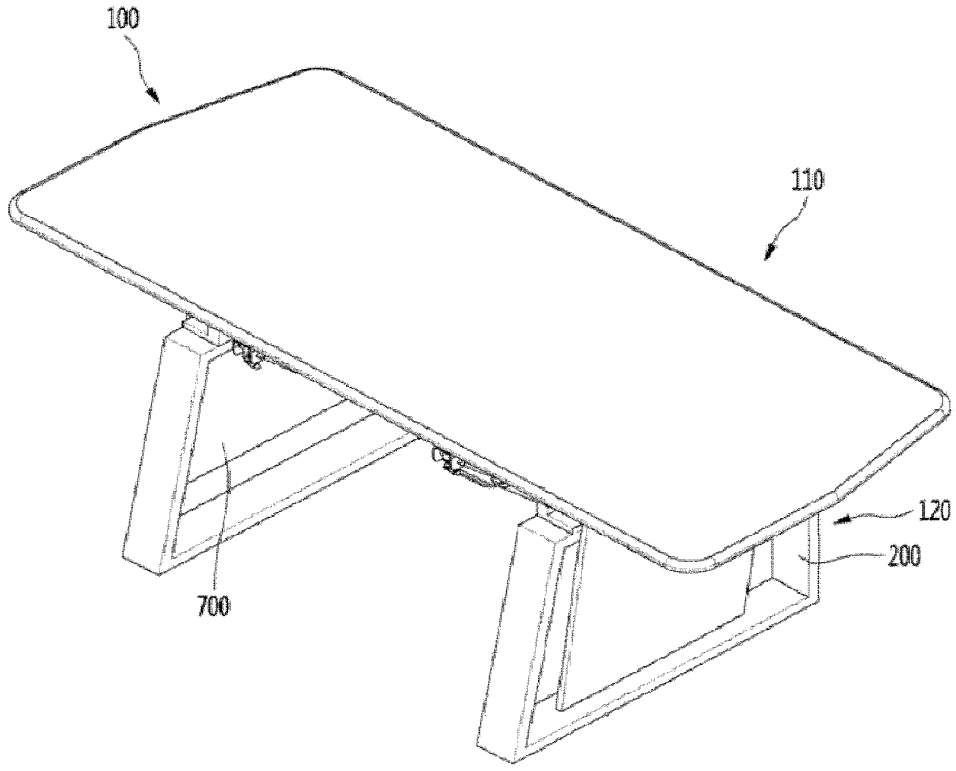
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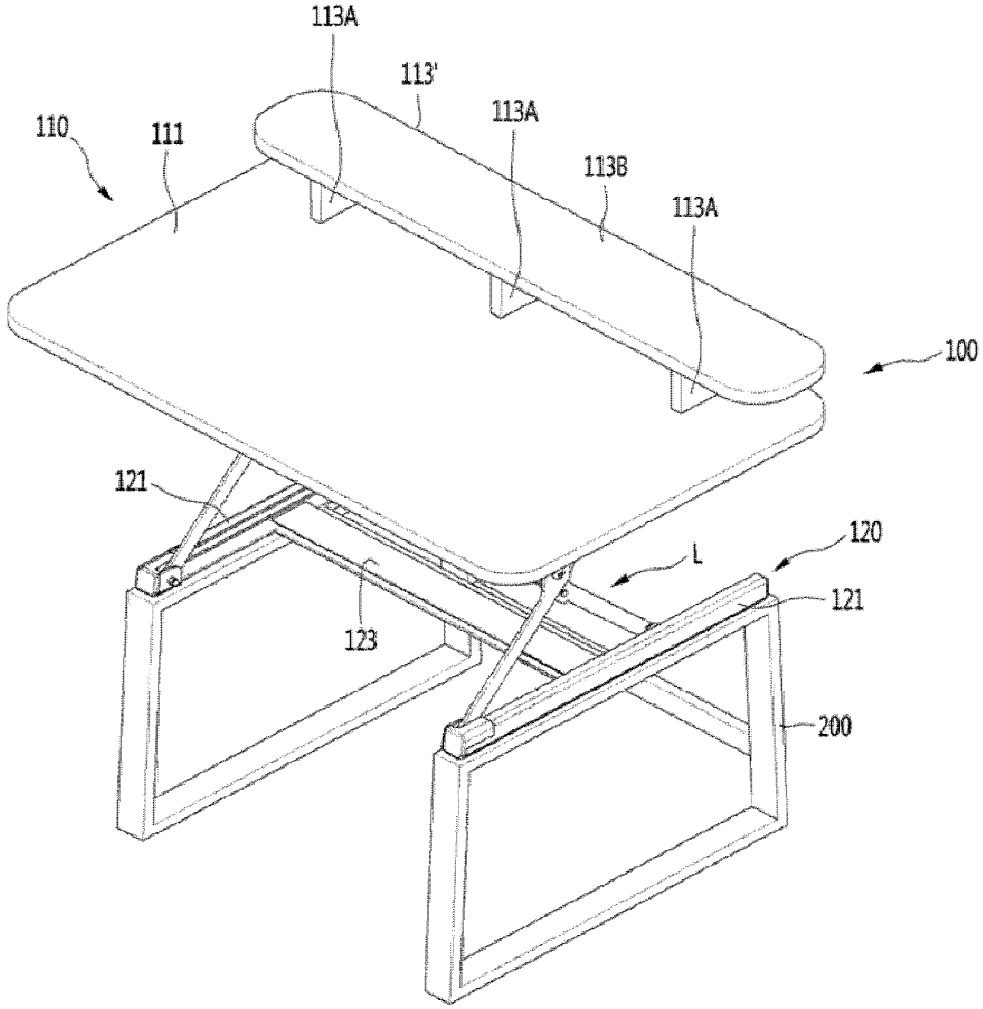
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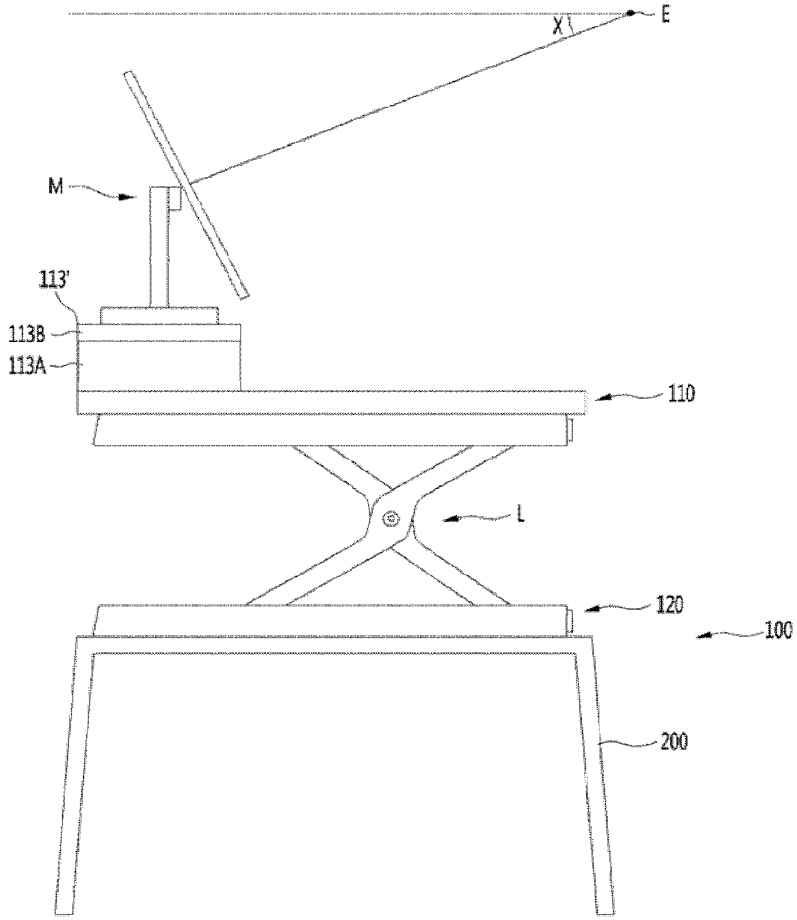
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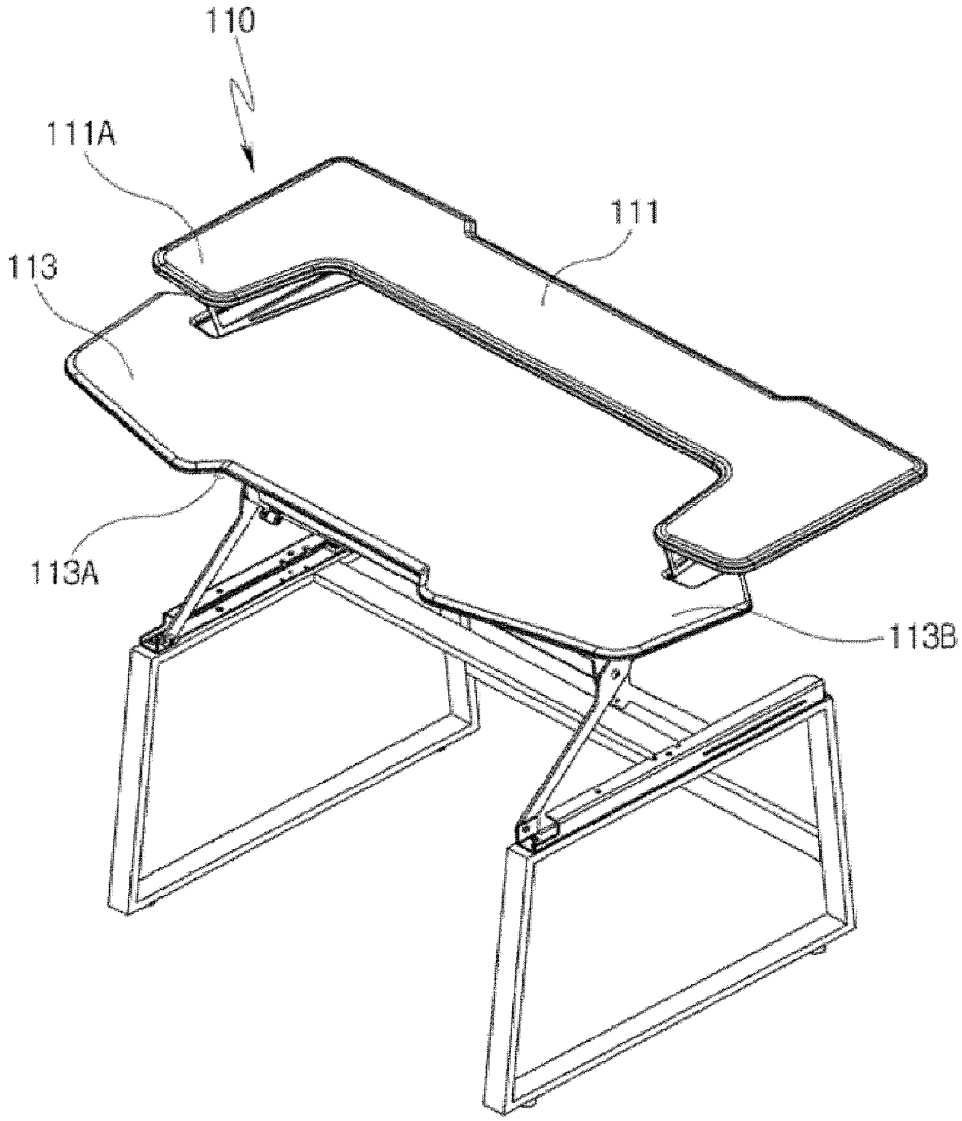
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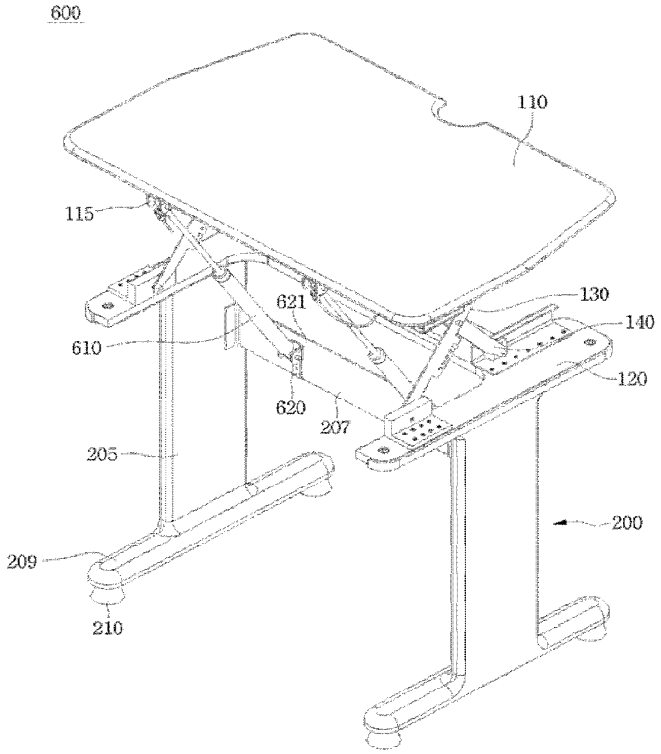
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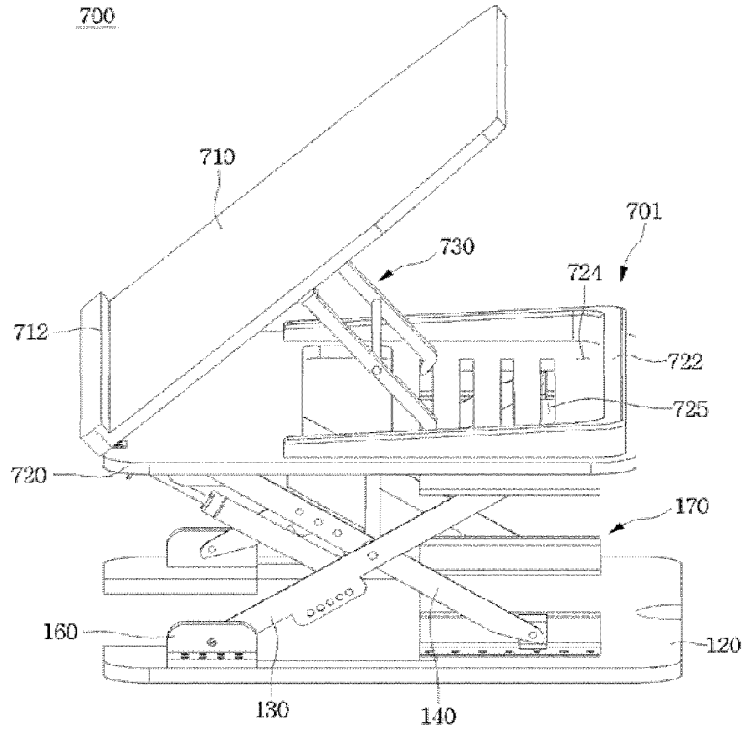
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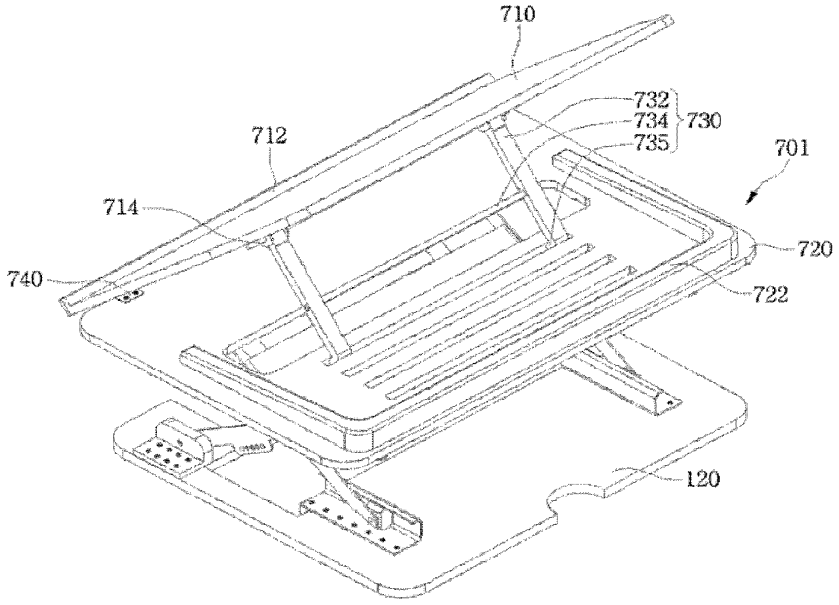
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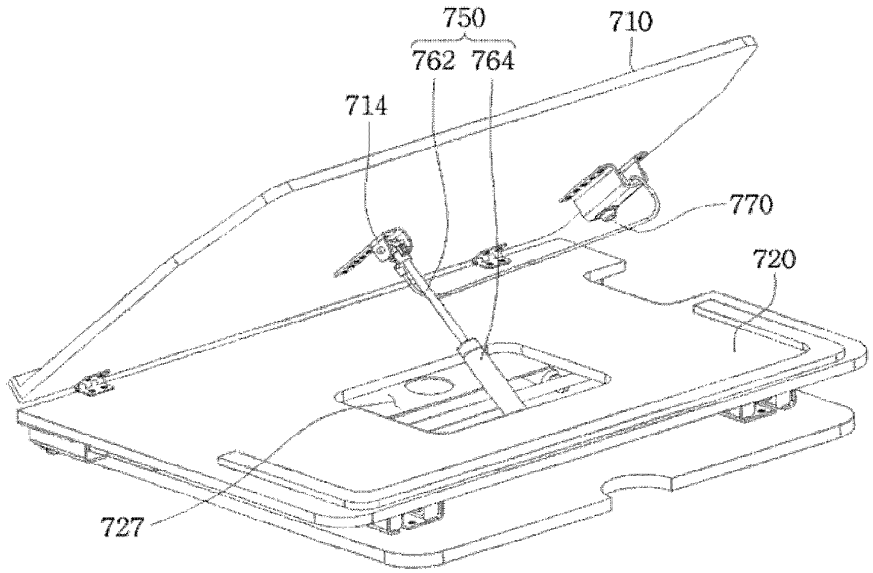
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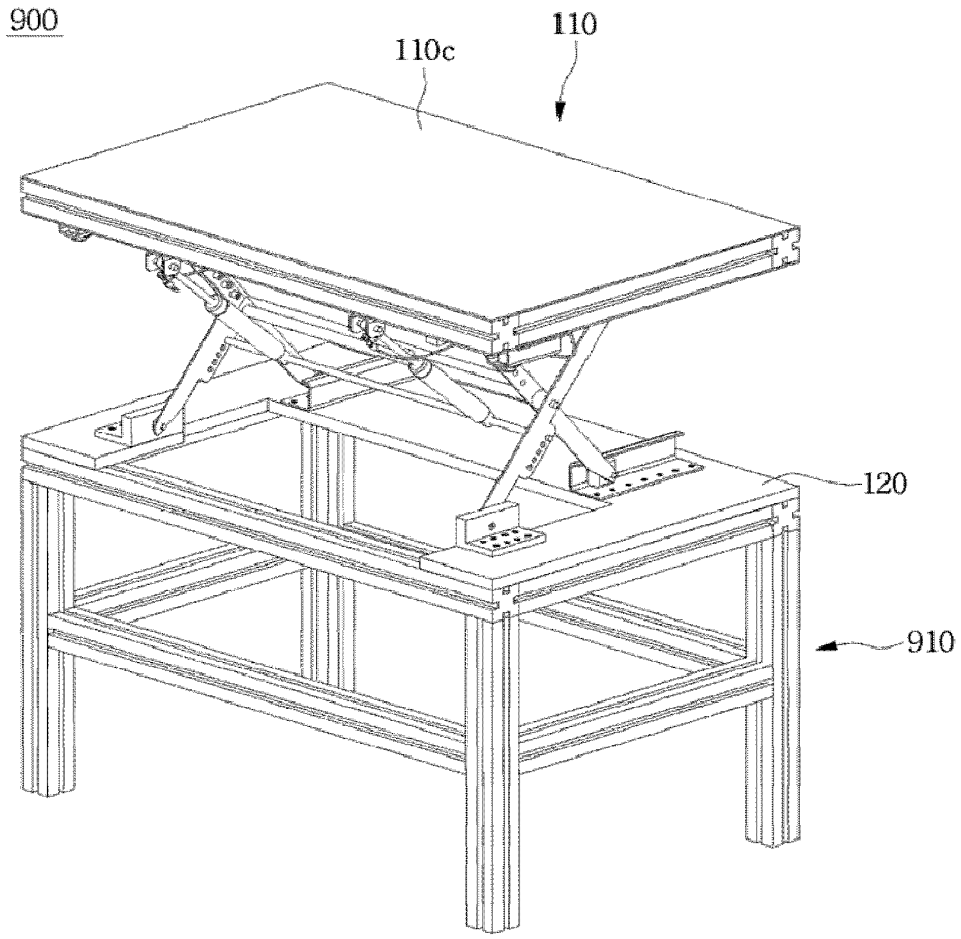
[도26]


710
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[도27]


750
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[도28]



INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2016/001477

A. CLASSIFICATION OF SUBJECT MATTER

A47B 9/18(2006.01)i, A47B 17/02(2006.01)i, A47B 21/02(2006.01)i, A47B 9/10(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A47B 9/18; A47B 9/00; A47B 9/10; A47F 5/12; B25H 1/00; A47B 13/00; B66F 9/06; B62B 3/06; A47B 17/02; A47B 21/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean Utility models and applications for Utility models: IPC as above
Japanese Utility models and applications for Utility models: IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS (KIPO internal) & Keywords: high and low, height, adjustment, desk, cylinder, piston, link, base, upper plate, slide, fixing, auxiliary upper plate

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KR 10-1998-0056758 A (HYUNDAI MOTOR COMPANY et al.) 25 September 1998 See page 2, lines 2-31; and figure 1.	1-22
Y	JP 2007-037926 A (OKAMURA CORP.) 15 February 2007 See paragraphs [0022], [0026], [0030]; and figures 1, 3-5, 7.	1-22
A	KR 10-2014-0074679 A (GO, Byeong Ki) 18 June 2014 See paragraphs [0018]-[0048]; and figures 1-3, 6.	1-22
A	JP 10-262741 A (OKAMURA CORP.) 06 October 1998 See paragraphs [0016]-[0018]; and figure 1.	1-22
A	US 5778799 A (EYRE, Clarence W.) 14 July 1998 See column 2, line 44-column 3, line 67; and figures 1-2.	1-22

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
23 JUNE 2016 (23.06.2016)	**23 JUNE 2016 (23.06.2016)**

Name and mailing address of the ISA/KR
Korean Intellectual Property Office
Government Complex-Daejeon, 189 Seonsa-ro, Daejeon 302-701, Republic of Korea
Facsimile No. 82-42-472-7140

Authorized officer

Telephone No.

Form PCT/ISA/210 (second sheet) (January 2015)

Patent document cited in search report	Publication date	Patent family member	Publication date
KR 10-1998-0056758 A	25/09/1998	NONE	
JP 2007-037926 A	15/02/2007	CN 101068485 A	07/11/2007
		CN 101068485 B	12/01/2011
		EP 1806067 A1	11/07/2007
		EP 2206448 A1	14/07/2010
		JP 2006-102101 A	20/04/2006
		JP 2006-102105 A	20/04/2006
		JP 4264046 B2	13/05/2009
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		JP 4317170 B2	19/08/2009
		US 2008-0028996 A1	07/02/2008
		US 7798070 B2	21/09/2010
		WO 2006-038649 A1	13/04/2006
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		KR 10-2015-0049315 A	08/05/2015
		WO 2014-092331 A1	19/06/2014
JP 10-262741 A	06/10/1998	NONE	
US 5778799 A	14/07/1998	EP 0592181 A2	13/04/1994
		JP 07-295677 A	10/11/1995
		US 5685231 A	11/11/1997
		WO 94-07397 A1	14/04/1994

국 제 조 사 보 고 서

국제출원번호
PCT/KR2016/001477

A. 발명이 속하는 기술분류(국제특허분류(IPC))

A47B 9/18(2006.01)i, A47B 17/02(2006.01)i, A47B 21/02(2006.01)i, A47B 9/10(2006.01)i

B. 조사된 분야

조사된 최소문헌(국제특허분류를 기재)
A47B 9/18; A47B 9/00; A47B 9/10; A47F 5/12; B25H 1/00; A47B 13/00; B66F 9/06; B62B 3/06; A47B 17/02; A47B 21/02

조사된 기술분야에 속하는 최소문헌 이외의 문헌
한국등록실용신안공보 및 한국공개실용신안공보: 조사된 최소문헌란에 기재된 IPC
일본등록실용신안공보 및 일본공개실용신안공보: 조사된 최소문헌란에 기재된 IPC

국제조사에 이용된 전산 데이터베이스(데이터베이스의 명칭 및 검색어(해당하는 경우))
eKOMPASS(특허청 내부 검색시스템) & 키워드: 높낮이, 높이, 조절, 책상, 실린더, 피스톤, 링크, 베이스, 상판, 슬라이드, 고정, 보조 상판

C. 관련 문헌

카테고리*	인용문헌명 및 관련 구절(해당하는 경우)의 기재	관련 청구항
Y	KR 10-1998-0056758 A (현대자동차 주식회사 등) 1998.09.25 페이지 2, 라인 2-31; 및 도면 1 참조.	1-22
Y	JP 2007-037926 A (OKAMURA CORP) 2007.02.15 단락 [0022], [0026], [0030]; 및 도면 1, 3-5, 7 참조.	1-22
A	KR 10-2014-0074679 A (고병기) 2014.06.18 단락 [0018]-[0048]; 및 도면 1-3, 6 참조.	1-22
A	JP 10-262741 A (OKAMURA CORP) 1998.10.06 단락 [0016]-[0018]; 및 도면 1 참조.	1-22
A	US 5778799 A (EYRE, CLARENCE W.) 1998.07.14 컬럼 2, 라인 44 - 컬럼 3, 라인 67; 및 도면 1-2 참조.	1-22

☐ 추가 문헌이 C(계속)에 기재되어 있습니다.

☒ 대응특허에 관한 별지를 참조하십시오.

* 인용된 문헌의 특별 카테고리:

"A" 특별히 관련이 없는 것으로 보이는 일반적인 기술수준을 정의한 문헌

"E" 국제출원일보다 빠른 출원일 또는 우선일을 가지나 국제출원일 이후에 공개된 선출원 또는 특허 문헌

"L" 우선권 주장에 의문을 제기하는 문헌 또는 다른 인용문헌의 공개일 또는 다른 특별한 이유(이유를 명시)를 밝히기 위하여 인용된 문헌

"O" 구두 개시, 사용, 전시 또는 기타 수단을 언급하고 있는 문헌

"P" 우선일 이후에 공개되었으나 국제출원일 이전에 공개된 문헌

"T" 국제출원일 또는 우선일 후에 공개된 문헌으로, 출원과 상충하지 않으며 발명의 기초가 되는 원리나 이론을 이해하기 위해 인용된 문헌

"X" 특별한 관련이 있는 문헌. 해당 문헌 하나만으로 청구된 발명의 신규성 또는 진보성이 없는 것으로 본다.

"Y" 특별한 관련이 있는 문헌. 해당 문헌이 하나 이상의 다른 문헌과 조합하는 경우로 그 조합이 당업자에게 자명한 경우 청구된 발명은 진보성이 없는 것으로 본다.

"&" 동일한 대응특허문헌에 속하는 문헌

국제조사의 실제 완료일	국제조사보고서 발송일
2016년 06월 23일 (23.06.2016)	2016년 06월 23일 (23.06.2016)

ISA/KR의 명칭 및 우편주소
대한민국 특허청
(35208) 대전광역시 서구 청사로 189,
4동 (둔산동, 정부대전청사)
팩스 번호 +82-42-481-8578

심사관
황찬윤
전화번호 +82-42-481-3347

서식 PCT/ISA/210 (두 번째 용지) (2015년 1월)

국제조사보고서에서 인용된 특허문헌	공개일	대응특허문헌	공개일
KR 10-1998-0056758 A	1998/09/25	없음	
JP 2007-037926 A	2007/02/15	CN 101068485 A	2007/11/07
		CN 101068485 B	2011/01/12
		EP 1806067 A1	2007/07/11
		EP 2206448 A1	2010/07/14
		JP 2006-102101 A	2006/04/20
		JP 2006-102105 A	2006/04/20
		JP 4264046 B2	2009/05/13
		JP 4317108 B2	2009/08/19
		JP 4317170 B2	2009/08/19
		US 2008-0028996 A1	2008/02/07
		US 7798070 B2	2010/09/21
		WO 2006-038649 A1	2006/04/13
KR 10-2014-0074679 A	2014/06/18	KR 10-1412952 B1	2014/06/26
		KR 10-2015-0049315 A	2015/05/08
		WO 2014-092331 A1	2014/06/19
JP 10-262741 A	1998/10/06	없음	
US 5778799 A	1998/07/14	EP 0592181 A2	1994/04/13
		JP 07-295677 A	1995/11/10
		US 5685231 A	1997/11/11
		WO 94-07397 A1	1994/04/14

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
22 October 2015 (22.10.2015)

WIPO | PCT

(10) International Publication Number
WO 2015/160825 A2

(51) International Patent Classification:
A47B 9/16 (2006.01) *A47B 9/02* (2006.01)

(21) International Application Number:
PCT/US2015/025780

(22) International Filing Date:
14 April 2015 (14.04.2015)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/979,265 14 April 2014 (14.04.2014) US
62/053,880 23 September 2014 (23.09.2014) US

(71) Applicant: **ERGOTRON, INC.** [US/US]; 1181 Trapp Road, Saint Paul, Minnesota 55121 (US).

(72) Inventors; and

(71) Applicants : **ERGUN, Mustafa A.** [US/US]; 1020 Amble Road, Shoreview, Minnesota 55126 (US). **WONG, Thiem** [US/US]; 6609 Neddersen Parkway, Minneapolis, Minnesota 55445 (US). **THEIS, John W.** [US/US]; 1932 Juliet Ave., St. Paul, Minnesota 55105 (US).

(74) Agents: **ARORA, Suneel** et al.; Schwegman, Lundberg & Woessner, P.A., P.O. Box 2938, Minneapolis, Minnesota 55402 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— *without international search report and to be republished upon receipt of that report (Rule 48.2(g))*

(54) **Title**: HEIGHT ADJUSTABLE DESKTOP WORK SURFACE

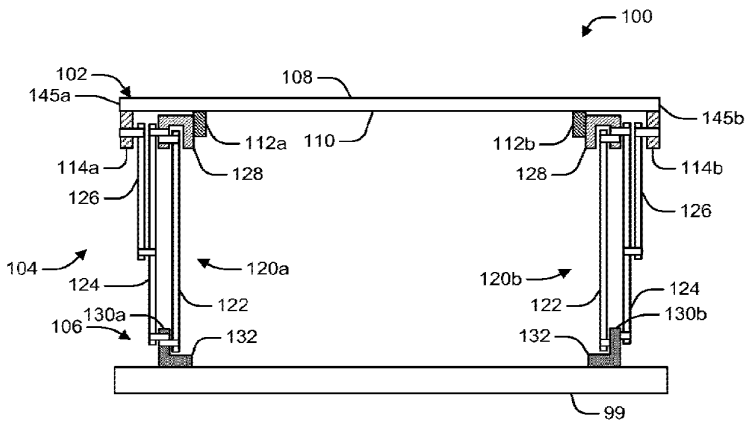


Figure 5

(57) **Abstract**: In one example, a height adjustable desktop system is described that can include a work surface, a foot assembly and a linkage assembly that adjustably connects the work surface to the foot assembly allowing vertical adjustment of the work surface. The linkage assembly can include a pair of adjustment assemblies, each having a transverse linkage that maintains the work surface in a horizontal orientation as the work surface is elevated or lowered. A biasing mechanism, such as an extension spring or a torsion spring, biases the work surface toward the elevated position.

WO 2015/160825 A2

HEIGHT ADJUSTABLE DESKTOP WORK SURFACE

CLAIM OF PRIORITY

This patent application claims the benefit of priorityto U.S. Patent Application Serial Number 61/979,265, filed on April 14, 2014 (Attorney Docket No. 5983.124PRV) and U.S. Patent Application Serial Number 62/053,880, filed on September 23, 2014 (Attorney Docket No. 5983.263PRV), the benefit of priority of each of which is claimed hereby, and each of which are incorporated by reference herein in its entirety.

TECHNICAL FIELD

This document pertains generally, but not by way of limitation, to a desktop assembly for providing a height adjustable work surface.

BACKGROUND

Conventional desks include a planar desktop providing a work surface and for receiving a computer monitor, computer peripherals or other desktop items. Typically, the desktop is mounted at a horizontal position to provide a flat surface for receiving and retaining desktop items. Similarly, the desktop is positioned at a height that corresponds to a position at which a seated person can comfortably use the desk. Recently, desk users have sought to use desks while standing to prevent back strain and other injuries that result from extended seated use of the desk and in particular computer use, which often results in the user being hunched over the desktop. In particular, recent information has indicated that alternating between standing and sitting while using a desk for extending periods of time has beneficial health benefits.

An approach for providing standing use of a desk for computer use is a computer mount including a vertical riser mountable to the work surface of a desk. Fixed or height adjustable mounts for a computer monitor and/or keyboard can be secured to the vertical riser at appropriate heights for standing or alternating between sitting and standing use of the computer. A drawback of this approach is that the monitor is typically fixed to the work surface to avoid tipping. Risers can be fixed to the work surface with an edge clamp, grommet

mount or other clamping apparatuses. A drawback of clamping apparatus is that the existing desktop may have to be modified by drilling holes or removing edge sections of the desktop. The substantial and permanent modification of the desk requires substantial investment and can render the desktop unsuitable for its original intended use or other uses.

OVERVIEW

The present inventors have recognized, among other things, that a problem to be solved can include providing a stable, height adjustable work surface that is sufficiently sized for computer and other uses. In addition, the present inventors have recognized that a related problem to be solved can include converting fixed height desks to a sit-to-stand desk by incorporating a height adjustable work surface. In an example, the present subject matter can provide a solution to this problem, such as by providing a height adjustable work surface that can be set or located on a fixed height desk to convert the fixed height desk. In an example, the height adjustable work surface can have a foot assembly and a linkage assembly that adjustably connects the work surface to the foot assembly allowing vertical adjustment of the work surface relative to the foot assembly. In at least one example, the foot assembly can be placed on or releasably mounted to a work surface of a fixed height desk to provide a stable, height adjustable work surface on the fixed height desk.

In an example, the linkage assembly can include one or more adjustment assemblies, each having at least two parallel linkages and a transverse linkage that maintains the work surface in a generally horizontal orientation as the work surface is elevated or lowered. One of the parallel linkages can rotate in a first plane while the second rotating linkage can rotate in second plane parallel to and offset from the first plane. The offset of the planes can reduce torqueing of the of the work surface relative to the foot assembly. In at least one example, each adjustment assembly can include a gliding upper bar that moves a glide support to elevate and lower the work surface and can also operate to maintain the work surface in a generally horizontal orientation. In at least one example, each adjustment assembly can include a biasing mechanism such as an extension spring or a torsion spring that biases the work surface toward the elevated position. In at least one example, each adjustment assembly can include a gliding

upper bar that moves a glide support to elevate and lower the work surface and can also operate to maintain the work surface in a generally horizontal orientation. In this configuration, the glide rod can include a plurality of indentations that can be rotated between a first position in which the notches engage the glider to prevent adjustment of the work surface and a second position allowing lowering and raising of the work surface.

In at least one example, each adjustment assembly can include a lock lever assembly including a plunger pin that engages one of a plurality of holes in the transverse linkage to fix adjustment assembly preventing elevating or lowering of the work surface.

In an example, the height adjustable desktop can include at least one clamping member such as a clamp, a grommet, a vise, a clip, or an alternative type of fastener for securing the height adjustable desktop to a desktop, table, desk frame, wall or other structure. Securing the base foot assembly or other portion of the height adjustable desktop assembly to the desktop can improve the stability of the work surface during uses such as typing. In at least one example, each clamping members can be located in the front of the foot assembly or base and in another example; one or more clamping members can be located at the rear. In another example, a grommet mount can be used to attach the base to the desktop. The grommet mount can allow the height adjustable desk assembly to be rotated relative to the underlying supporting surface.

In an example, a height adjustable desktop system can include a work surface, a foot assembly and an adjustment assembly. The work surface can define an underside and include a glide support and a support bracket positioned on the underside of the work surface. The foot assembly can include at least one foot bracket. The adjustment assembly can include a glider slidable on the glide support, a first linkage rotatably connected to the glider and rotatably connected to the foot bracket, a second linkage rotatable with the first linkage, the second linkage rotatably connected to the glider and rotatably connected to the foot bracket, and a transverse linkage rotatably connected to the support bracket and rotatably connected to the second linkage. The glider can be slid on the glide support between a first position proximate to the support bracket and a second position distal to the support bracket; wherein the first, second and transverse linkages can be extended when the glide is positioned in the first position to

position the work surface at an elevated position, wherein the first, second and transverse linkages can be collapsed when the glide is positioned in the second position to position the work surface at a lowered position.

In an example, the glide support can include a glide rod defining a plurality of indentations. In this configuration, the glider can define a first glide hole and a second glide hole aligned with the first glide hole, wherein the glide rod can be receivable in the first and second glide hole such that the glider is slidable on the glide rod. The second glide hole can define a flat edge. The glide rod can be rotated between a first position in which the indentations can be aligned to engage the flat edge to prevent sliding of the glider on the glide rod and a second position in which the indentations are out of alignment with the flat edge to allow sliding of the glider on the glide rod.

In an example, the transverse linkage can include a fan portion and defines a plurality of holes in the fan portion arranged in an arc. The height adjustable desktop system can also include a piston having a piston pin. The piston pin can be moved between an extended position in which the pin intersects one of the holes to prevent rotation of the transverse linkage and fixing elevation of the work surface and a retracted position allowing rotation of the transverse linkage permitting movement of the work surface.

This overview is intended to provide an overview of subject matter of the present patent application. It is not intended to provide an exclusive or exhaustive explanation of the present subject matter. The detailed description is included to provide further information about the present patent application.

BRIEF DESCRIPTION OF THE DRAWINGS

In the drawings, which are not necessarily drawn to scale, like numerals may describe similar components in different views. Like numerals having different letter suffixes may represent different instances of similar components. The drawings illustrate generally, by way of example, but not by way of limitation, various embodiments discussed in the present document.

Figure 1 is a schematic side view of a height adjustable desktop system having a work surface in an elevated position, according to an example of the present disclosure.

Figure 2 is a schematic side view of the height adjustable desktop system depicted in Figure 1 having the work surface positioned in an intermediate lowered position, according to an example of the present disclosure.

Figure 3 is a schematic side view of the height adjustable desktop system depicted in Figure 1 having the work surface including a shelf positioned in a lowered position, according to an example of the present disclosure.

Figure 4 is a front view of the height adjustable desktop system depicted in Figure 1 in accordance to an example of the present disclosure.

Figure 5 is a schematic front view of the height adjustable desktop system having a work surface in an elevated position, according to an example of the present disclosure.

Figure 6 is a schematic front view of the height adjustable desktop system having a work surface in an elevated position, according to an example of the present disclosure.

Figure 7 is a schematic side view of a height adjustable desktop system having a work surface including a shelf positioned in a lowered position, according to an example of the present disclosure.

Figure 8 is a schematic side view of a height adjustable desktop system having a work surface including a shelf positioned in a lowered position, according to an example of the present disclosure.

Figure 9 is a schematic side view of a height adjustable desktop system having a clamping member, according to an example of the present disclosure.

Figure 10 is a schematic side view of a height adjustable desktop system having a clamping member, according to an example of the present disclosure.

Figure 12 is a schematic side view of a height adjustable desktop system having a work surface in an elevated position, according to an example of the present disclosure, wherein an extension spring operably linking a glider to a transverse linkage.

Figure 13 is a schematic side view of a height adjustable desktop system having a work surface in an elevated position, according to an example of the present disclosure, wherein an extension spring operably linking a glider to a spring holding bracket affixed to the work surface.

Figure 14 is a schematic side view of the height adjustable desktop system depicted in Figure 7 having a work surface positioned in an intermediate lowered position, according to an example of the present disclosure.

Figure 15 is a schematic side view of a height adjustable desktop system having a work surface in an elevated position, according to an example of the present disclosure, wherein a torsion spring is positioned bias the work surface to the elevated position.

Figure 16 is a schematic side view of the height adjustable desktop system depicted in Figure 15 having a work surface positioned in an intermediate lowered position, according to an example of the present disclosure.

Figure 17 is a schematic side view of a height adjustable desktop system having a work surface in an elevated position and having a wall bracket for mounting the system to a wall, according to an example of the present disclosure.

Figure 18 is a perspective view of a height adjustable desktop system having a work surface in an elevated position, according to an example of the present disclosure.

Figure 19 is a side view of the height adjustable desktop system having a work surface depicted in Figure 18.

Figure 20 is a front view of the height adjustable desktop system having a work surface depicted in Figure 18.

Figure 21 is a side view of the height adjustable desktop system depicted in Figure 18 having the work surface positioned in an intermediate lowered position, according to an example of the present disclosure.

Figure 22 is a side view of the height adjustable desktop system depicted in Figure 18 having the work surface positioned in an intermediate lowered position, according to an example of the present disclosure.

Figure 23 is partial front view of a height adjustable desktop system illustrating a lever for a glide rod, according to an example of the present disclosure.

Figure 24 is a partial perspective view of a height adjustable desktop system, according to an example of the present disclosure.

Figure 25 is a perspective view of a glider rod, support frame and glider assembly, according to an example of the present disclosure.

Figure 26 is a perspective view of a glider, according to an example of the present disclosure.

Figure 27 is a perspective view of a glider rod, according to an example of the present disclosure.

Figure 28 is a top view of a lever of a glider rod, according to an example of the present disclosure.

Figure 29 is a partial cross-sectional view of a glider rod, according to an example of the present disclosure.

Figure 30 is a perspective view of a height adjustable desktop system having a work surface in an elevated position, according to an example of the present disclosure.

Figure 31 is a side view of the height adjustable desktop system having a work surface depicted in Figure 30 of the present disclosure.

Figure 32 is a side view of the height adjustable desktop system depicted in Figure 30 having the work surface positioned in an intermediate lowered position, according to an example of the present disclosure.

Figure 33 is a front view of the height adjustable desktop system having a work surface depicted in Figure 24 of the present disclosure.

Figure 34 is a partial perspective view of a lock lever assembly according to an example of the present disclosure.

Figure 35 is a partial cross-sectional side view of a lock lever assembly according to an example of the present disclosure.

Figure 36 is a perspective view of a height adjustable desktop system having a lower lock assembly, with a work surface positioned in an elevated position, according to an example of the present disclosure.

Figure 37 is a perspective view of a height adjustable desktop system having a lower lock assembly, with a work surface positioned in a lowered and locked position, according to an example of the present disclosure.

Figure 38 is a perspective view of a lever having a locking arm according to an example of the present disclosure.

Figure 39 is a partial perspective view of a height adjustable desktop system locked into a lowered position according to an example of the present disclosure.

Figure 40 is a cross-sectional perspective view of a height adjustable desktop system locked into a lowered position according to an example of the present disclosure.

DETAILED DESCRIPTION

As depicted in FIGS. 1-3, a height adjustable desktop system 100, according to an example of the present disclosure, can include a work surface 102, a linkage assembly 104 and a foot assembly 106. The work surface 102 provides a planar surface for writing or receiving desktop items such as computer peripherals. The foot assembly 106 is configured to be placed on a desktop 99 of a desk, secured to the frame of the desk or secured to a wall or other structure. The linkage assembly 104 operably connects the work surface 102 to the foot assembly 106. The linkage assembly 104 is configured to position the work surface 102 for vertical height adjustment of the work surface 102 and permitting use of the work surface 102 while seated, standing or in other positions. As illustrated in FIG. 2, in an example, the linkage assembly 104 can elevate as depicted in FIG. 1 or lower the work surface 102 relative to the foot assembly 106 as depicted in FIG. 3.

As depicted in FIGS. 1-6, the work surface 102 can define a primary top surface 108 and an underside 110. The top surface 108 can be planar to provide a flat surface for writing or receiving desktop items. In an example, the primary top surface 108 can include a high friction surface to prevent desktop items from sliding on the primary top surface 108 while the work surface 102 is being elevated or lowered by the linkage assembly 104. As depicted in FIG. 4, in at least one example, the work surface 102 can include at least one glide support 112 and a support bracket 114 arranged on the underside 110 of the work surface 102 along an axis. In this configuration, a first adjustment assembly 120a can be located proximate the center of the work surface 102. The foot assembly 106 can be large enough to maintain stability of the work surface 102 during use of the height adjustable desktop system 100.

As depicted in FIGS. 7-8, in an example, the work surface 102 can include a shelf 116 defining a secondary top surface 118 for use as a keyboard tray or other purposes providing a bi-level work surface. In at least one example, the secondary top surface 118 can be located at a lower height than the primary

top surface 108. In this configuration, the lower secondary top surface 118 can permit use of certain peripherals at a lower height relative to the primary top surface 108 to position the peripherals at a more ergonomic operating position for the user's hands while the relatively higher primary top surface 108 positions other peripherals, such as computer monitors, at a more ergonomic viewing position for the user's head and eyes. For example, the peripherals for use on the secondary top surface 118 can include, but not limited to computer monitors, keyboards, mice, speakers, boon microphones and other peripherals commonly used with computers. As depicted in FIG. 7, in an example, the secondary top surface 118 can rest against the foot assembly 106 on the desktop 99 in the lowered position 144. As depicted in FIG. 8, in an example, the secondary top surface 118 can extend forward of the front 140 of the desktop 99 and can include a lowered position 144 that can be lower than the surface of the foot assembly 106 or the surface of the desktop 99. In this configuration, the secondary top surface 118 can be positioned at a height about or below the primary top surface 108. As depicted in FIGS. 18-22 and 30, in at least one example, the work surface 102 can include at least one attachment bracket 119 for releasably securing the shelf 116 to the work surface 102. As depicted in FIG. 5, in at least one example,

As depicted in FIGS. 5-6, in at least one example, the work surface 102 can include a first glide support 112a and a first support bracket 114a arranged on the underside 110 of the work surface 102 along a first axis. In this configuration, the work surface 102 also can include a second glide support 112b and a second support bracket 114b arranged on the underside 110 of the work surface 102 along a second axis parallel to the first axis. In this configuration, the first support bracket 114a and the second support bracket 114b cooperate to support the work surface 102. In at least one example, the work surface 102 further can include a back bracket 115 joining the first and second glide supports 112a, 112b.

As depicted in FIGS. 5-6, the linkage assembly 104 can include a first adjustment assembly 120a and a second adjustment assembly 120b. Whether the linkage assembly 104 includes only one adjustment assembly or additional adjustment assemblies, the following description may use the "first adjustment assembly" nomenclature and element numbering in various examples. The work

surface 102 can include a first glide support 112a and a first support bracket 114a arranged on the underside 110 of the work surface 102 along a first axis. Each adjustment assembly 120a, 120b can include a first parallel linkage 122, a second parallel linkage 124 and a transverse linkage 126. Each adjustment assembly 120a, 120b also can include a glider 128 configured to slide on one of the glide supports 112a, 112b. The first adjustment assembly 120a can be located proximate to a first edge 145a of the work surface 102. The second adjustment assembly 120b can be located proximate to a second edge 145b of the work surface 102 which can be opposite the first edge 145a. The first and second adjustment assemblies 120a, 120b can be operationally connected to the work surface 102 on the upper end, such as at the underside 110, and operationally connected to the foot assembly 106 at the lower end. The foot assembly 106 can include an individual foot portion 132 for each adjustment assembly 120a, 120b as illustrated in FIG. 5, or in some configurations, the foot assembly 106 can be formed as a base 147 that spans from the first adjustment assembly 120a to the second adjustment assembly 120b as illustrated in FIG. 6.

A first lower bar 130a can be formed as part of the foot assembly 106. The first lower bar 130a can extend upwardly from the foot assembly 106 and can be formed separately or integrally with the foot assembly 106. The first lower bar 130a can be an attachment structure, a bracket, a foot bracket, or similar structure. Similarly, the second adjustment assembly 120b can include a second lower bar 130b such that the first and second parallel linkages 122, 124 of the second adjustment assembly 120b can be individually mounted to the foot portion 132.

As depicted in FIG. 1, the first and second parallel linkages 122, 124 can be rotatably mounted at one end to the first lower bar 130a at a first hinge 148 and a second hinge 149 such that the first and second parallel linkages 122, 124 rotate in parallel on the first lower bar 130a. The first and second parallel linkages 122, 124 can be rotatably mounted at an opposite end to the glider 128 at a third hinge 150 and a fourth hinge 151 such that the first and second parallel linkages 122, 124 rotate in parallel on the glider 128. Similarly, the transverse linkage 126 can be rotatably mounted at one end to the second parallel linkage 124 by a sixth hinge 153 and rotatably mounted to the corresponding support brackets 114a, 114b through a fifth hinge 152. In an example, the transverse

linkage 126 can be rotatably mounted to the second parallel linkage 124 at about the midpoint of the second parallel linkage 124. In an example, the transverse linkage 126 is about half the length of the second parallel linkage 124.

As depicted in FIGS. 30 and 33, in an example, the first parallel linkages 122 of the adjustment assemblies 120a, 120b can be connected by a first cross-piece 123. Similarly, the second parallel linkages 124 of the adjustment assemblies 120a, 120b can be connected by a second cross-piece 125.

As depicted in FIGS. 4-6, in an example, the first and second parallel linkages 122, 124, the transverse linkage 126 and combinations thereof can be offset along an axis transverse to plane of rotation of the first and second parallel linkages 122, 124 and the transverse linkage 126. In this configuration, the offset prevents contact or pinching of the linkages 122, 124, and 126 during rotation of the linkages 122, 124, and 126. As illustrated in FIG. 4, in at least one example, the first parallel linkage 122 can rotate in a first plane and the second parallel linkage 124 can rotate in a second plane. The second plane can be parallel to and offset from the first plane. The offsetting of the first and second planes can prevent torqueing of the work surface 108 relative to the foot assembly 147 during use of the work surface 108.

FIGS. 1-3 illustrate side views of a height adjustable desktop system 100 and a linkage assembly 104. FIG. 1 illustrates an elevated position 142, FIG. 2 illustrates an intermediate position 143 and FIG. 3 illustrates a lowered position 144. As depicted in FIGS. 1-3, the linkage assembly 104 can be configured with a 4-bar linkage 105 to keep the platform in horizontal orientation during the height adjustment.

FIGS. 1-3 illustrate the operation of the height adjustable desktop system 100. In operation, the gliders 128 of the first and second adjustment assemblies 120a, 120b can each slide along the corresponding first and second glide support 112a, 112b between a first position 138 and a second position 139, which correspondingly moves the work surface 102 between an elevated position 142 and a lowered position 144. FIG. 2 illustrates the work surface 102 in an intermediate position 143 as the first glide support 112a is between a first position 138 and a second position 139. In the first position 138, each glider 128 can be positioned proximate to the corresponding support bracket 114a, 114b along the corresponding first and second glide support 112a, 112b such that the

work surface 102 can be raised to an elevated position 142 (see FIG. 1). In the elevated position 142, the first, second and transverse linkages 122, 124, 126, can be extended when the glider 128 is positioned in the first position 138. In the second position 139, each glider 128 can be located distal to the corresponding support bracket 114a along the corresponding first and second glide support 112a, 112b such that the work surface 102 can be located in a lowered position 144 (see FIG. 3). As the work surface 102 moves from elevated position 142 to lowered position 144 by means of the linkage assembly 104, parallel linkages 122 and 124 can maintain the horizontal orientation of the work surface 102, and the transverse linkage 126 can maintain the vertical orientation of the work surface 102. The first parallel linkage 122, the second parallel linkage 124 and the transverse linkage 126 can be collapsed toward the foot assembly 106 when the glider 128 is positioned in the second position 139. When the glider 128 reaches the second position, the work surface 102 can be at the lowered position 144.

The height adjustable desktop system 100 can also be configured with a work surface 102 that is angled, such as a drafting table. The linkage assembly 104 can be configured to maintain the angle of the work surface 102 relative to the foot assembly 106 during a height adjustment.

The height adjustable desktop system 100 can be used as free standing on the top of a desktop 99 as illustrated in FIGS. 1-8. However, in some configurations, the base 147 or foot assembly 106 of the work surface 102 can be secured to the desktop 99 as illustrated in FIGS. 9-11. The securement can be accomplished by a clamping member such as a clamp, a grommet, a vise, a cramp, a dog, a clip, or an alternative type of fastener. In some configurations, one or more clamping members 154 can be located in front 140 of the base 147 as illustrated in FIG. 9. In other configurations, one or more clamping members 154 can be located at the rear 141 of the base 147 as illustrated in FIG. 10. Clamping members 154 can be located on any edge of the base 147 and in any number desired. Still in other configurations, a grommet mount 155 can be used to attach the base 147 to the desktop 99 as illustrated in FIG. 11. The grommet mount 155 can allow the height adjustable desktop system 100 to be rotated to the right or left. The grommet mount 155 can be located at the center of the base 147 or at other locations of the base 147. The grommet mount 155 can form a

rotation center of the base 147. Multiple grommet mounts 155 can also be used. Various clamping devices are disclosed as part of the patent application 13/191170, published as 2012/0187056 which is hereby incorporated by reference herein in its entirety. Clamping the base 147 of the height adjustable desktop system 100 to the desktop 99 can improve the stability of the work surface 102 during uses such as typing.

A counterbalance mechanism can be used for lift assist during the height adjustment to reduce the force exerted by the user. As depicted in FIGS. 12-14, in an example, each adjustment assembly 120a, 120b can include a counterbalance mechanism such as an extension spring 157. The extension spring 157 can operably connect the glider 128 to the corresponding transverse linkage 126 as depicted in FIG. 12. As the work surface 102 is lowered and the glider 128 moves away from the corresponding support bracket 114a, 114b, the extension spring 157 can be stretched (see FIG. 14) to bias the work surface 102 toward the elevated position 142 (see FIGS. 12-13). In certain examples, the work surface 102 can further include a spring holding bracket 158 located on the underside 110 of the work surface 102. FIGS. 13-14 illustrate the extension spring 157 can be operably connected to the spring holding bracket 158 rather than the transverse linkage 126 as depicted in FIG. 12.

As depicted in FIGS. 15-16, in an example, each adjustment assembly 120a, 120b can include a counterbalance mechanism such as a torsion spring 159. The torsion spring 159 operably engages the transverse linkage 126 and the underside 110 of the work surface 102. As the work surface 102 is lowered and the transverse linkage 126 collapses (see FIG. 16), the torsion spring 159 is tensioned biasing the work surface 102 toward the elevated position 142 (see FIG. 15).

As depicted in FIGS. 5-6 and 18, the foot assembly 106 can include a first foot bracket 130a, a second foot bracket 130b and a foot portion 132. The foot brackets 130a, 130b can be fixed to the foot portion 132. In this configuration, the first and second parallel linkages 122, 124 of the first adjustment assembly 120a can be rotatably mounted to the foot bracket 130a through a hinge connection. Similarly, the first and second parallel linkages 122, 124 of the second adjustment assembly 120b can be rotatably mounted to the foot bracket 130b through a hinge connection. In an example, the foot portion

132 comprises a planar element for interfacing a top surface of a desktop as depicted in FIGS. 1-16. In an example, the foot portion 132 comprises a wall bracket 134 for receiving a fastener for securing the foot assembly 106 to a wall or other vertical surfaces such as depicted in FIG. 17. In at least one example, the wall bracket 134 can be configured to attach to shelf or other mounting bracket attached to the wall. In an example, the foot portion 132 comprises a U-shape element 136 having a pair of arms 137 for stabilizing the foot assembly 106 as depicted in FIGS. 18-22 and 30-33. In at least one example, the foot assembly 106 can include a plurality of first foot brackets 130a such that the first and second parallel linkages 122, 124 of the first adjustment assembly 120a can be individually mounted to the foot portion 132. Similarly, the second foot assembly 106 can include a plurality of second foot brackets 130b such that the first and second parallel linkages 122, 124 of the second adjustment assembly 120b can be individually mounted to the foot portion 106.

As depicted in FIGS. 6-8, in an example, each adjustment assembly 120a, 120b can include a counterbalance mechanism such as an extension spring 157. The extension spring 157 operably connects the glider 128 to the corresponding transverse linkage 126 as depicted in FIG. 6. As the work surface 102 is lowered and the glider 128 moves away from the corresponding support bracket 114a, 114b, the extension spring 157 is stretched to bias the work surface 102 toward the elevated position.

As depicted in FIGS. 18-29, in an example, each glide support 112a, 112b can include a glide rod 146 and a support frame 157. The glide rod 146 further can include a lever 150 that can be actuated to rotate the glider rod 146. The support frame 157 defines a pair of opposing bore holes 152 for rotatably receiving the glider rod 146. In this configuration, each glider 128 also can include a first glide hole 154 and a second glide hole 156, wherein the first glide hole 154 is aligned with the second glide hole 156 such that the glider 128 is slidable along the glider rod 146.

As depicted in FIGS. 24-26 and 27-29, in an example, the glider rod 146 defines a plurality of indentations 161. In this configuration, the first glide hole 154 of the glider 128 comprises a circular shape and is configured to receive a bushing 160 allowing the glide rod 146 to slide through the first glide hole 154 regardless of the rotational orientation of the glide rod 146. The second glide

hole 156 comprises a flat edge 162 positioned to engage the indentations 161 of the glide rod 146 to prevent movement of glider 128 along the glide rod 146. In operation, the glide rod 146 is adapted to rotate the glide rod 146 between a first position in which the indentations 161 can be aligned with the flat edge 162 of the second glide hole 156 preventing the glider 128 from moving on the glide rod 128 and a second position in which the indentations 161 are out of alignment with the flat edge 162 allowing the glider 128 to move along the glide rod 146.

As depicted in FIGS. 30-35, in an example, each transverse linkage 126 can include a fan portion 164 defining a plurality of holes 166 arranged in an arc. In this configuration, each adjustment assembly 120a, 120b can include a plunger 168 having a moving pin 170 extendable to engage one of the holes 166 in the transverse linkage 126 to prevent rotation of the transverse linkage 126 and raising or lowering of the work surface 120 as depicted in FIGS. 31-32 and 35. Similarly, the moving pin 170 can be retracted to disengage from the transverse linkage 126 to allow raising or lowering of the work surface 120 as depicted in FIGS. 31-32 and 35.

As depicted in FIGS. 33-35, in an example, each adjustment assembly 120a, 120b can include a lock lever assembly 172 can include a plunger bracket 174, rotating linkage 176 and a lever bracket 178. The plunger bracket 174 can be operably connected to the plunger pin 170 at one end and the rotatably connected to one end of the rotating linkage 176. The lever bracket 178 can be rotatably connected to the other end of the rotating linkage 176. In operation, pulling the lever bracket 178 rotates the rotating linkage 176 in a first direction, thereby pulling the plunger bracket 174 and retracting the pin 170 from the transverse linkage 126. Similarly, pushing the lever bracket 178 rotates the rotating linkage 176 in a second direction, thereby pushing the plunger bracket 174 and pushing the plunger pin 170 into engagement with the transverse linkage 126.

As depicted in FIGS. 33-35, in an example, the lock lever assembly 172 can include a lever 180 rotatably mounted to the lever bracket 178. The lever 180 can be pulled or pushed to operate the lever bracket 178 and correspondingly the plunger pin 170. In example, the lever 180 further can include an extended rod 182 for operably connecting the lever 180 to the lever

bracket 178. The extended rod 182 can be sized to position the lever 180 at a convenient position relative to the work surface 102 for access to the lever 180.

As depicted in FIGS. 36-40, in an example, the height adjustable desktop system 100 can further include a lock lever assembly 184 that can lock the work surface 102 in the lowered position. The lever 180 can further include a hook arm 186 rotatable between a lock position (shown in FIG. 38) and a release position. The foot portion 132 can also include at least one lock housing 188 corresponding to each hook arm 186. Each lock housing 188 can define at least one lock notch 190. In operation, the work surface 102 can be positioned in the lowered position and the lever 180 rotated to position the hook arm 186 in the lock position such that the hook arm 186 engages the lock notch 190. The engagement of the hook arm 186 to the lock housing 188 maintains the work surface 102 in the lowered position. The lever 180 can be rotated to position the hook arm 186 into the release position in which the hook arm 186 disengages from the hook arm 186 allowing the work surface 102 to be raised into the elevated position.

Each of these non-limiting examples can stand on its own, or can be combined in any permutation or combination with any one or more of the other examples.

The above detailed description can include references to the accompanying drawings, which form a part of the detailed description. The drawings show, by way of illustration, specific embodiments in which the present subject matter can be practiced. These embodiments are also referred to herein as "examples." Such examples can include elements in addition to those shown or described. However, the present inventors also contemplate examples in which only those elements shown or described are provided. Moreover, the present inventors also contemplate examples using any combination or permutation of those elements shown or described (or one or more aspects thereof), either with respect to a particular example (or one or more aspects thereof), or with respect to other examples (or one or more aspects thereof) shown or described herein.

In the event of inconsistent usages between this document and any documents so incorporated by reference, the usage in this document controls.

In this document, the terms "a" or "an" are used, as is common in patent documents, to include one or more than one, independent of any other instances or usages of "at least one" or "one or more." In this document, the term "or" is used to refer to a nonexclusive or, such that "A or B" can include "A but not B," "B but not A," and "A and B," unless otherwise indicated. In this document, the terms "including" and "in which" are used as the plain-English equivalents of the respective terms "comprising" and "wherein." Also, in the following claims, the terms "including" and "comprising" are open-ended, that is, a system, device, article, composition, formulation, or process that can include elements in addition to those listed after such a term in a claim are still deemed to fall within the scope of that claim. Moreover, in the following claims, the terms "first," "second," and "third," etc. are used merely as labels, and are not intended to impose numerical requirements on their objects.

The above description is intended to be illustrative, and not restrictive. For example, the above-described examples (or one or more aspects thereof) may be used in combination with each other. Other embodiments can be used, such as by one of ordinary skill in the art upon reviewing the above description. The Abstract is provided to comply with 37 C.F.R. §1.72(b), to allow the reader to quickly ascertain the nature of the technical disclosure. It is submitted with the understanding that it will not be used to interpret or limit the scope or meaning of the claims. Also, in the above Detailed Description, various features may be grouped together to streamline the disclosure. This should not be interpreted as intending that an unclaimed disclosed feature is essential to any claim. Rather, inventive subject matter may lie in less than all features of a particular disclosed embodiment. Thus, the following claims are hereby incorporated into the Detailed Description as examples or embodiments, with each claim standing on its own as a separate embodiment, and it is contemplated that such embodiments can be combined with each other in various combinations or permutations. The scope of the present subject matter should be determined with reference to the appended claims, along with the full scope of equivalents to which such claims are entitled.

WHAT IS CLAIMED IS:

1. A height adjustable desktop system, comprising:

a work surface defining an underside and including a glide support and a support bracket positioned on the underside of the work surface;

a foot assembly including at least one foot bracket;

an adjustment assembly including:

a glider slidable on the glide support;

a first linkage rotatably connected to the glider and rotatably connected to the foot bracket, wherein the first linkage is rotatable within a first plane;

a second linkage rotatable with the first linkage, the second linkage rotatably connected to the glider and rotatably connected to the foot bracket, wherein the second linkage is rotatable within a second plane parallel to and offset from the first plane; and

a transverse linkage rotatably connected to the support bracket and rotatably connected to the second linkage;

wherein the glider is slidable on the glide support between a first position proximate to the support bracket and a second position distal to the support bracket; wherein the first, second and transverse linkages are extended when the glide is positioned in the first position to position the work surface at an elevated position, wherein the first, second and transverse linkages are collapsed when the glide is positioned in the second position to position the work surface at a lowered position.

2. The height adjustable desktop system of claim 1, wherein the work surface defines a primary top surface opposite the underside.

3. The height adjustable desktop system of claim 2, wherein the work surface includes a shelf defining a secondary top surface lower than the primary top surface.

4. The height adjustable desktop system of claim 3, wherein the shelf includes an attachment bracket for positioning the secondary top surface below the primary top surface.

5. The height adjustable desktop system of claim 1, wherein the foot assembly includes a foot portion.

6. The height adjustable desktop system of claim 5, wherein the foot portion includes a planar element for interfacing with a desktop.

7. The height adjustable desktop system of claim 5, wherein the foot portion includes a wall bracket securable to a wall.

8. The height adjustable desktop system of claim 5, wherein the foot portion includes a U-shaped element having a pair of arms for stabilizing the foot assembly.

9. The height adjustable desktop system of claim 1, wherein the adjustment assembly includes an extension spring operably connected to the glider.

10. The height adjustable desktop system of claim 9, wherein the extension spring operably connects the glider to the transverse linkage.

11. The height adjustable desktop system of claim 9, wherein the extension spring operably connects the glider to a spring holding bracket affixed to the underside of the work surface.

12. The height adjustable desktop system of claim 1, wherein the adjustment assembly includes a torsion spring that is tensioned between the underside of the work surface and the transverse linkage as the work surface is lowered to bias the work surface toward an elevated position.

13. The height adjustable desktop system of claim 1, wherein the glide support includes a glide rod defining a plurality of indentations.

14. The height adjustable desktop system of claim 13, wherein the glider defines a first glide hole and a second glide hole aligned with the first glide hole, wherein the glide rod is receivable in the first and second glide hole such that the glider is slidable on the glide rod.

15. The height adjustable desktop system of claim 14, wherein the second glide hole defines a flat edge;

wherein the glide rod is rotatable between a first position in which the indentations are aligned to engage the flat edge to prevent sliding of the glider on the glide rod and a second position in which the indentations are out of alignment with the flat edge to allow sliding of the glider on the glide rod.

16. The height adjustable desktop system of claim 15, wherein the glide rod includes a lever operable to rotate the glide rod.

17. The height adjustable desktop system of claim 1, wherein the transverse linkage includes a fan portion and defines a plurality of holes in the fan portion arranged in an arc.

18. The height adjustable desktop system of claim 17, wherein the height adjustable desktop system includes a piston having a piston pin;

wherein the piston pin is movable between an extended position in which the pin intersects one of the holes to prevent rotation of the transverse linkage and fixing elevation of the work surface and a retracted position allowing rotation of the transverse linkage permitting movement of the work surface.

19. A height adjustable desktop system, comprising:

a work surface;

a foot assembly;

a linkage assembly rotatably coupled to the work surface and rotatable coupled to the foot assembly, wherein the linkage assembly is configured to rotate the work surface between a lowered position and an elevated position generally perpendicular to the work surface.

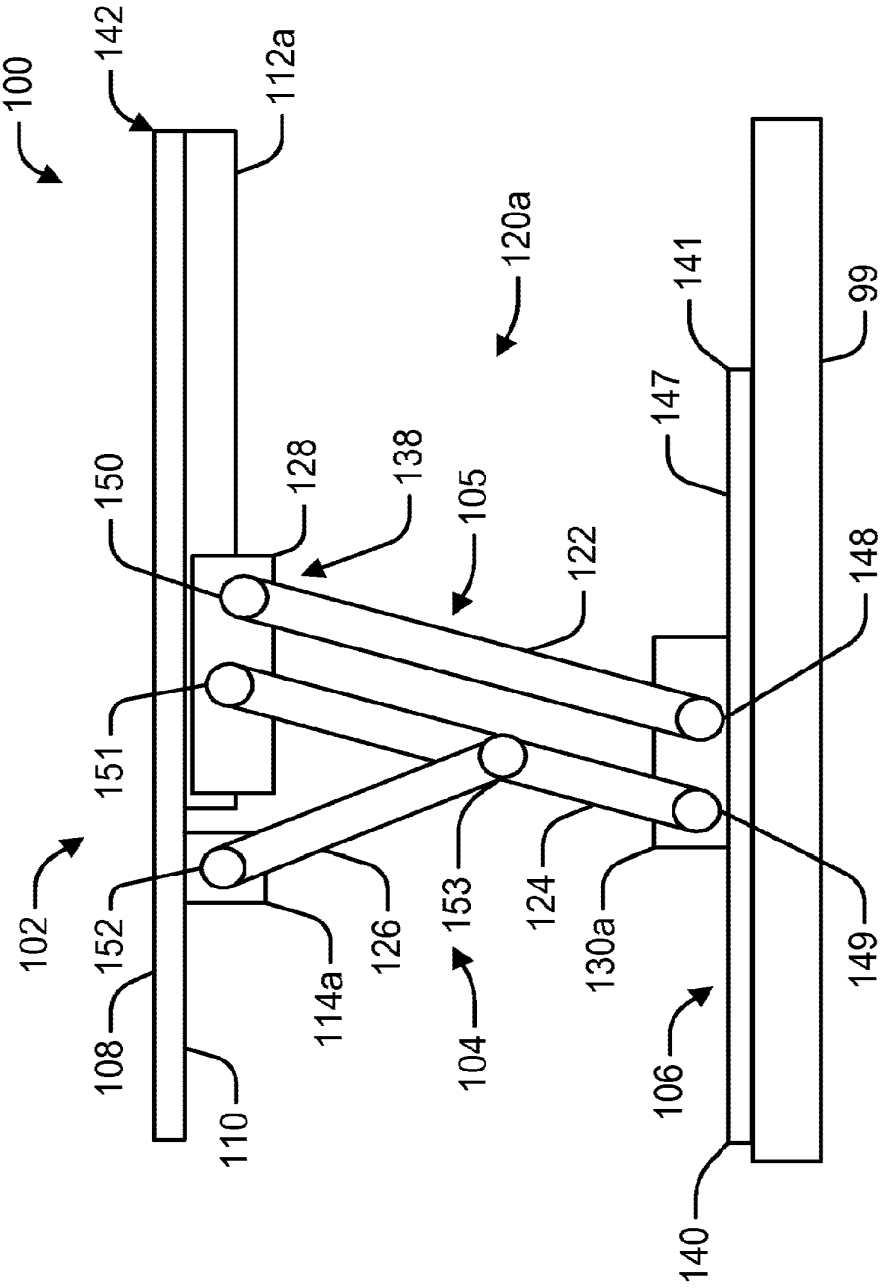

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Figure 1

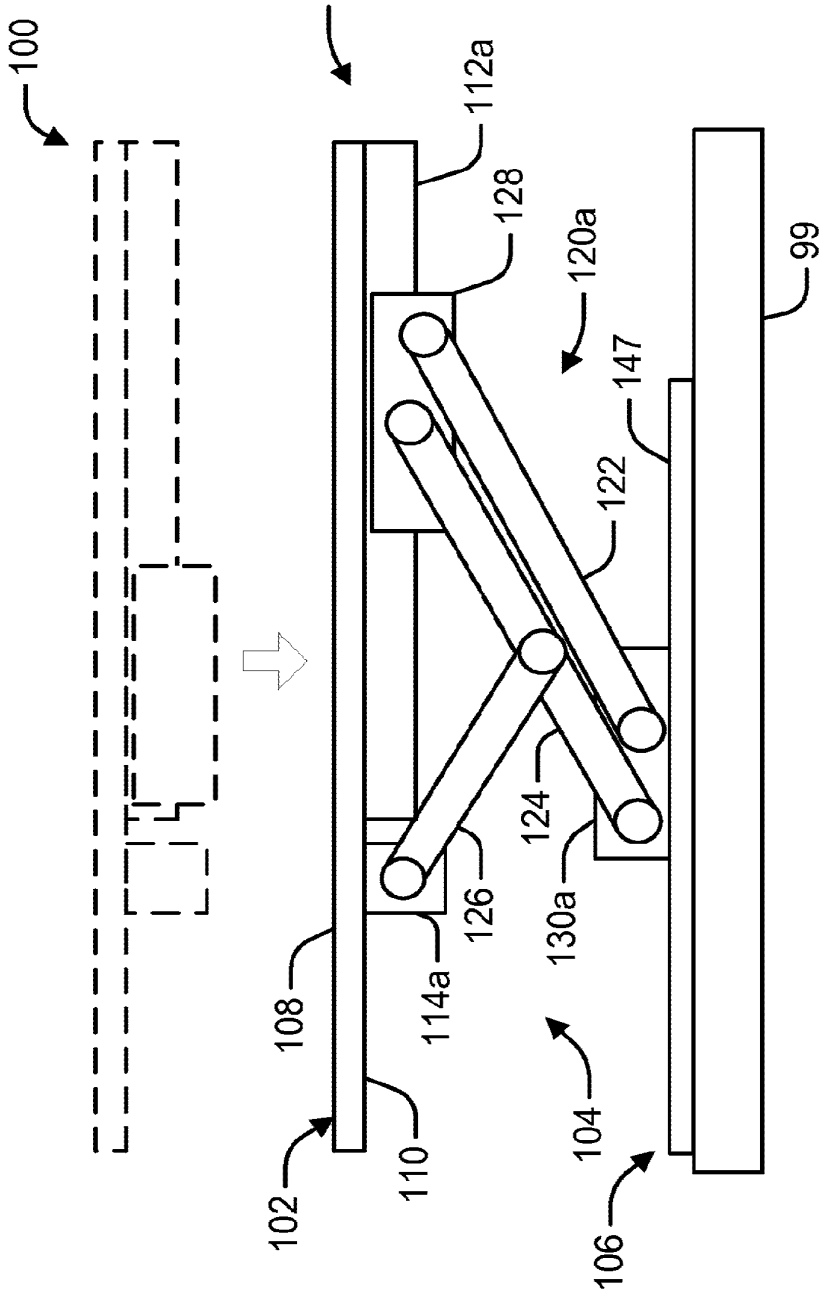

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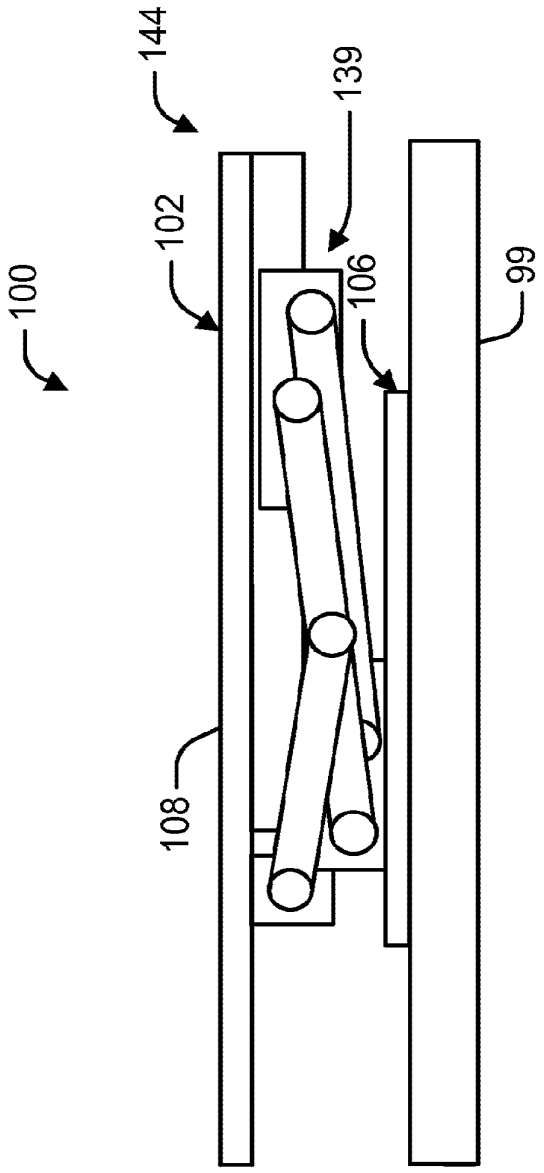


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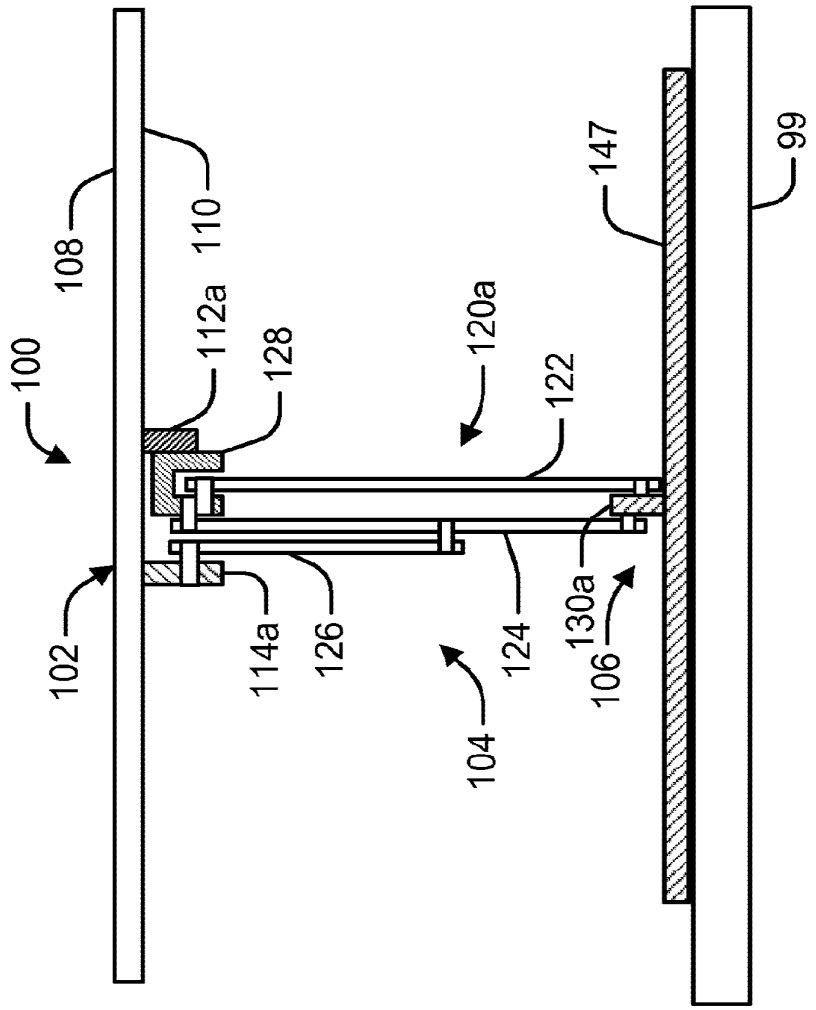

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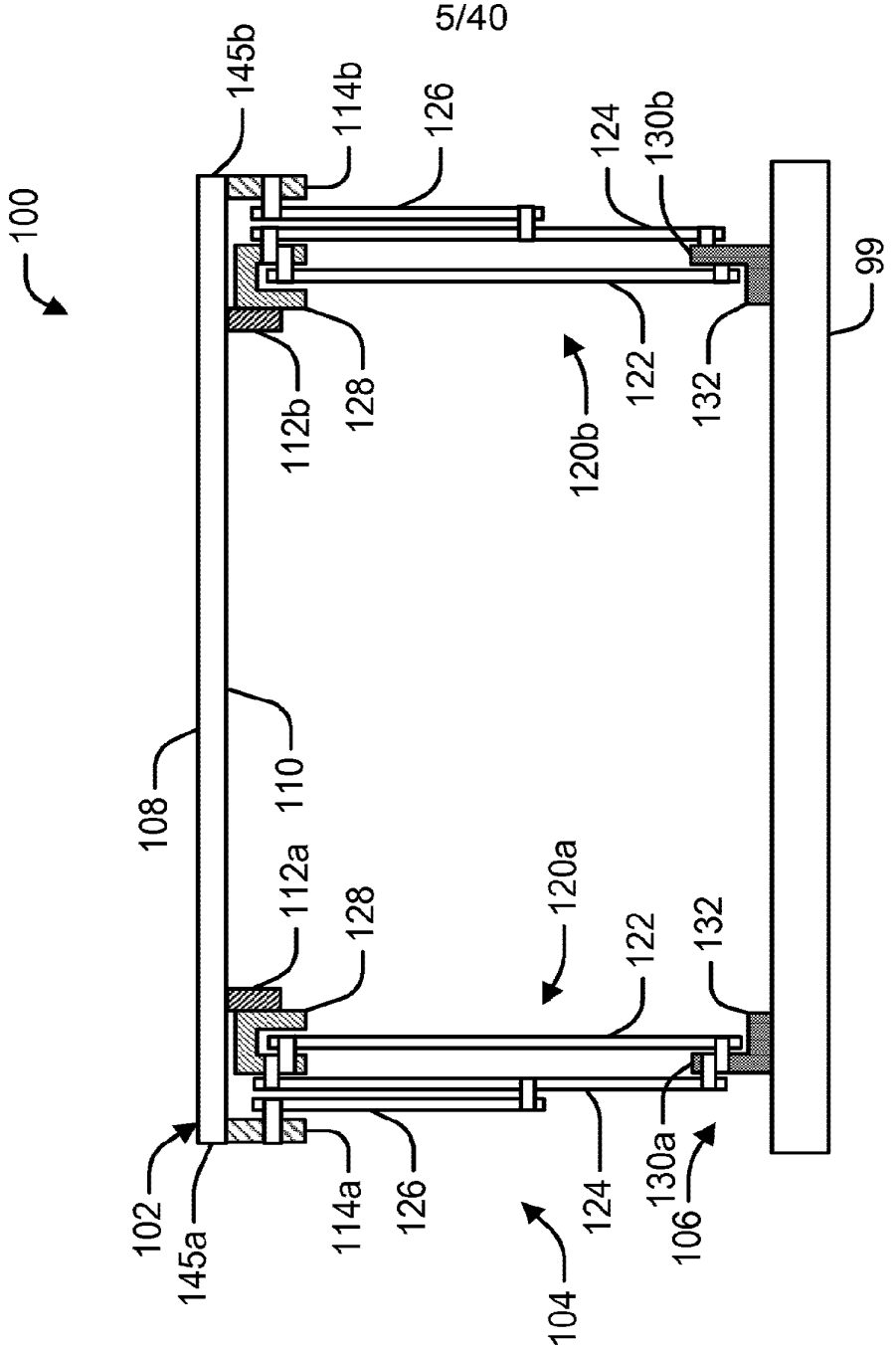

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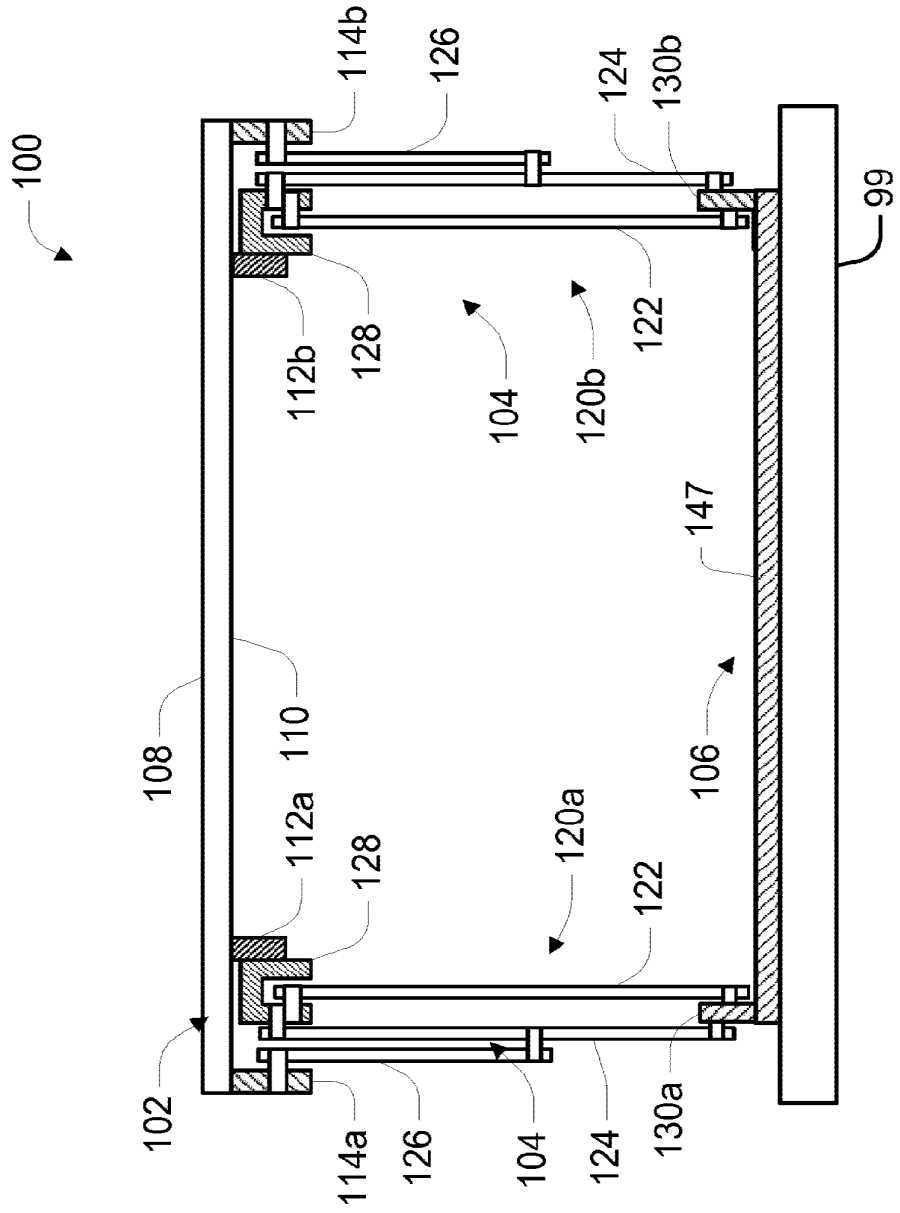

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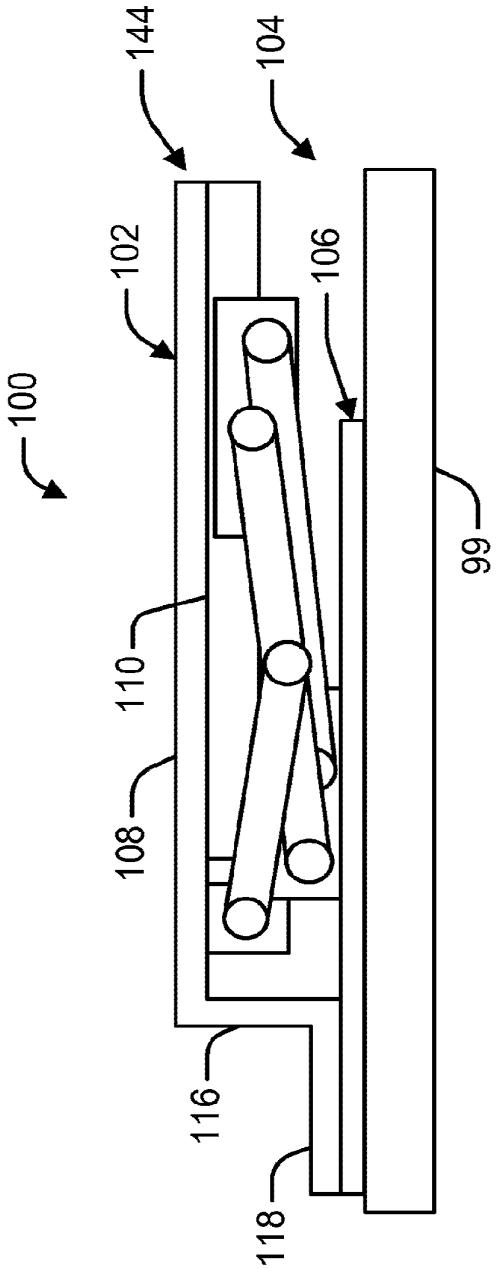


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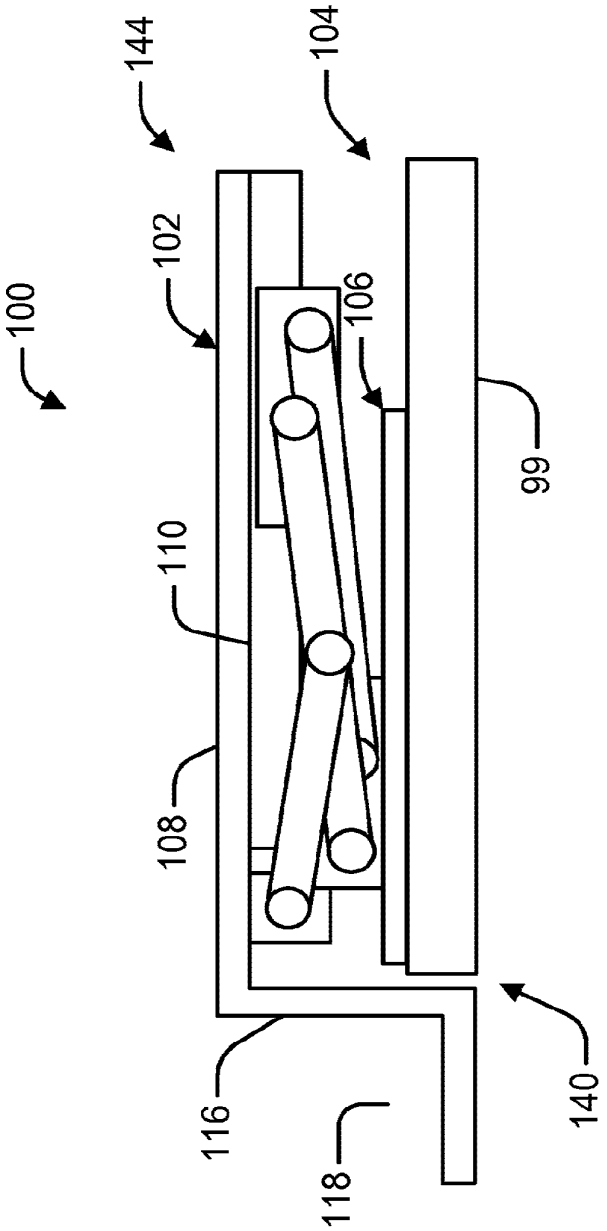


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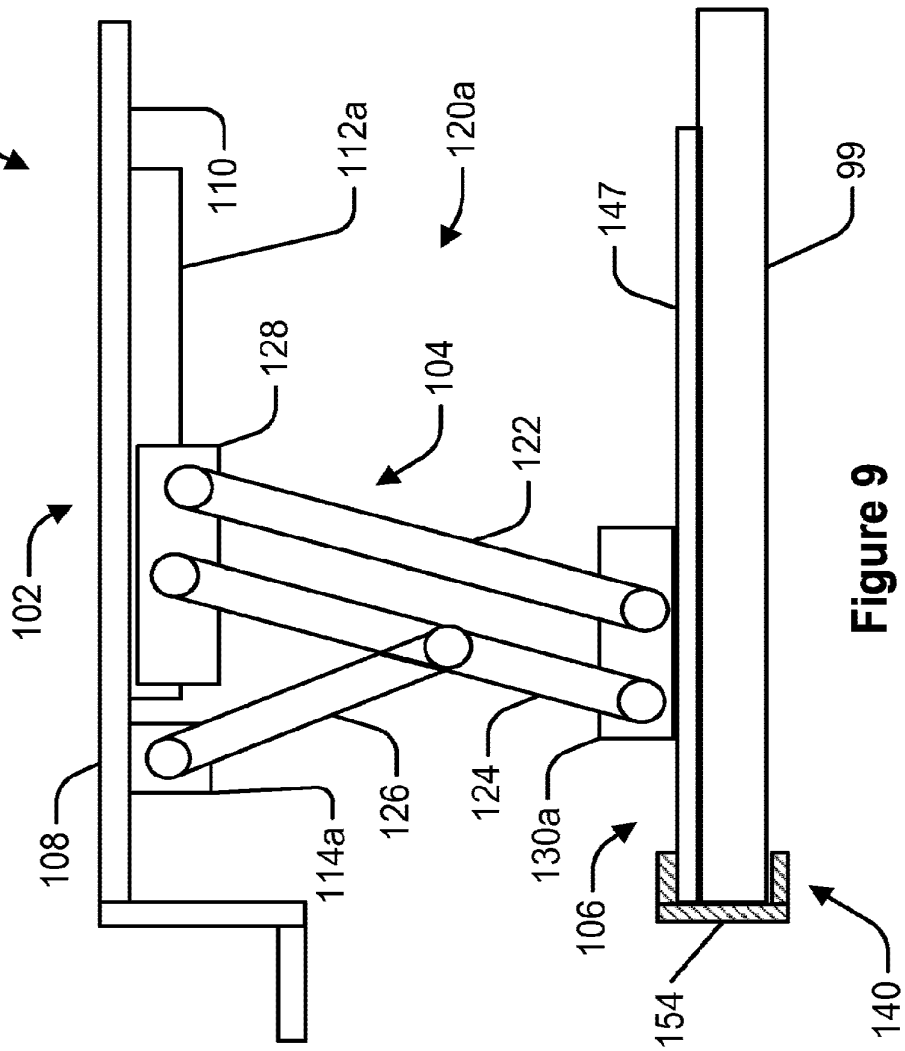

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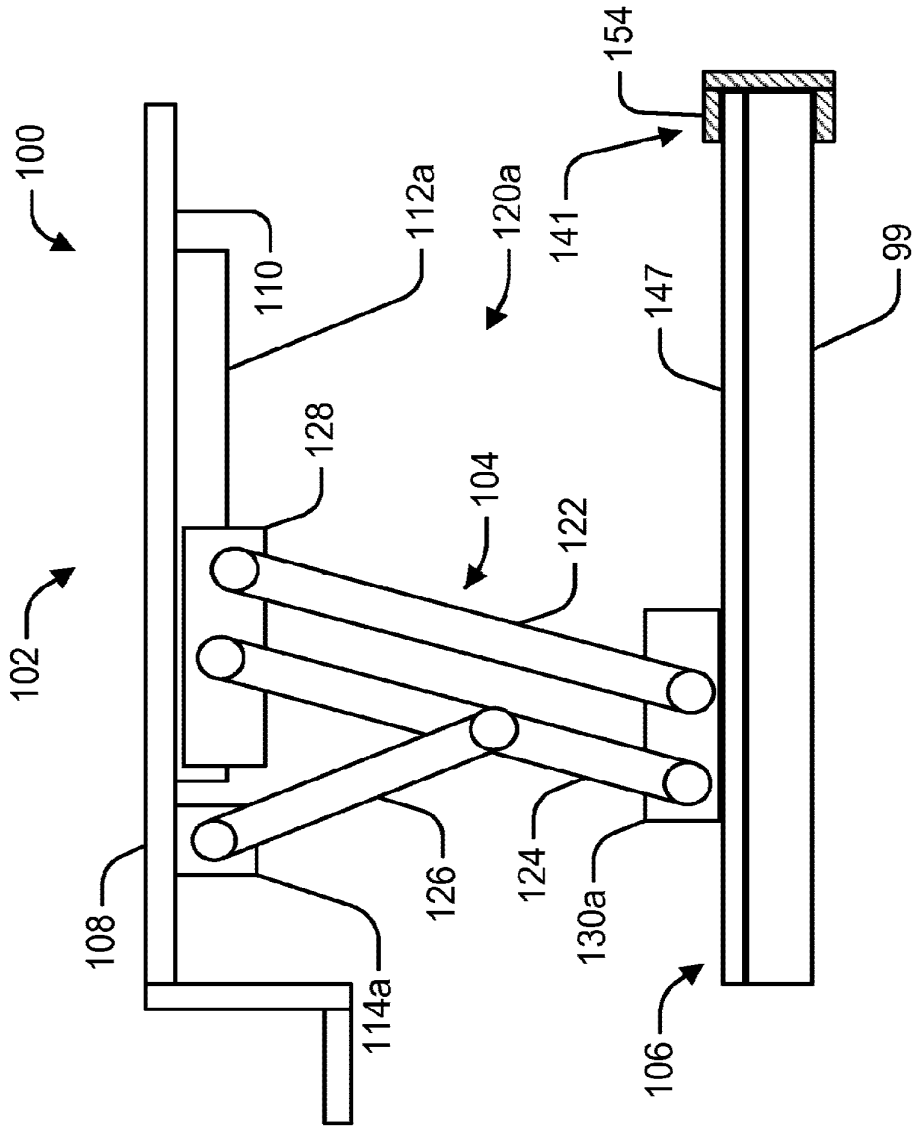

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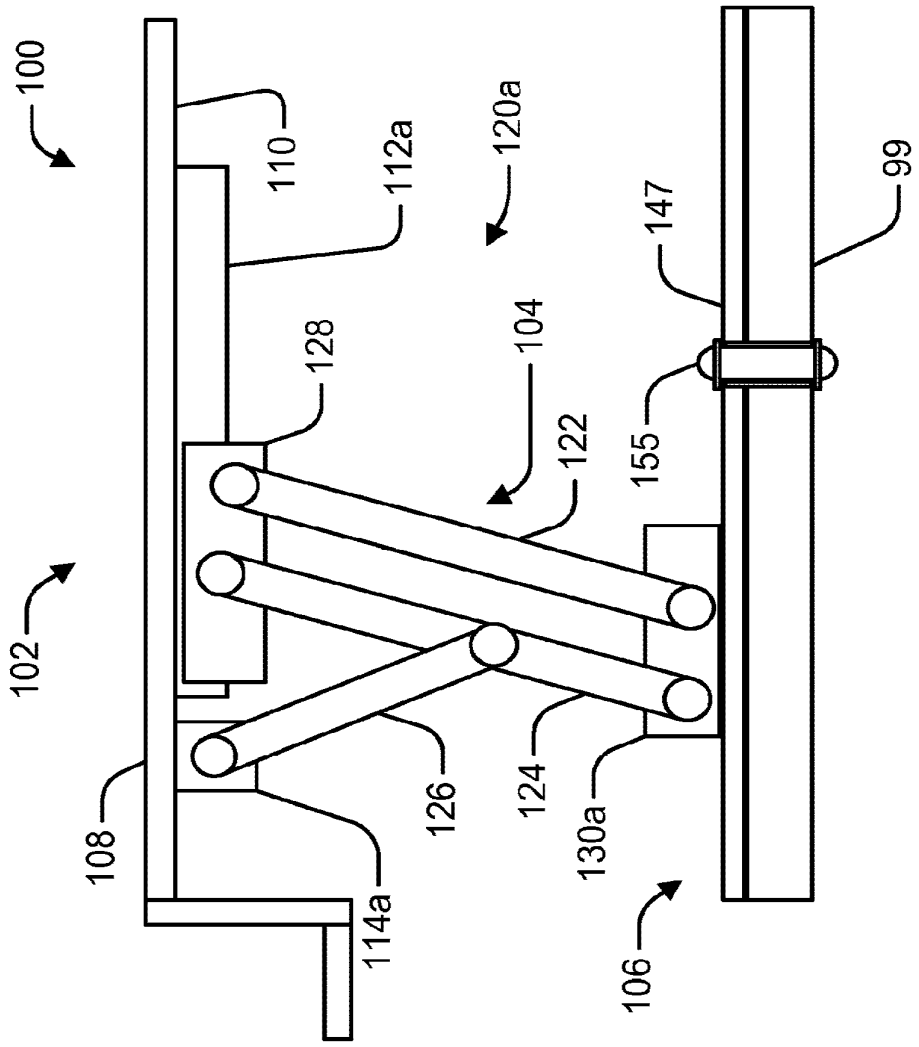

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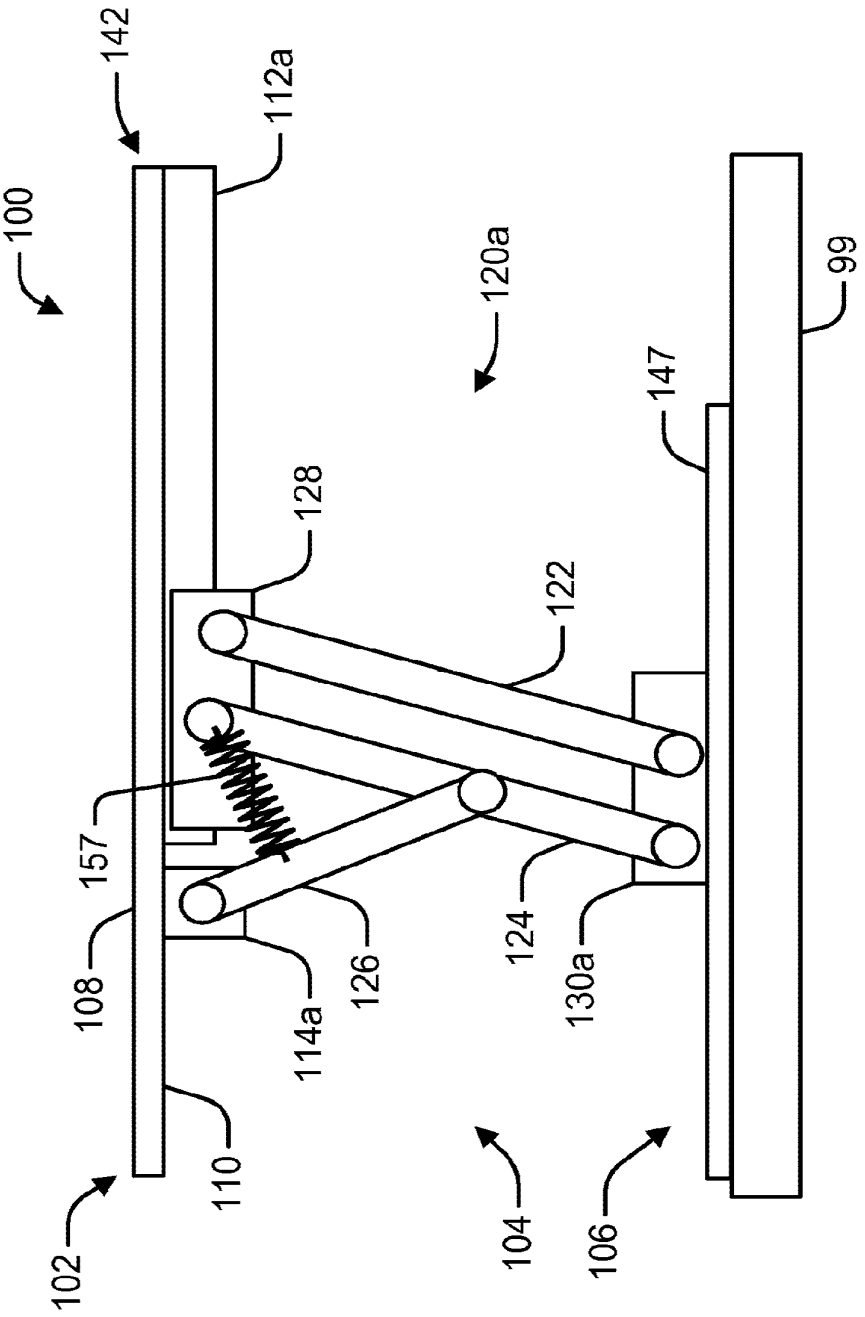

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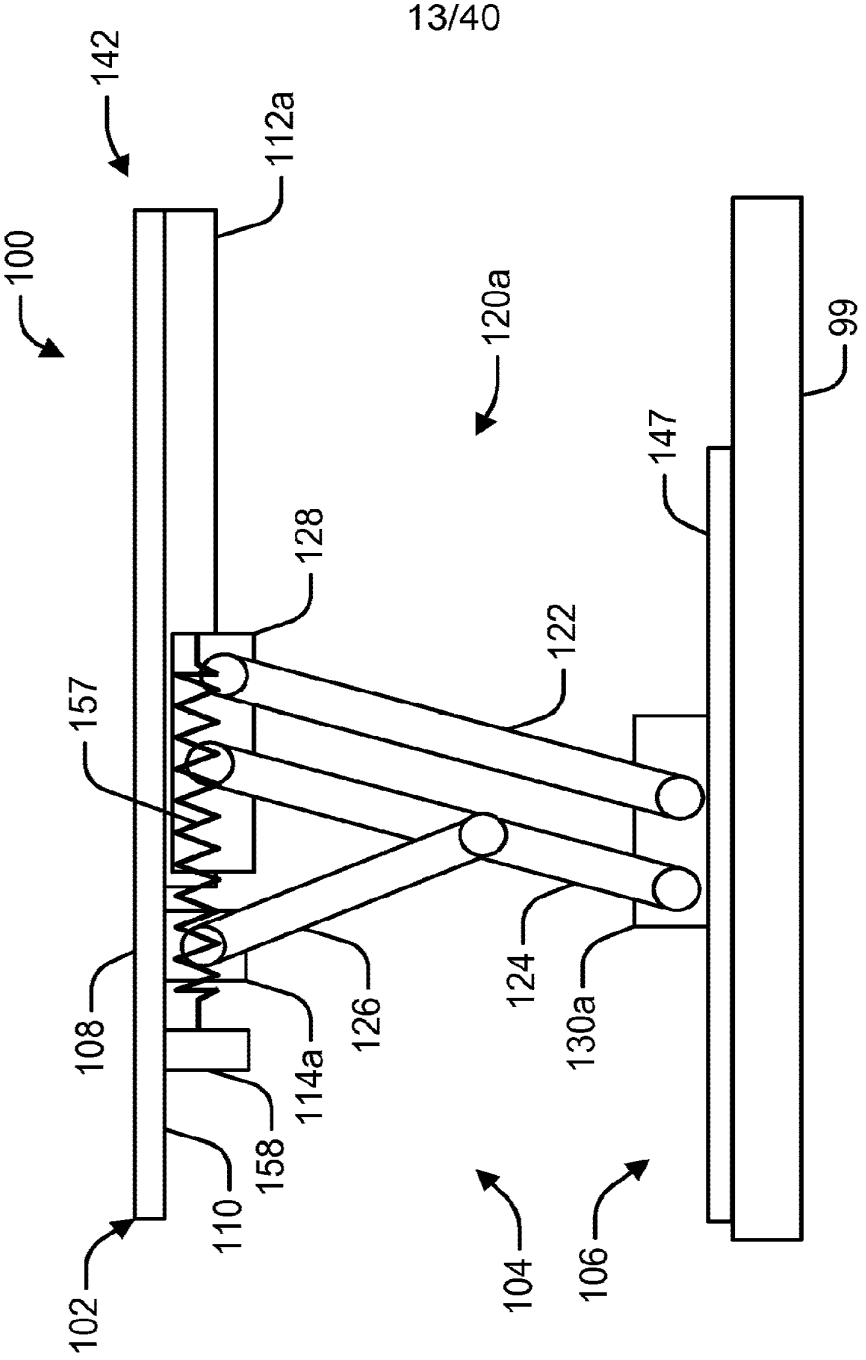

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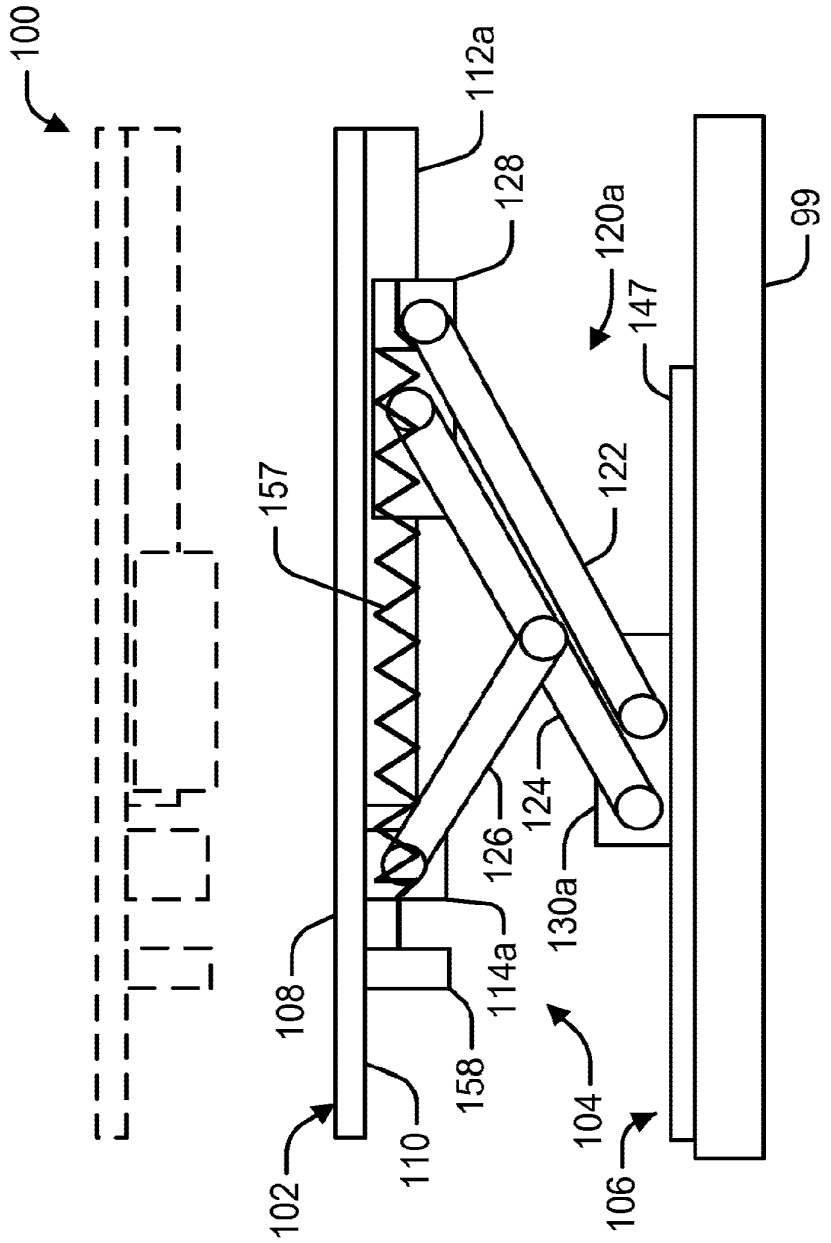

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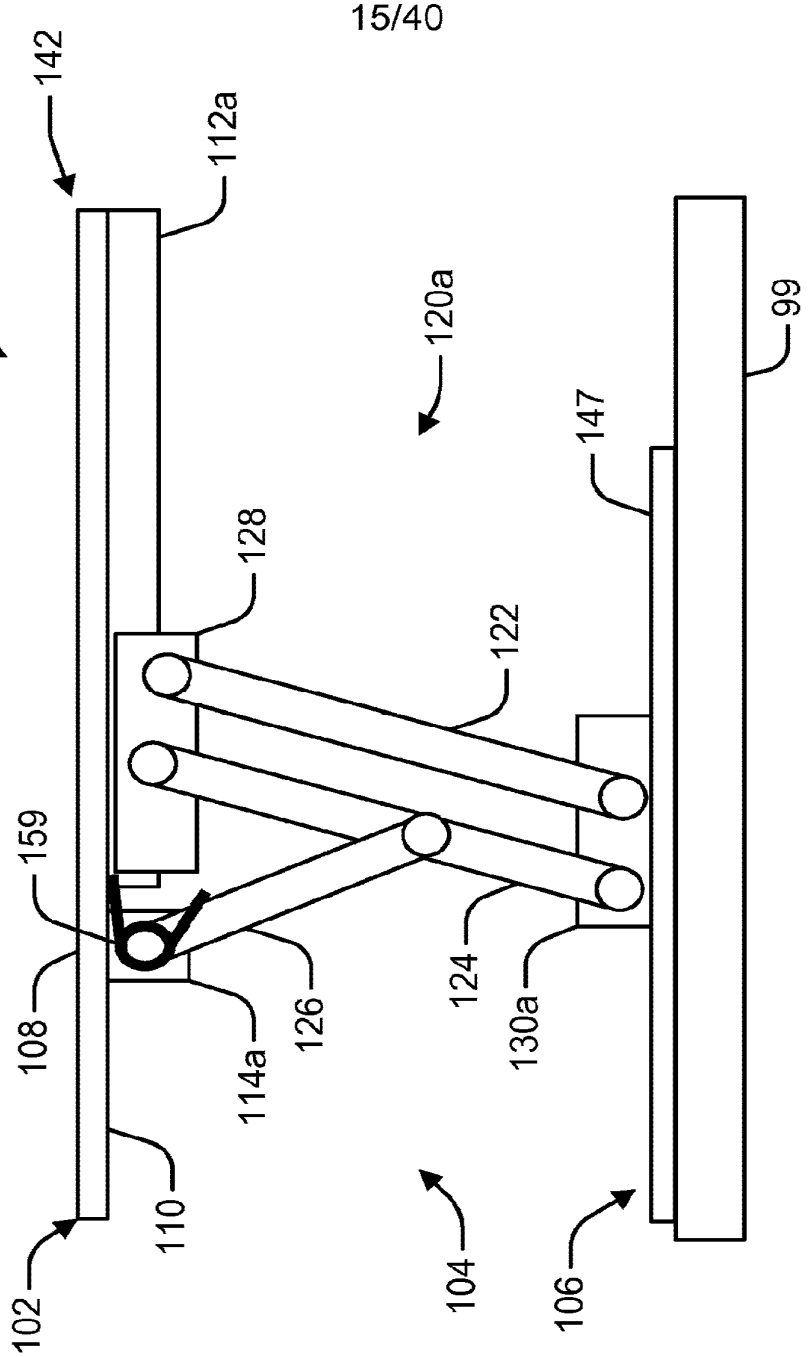

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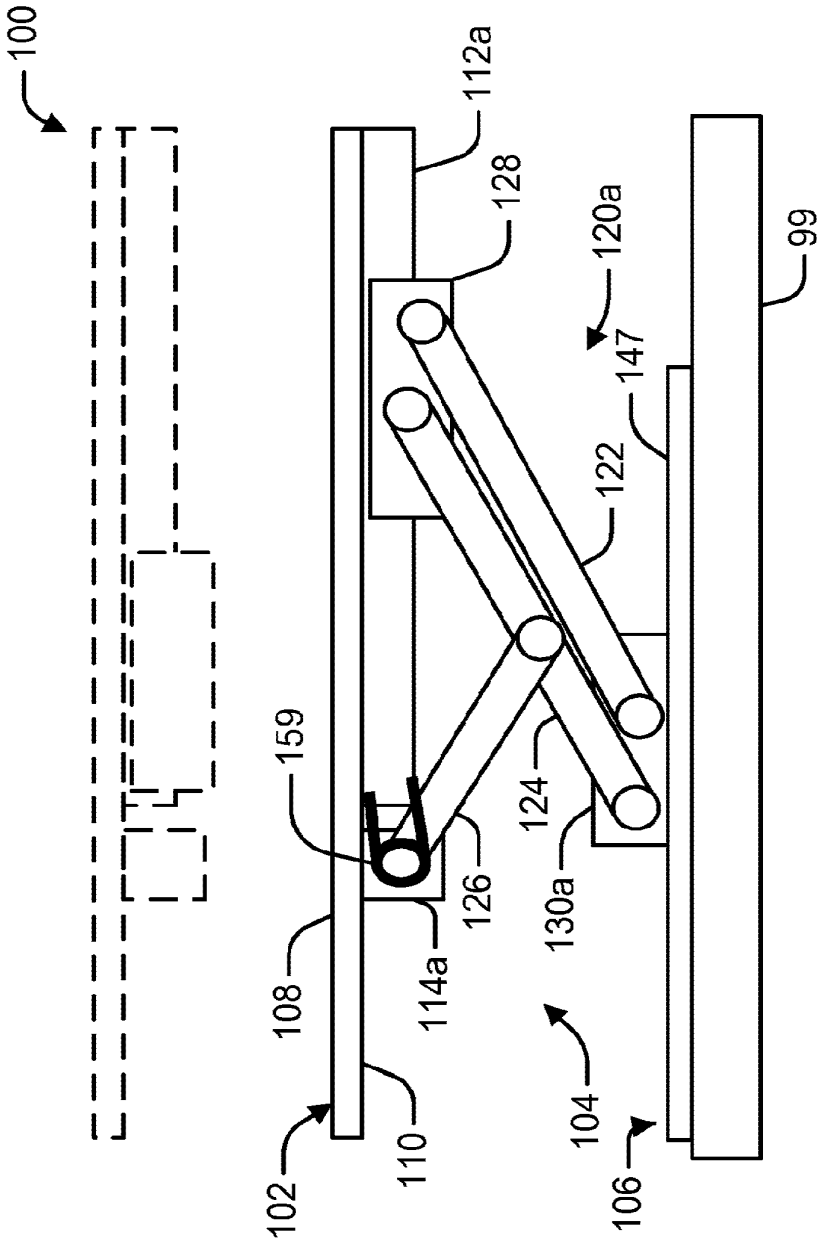

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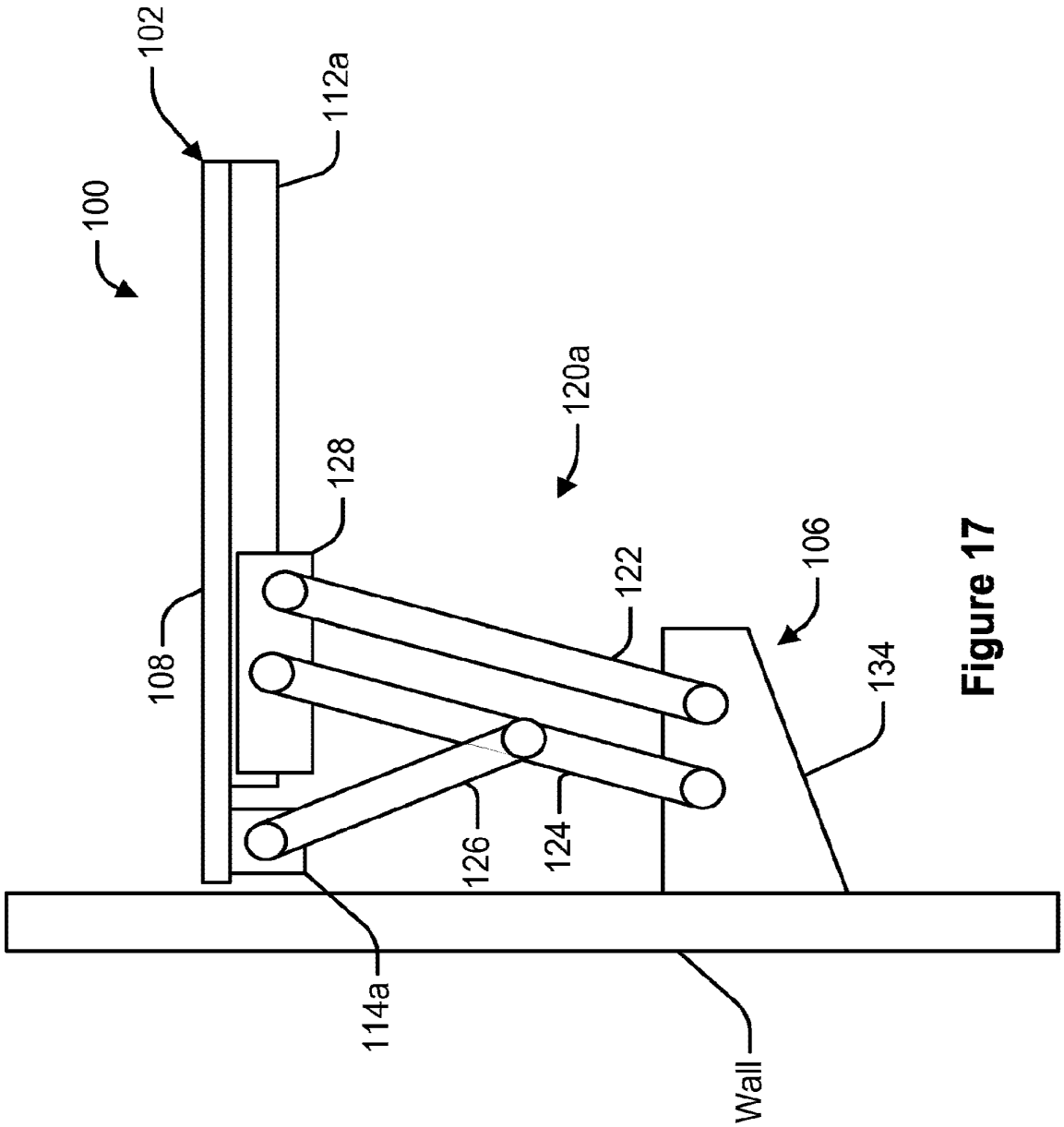


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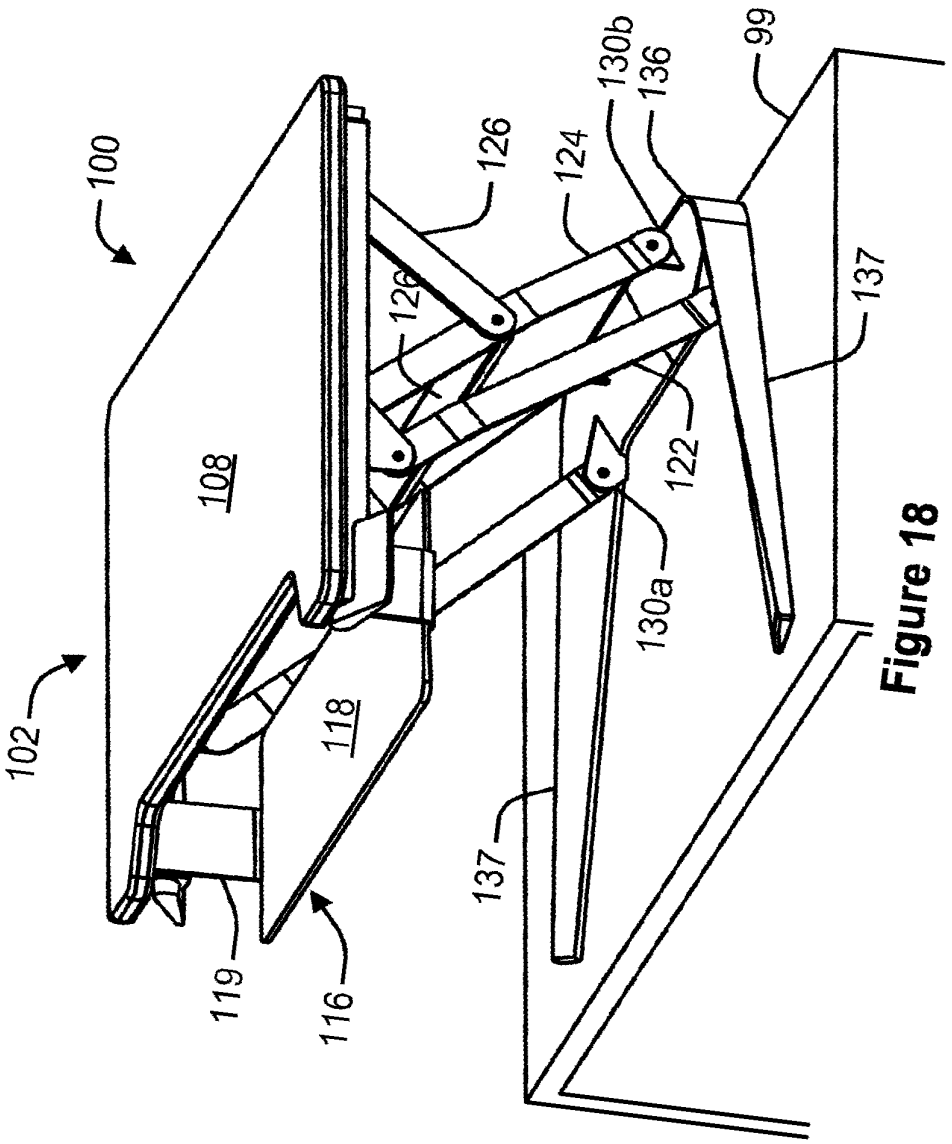


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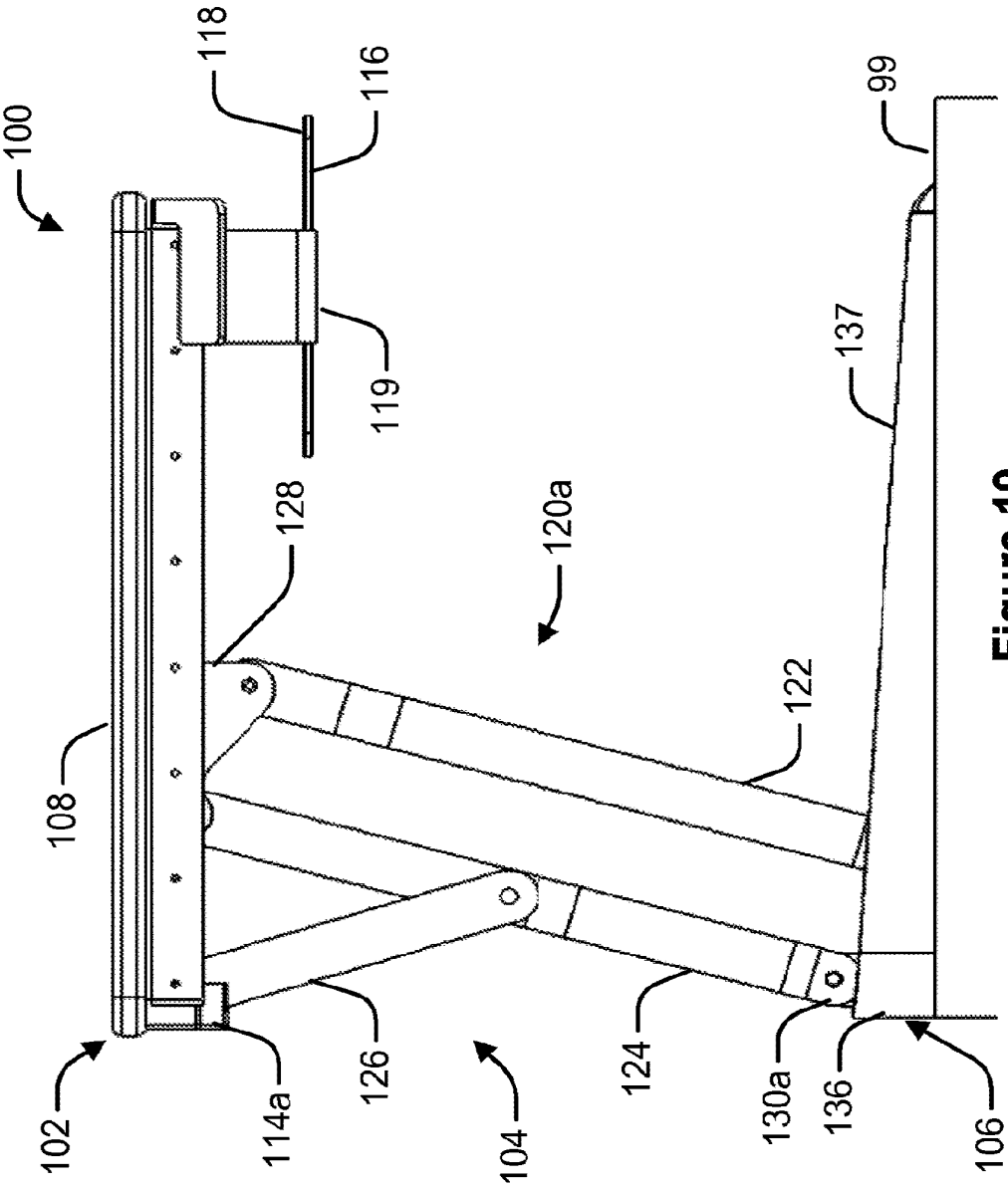

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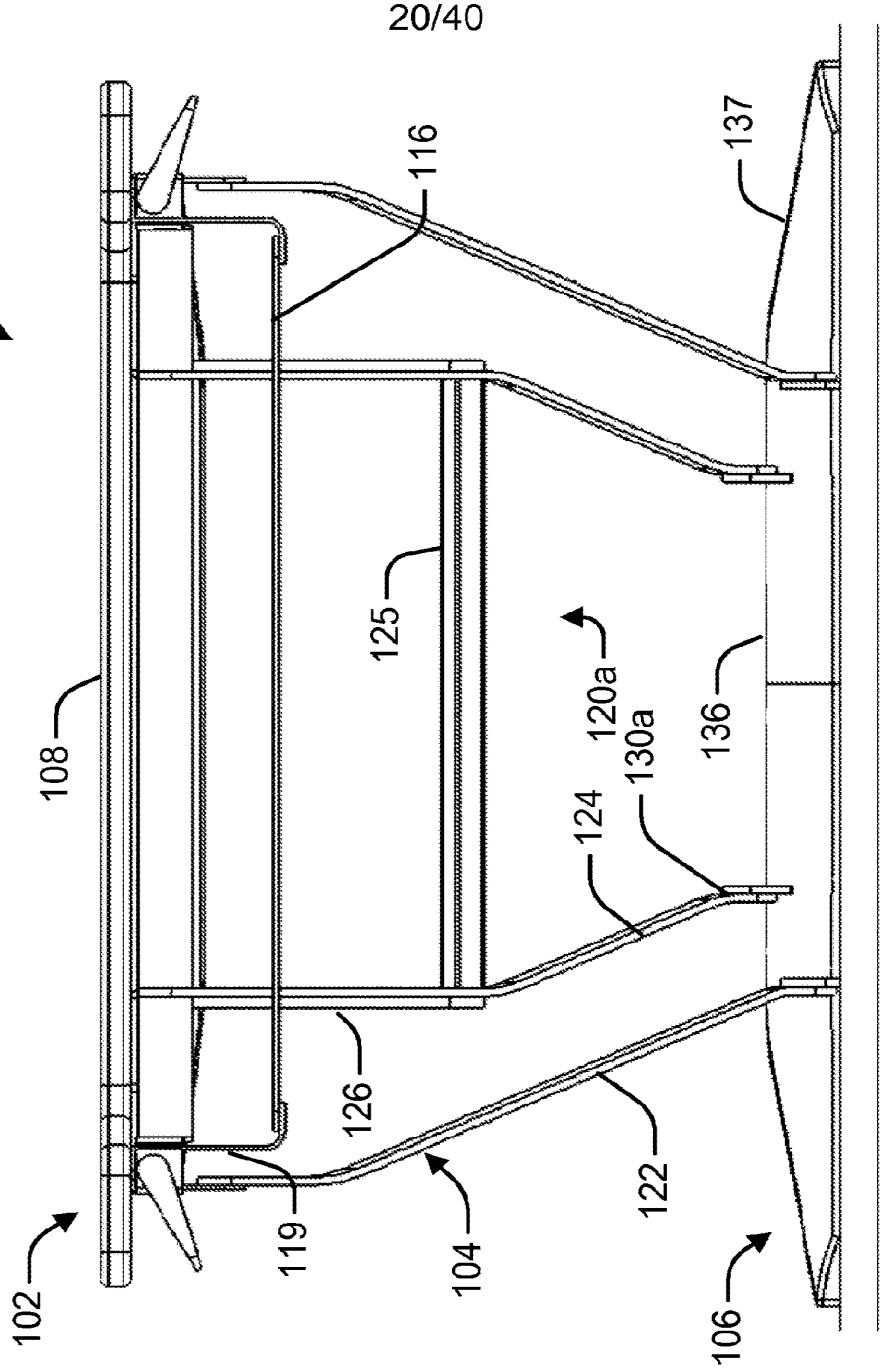


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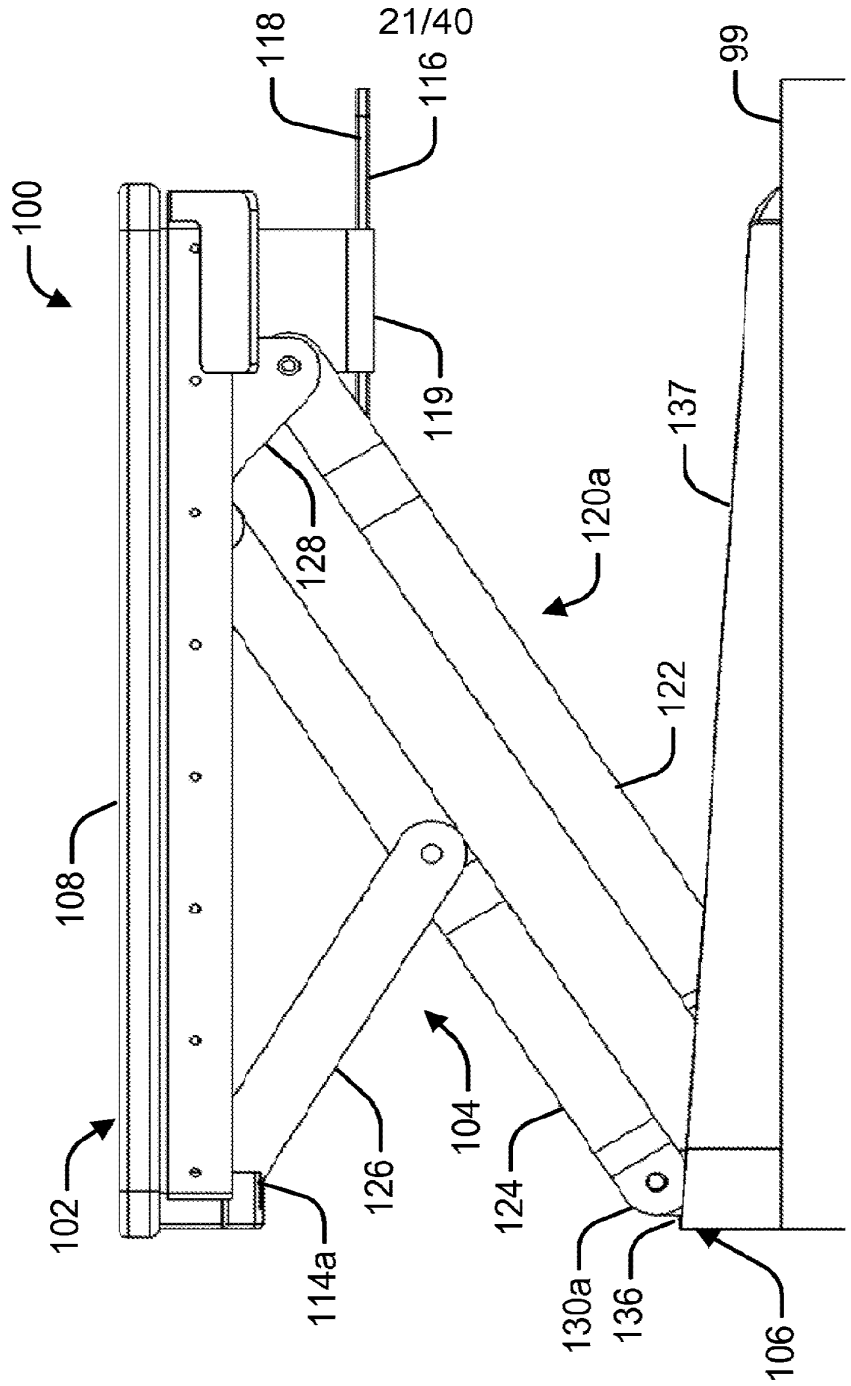

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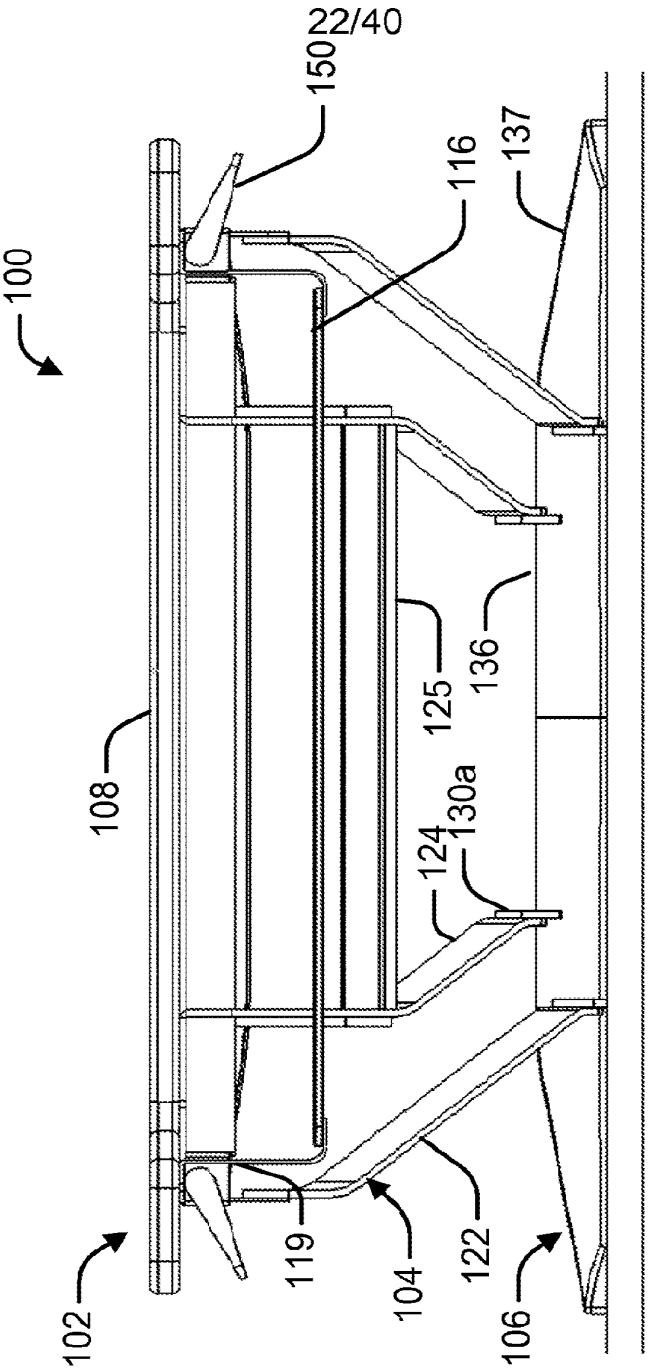


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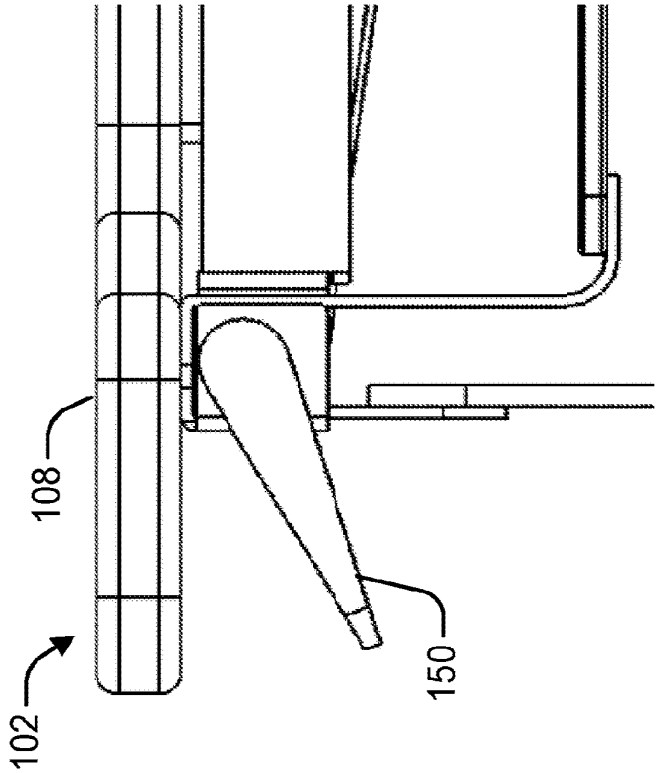


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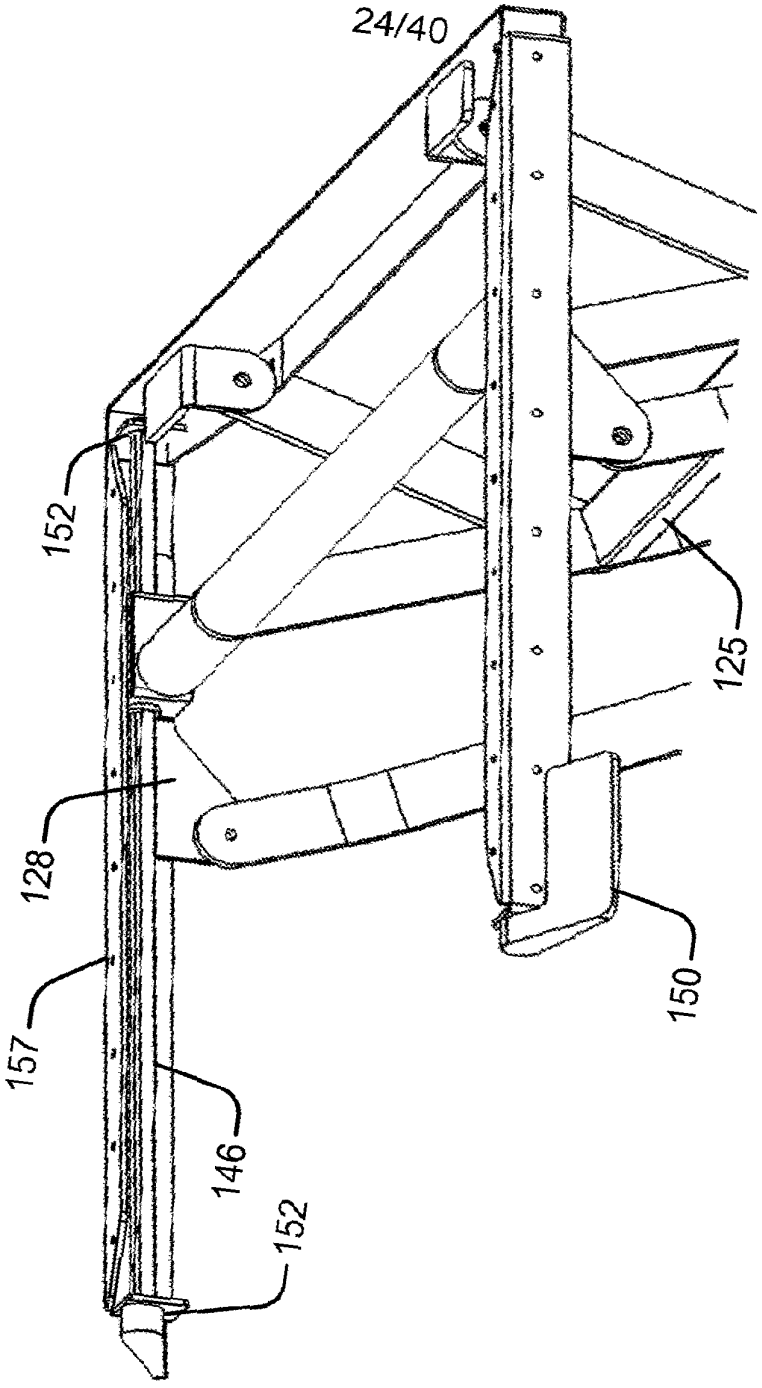


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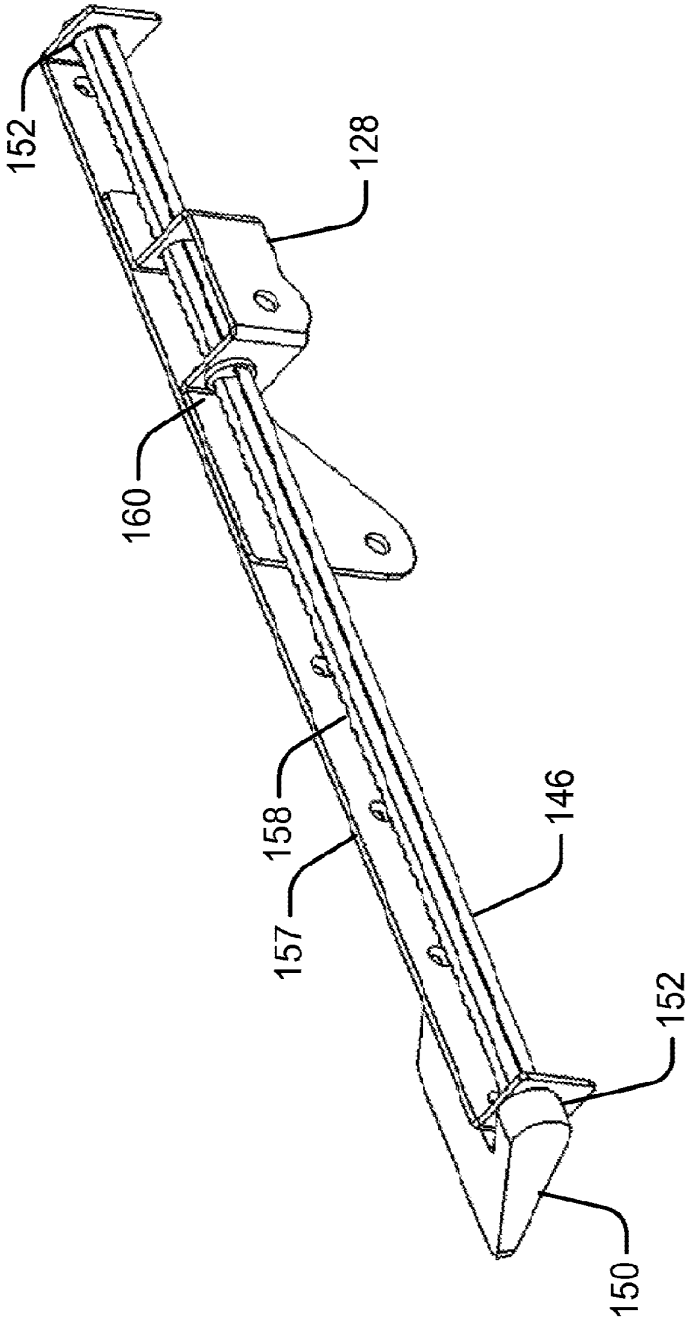


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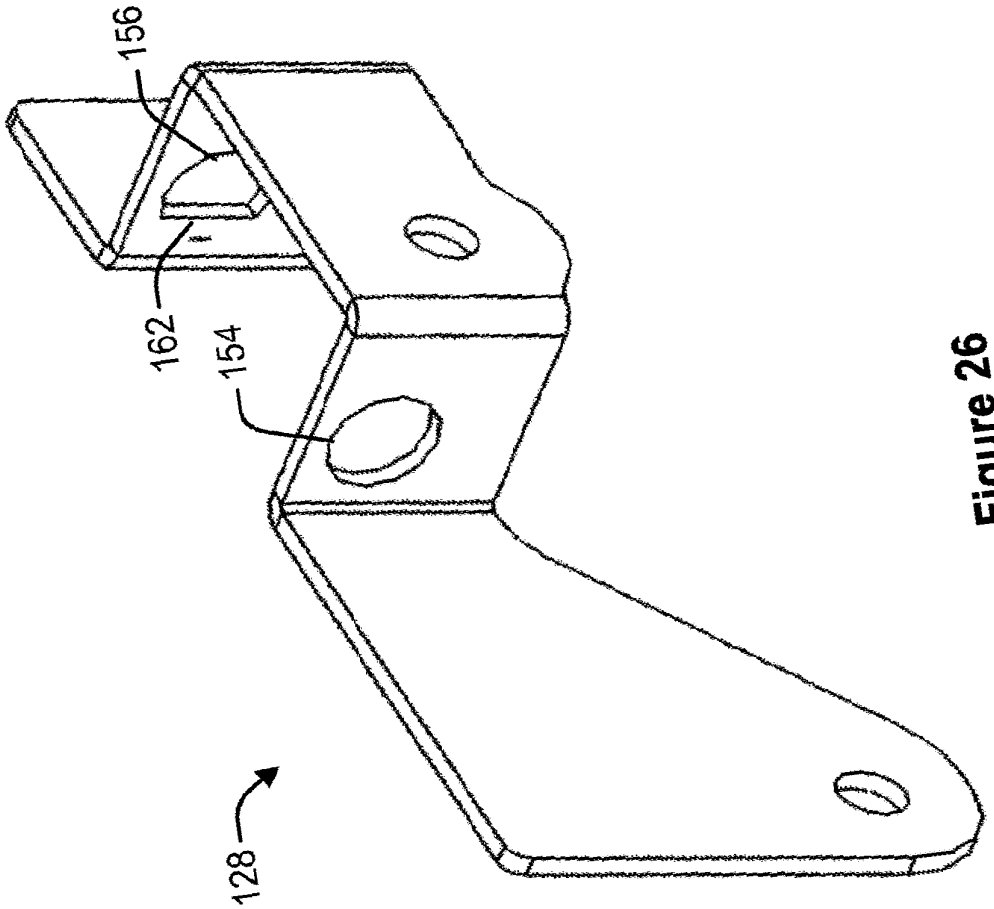


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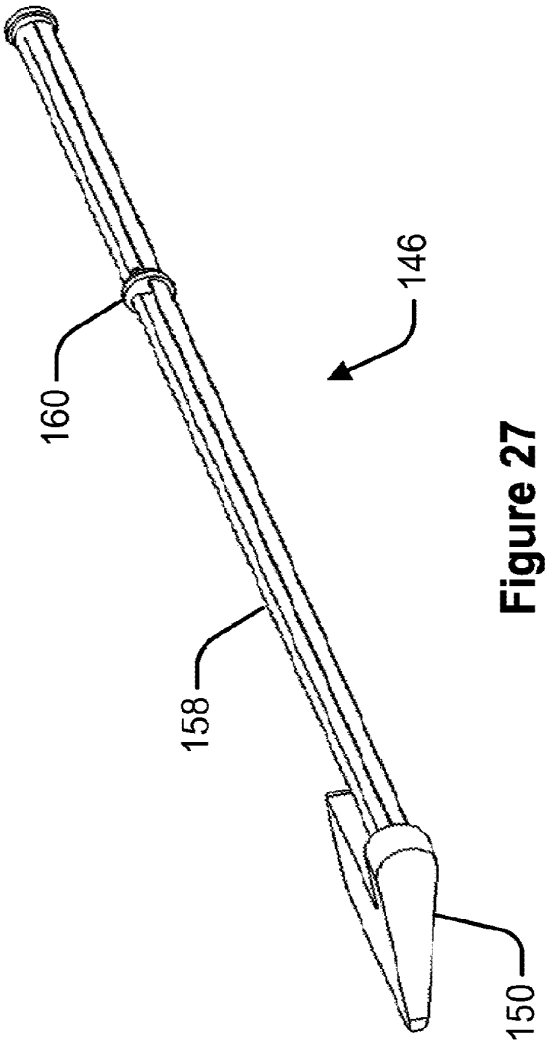


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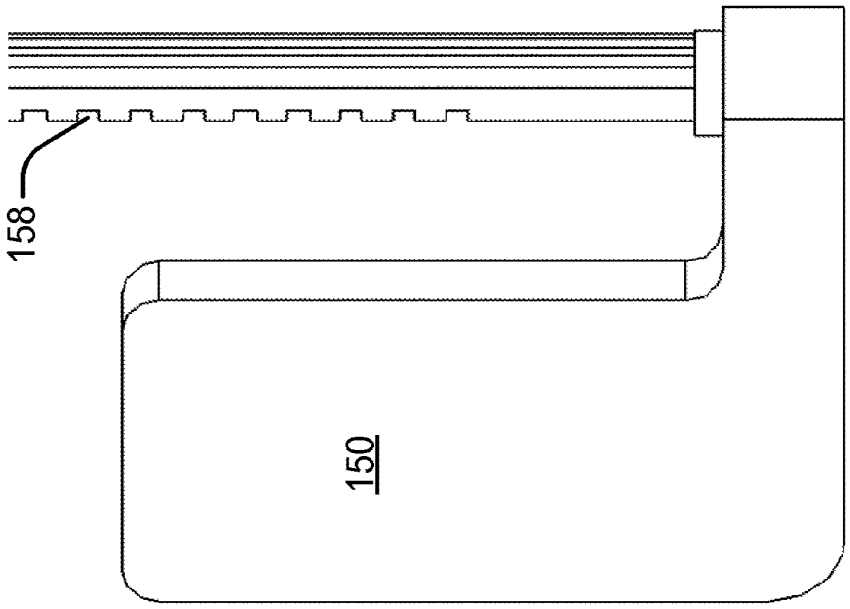


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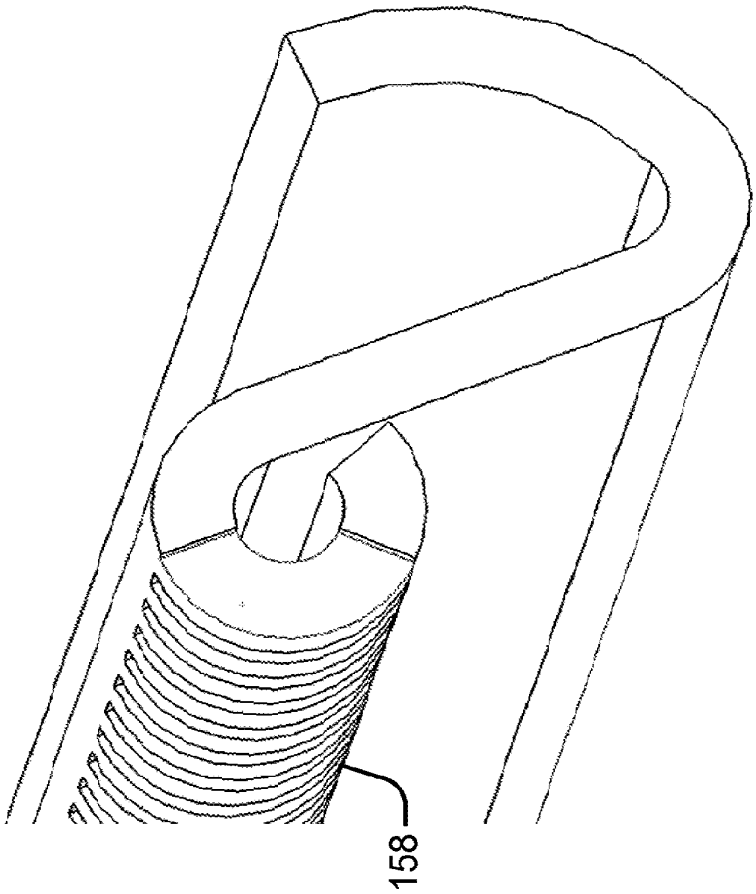


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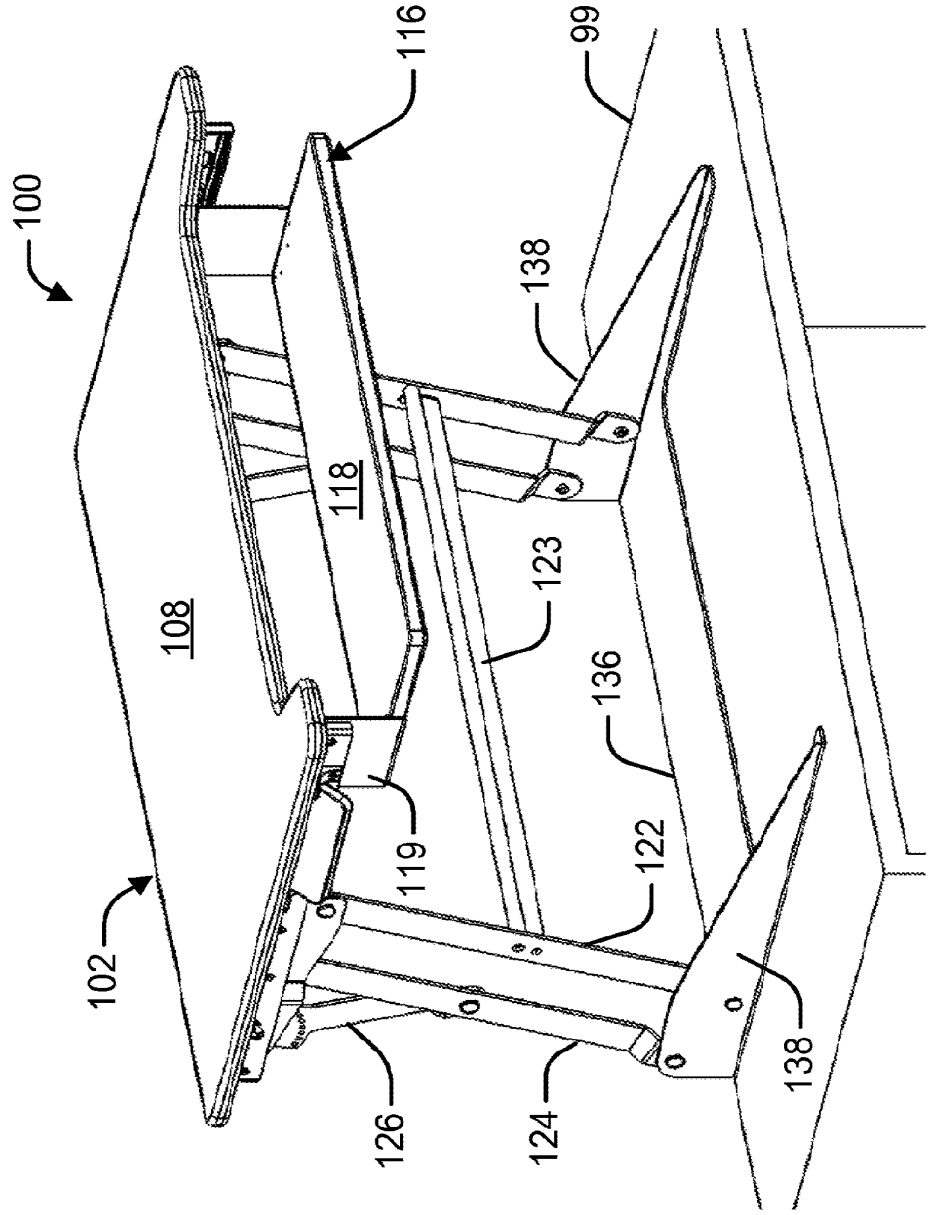


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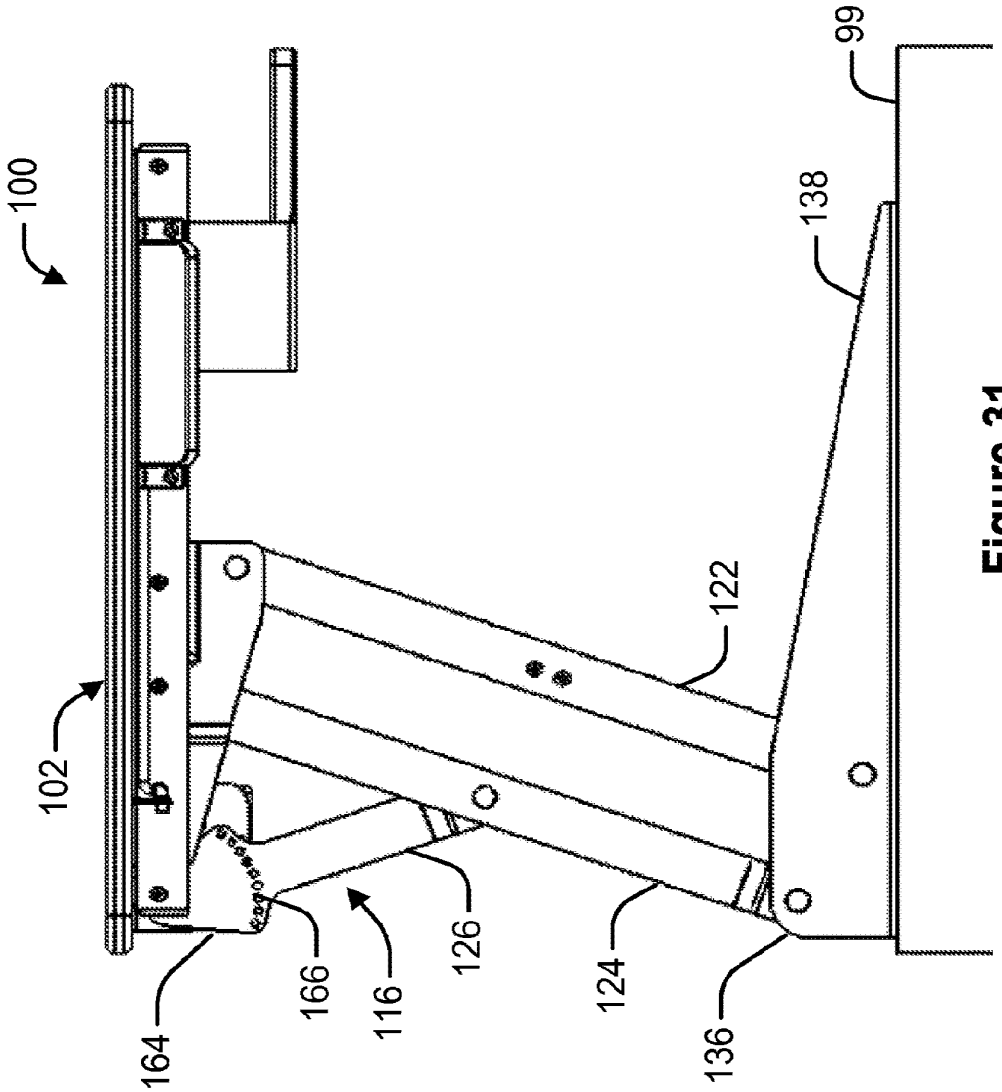


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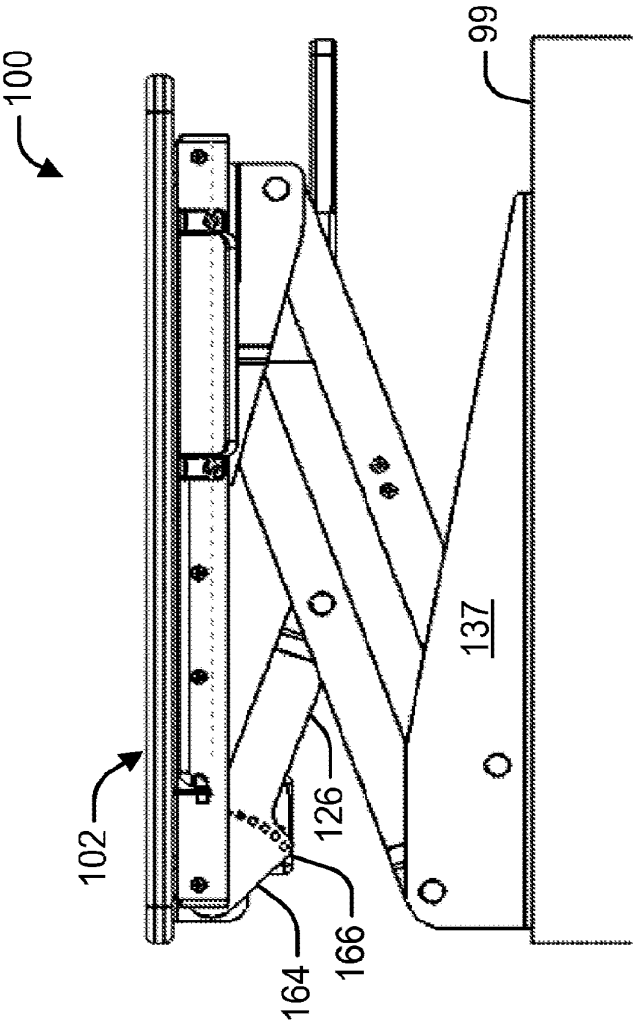


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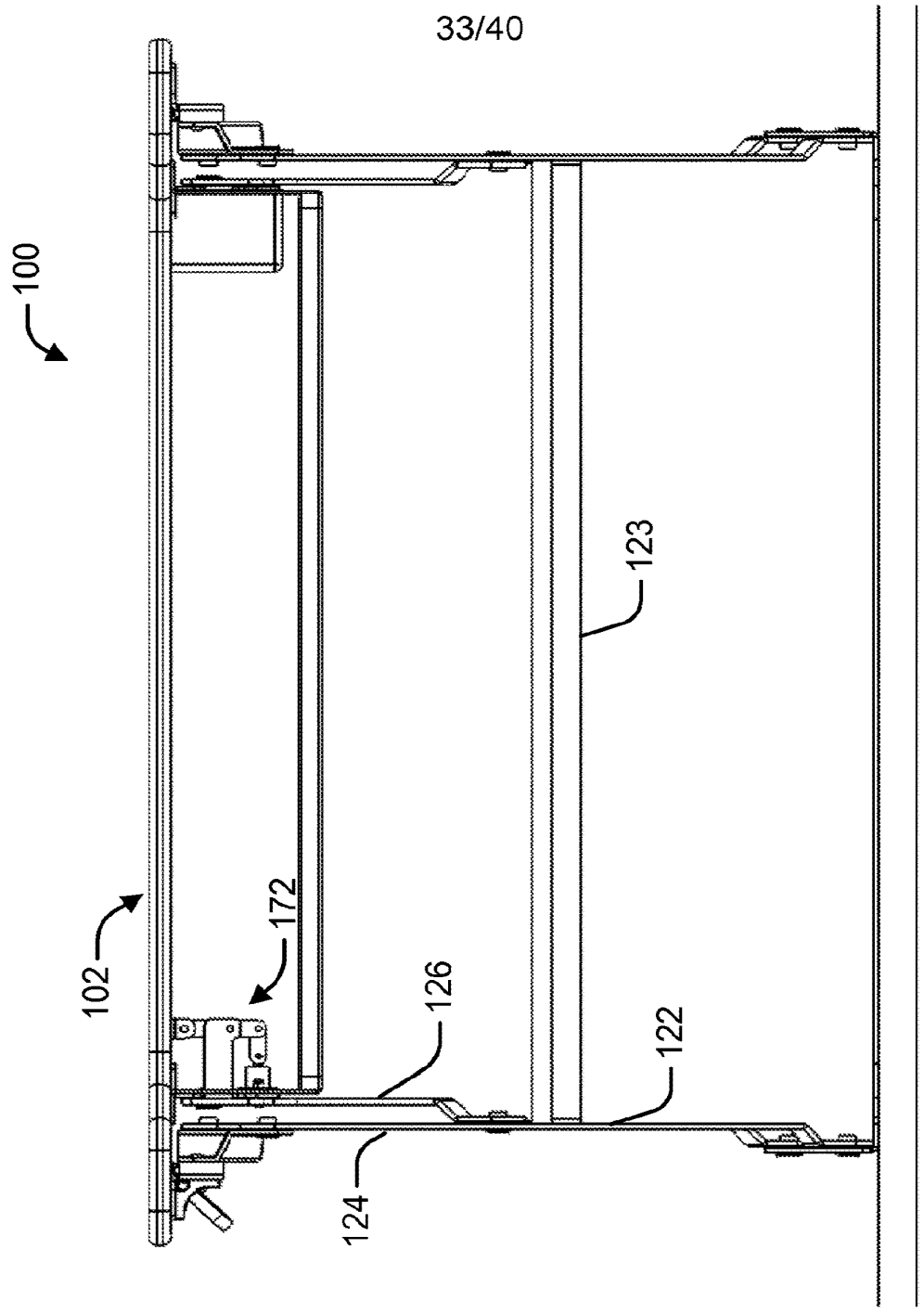


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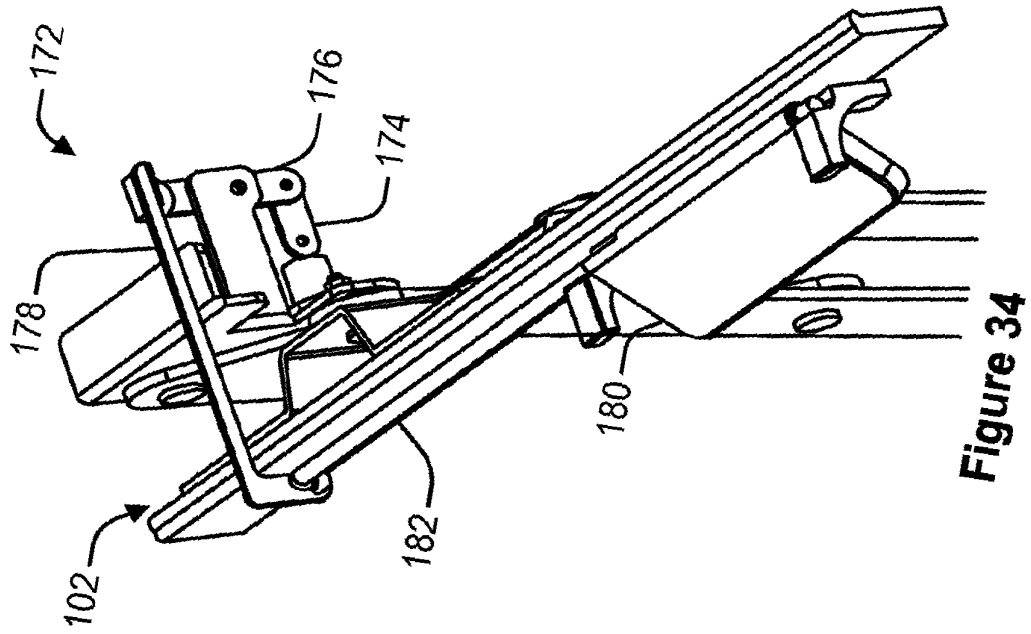


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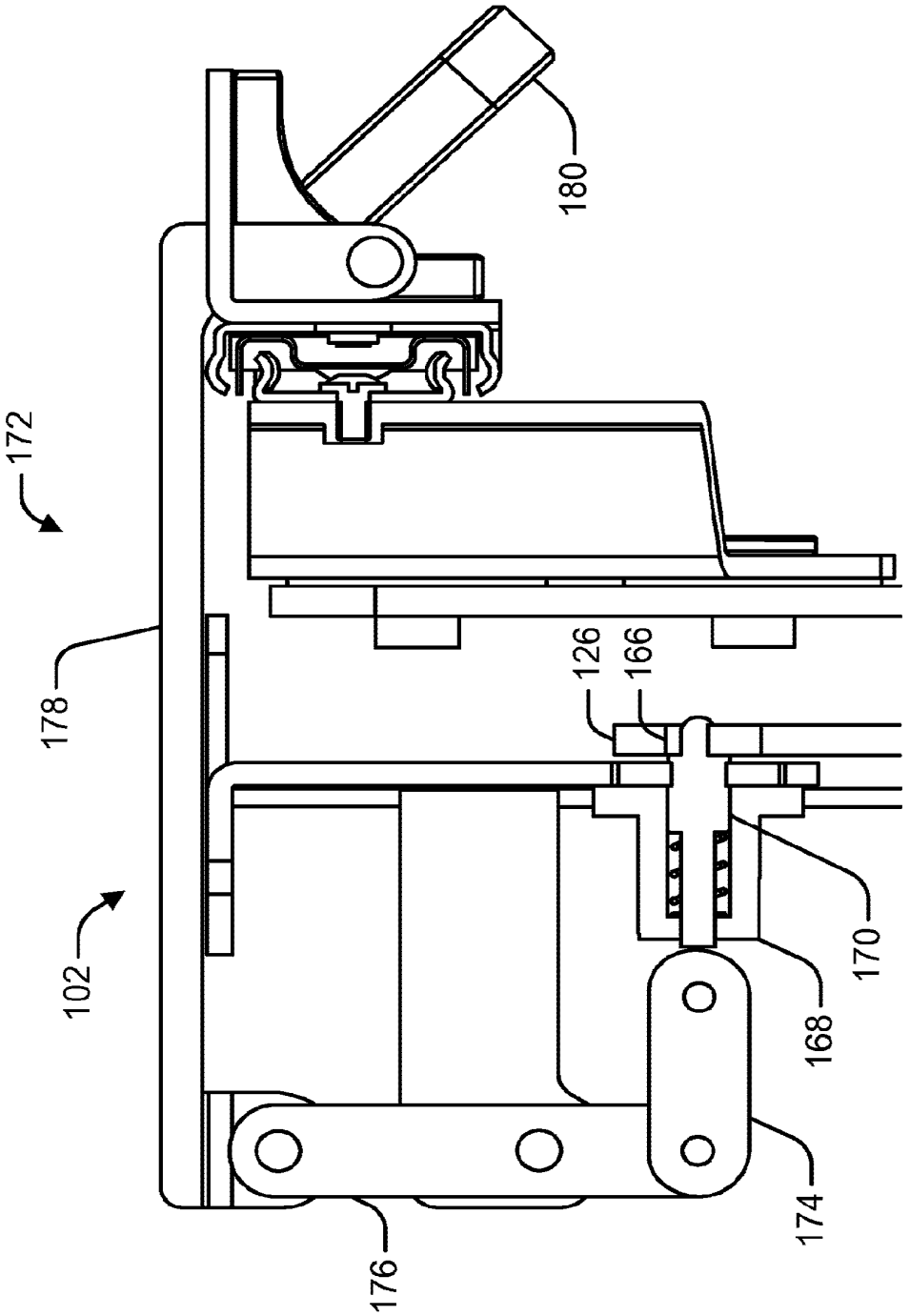


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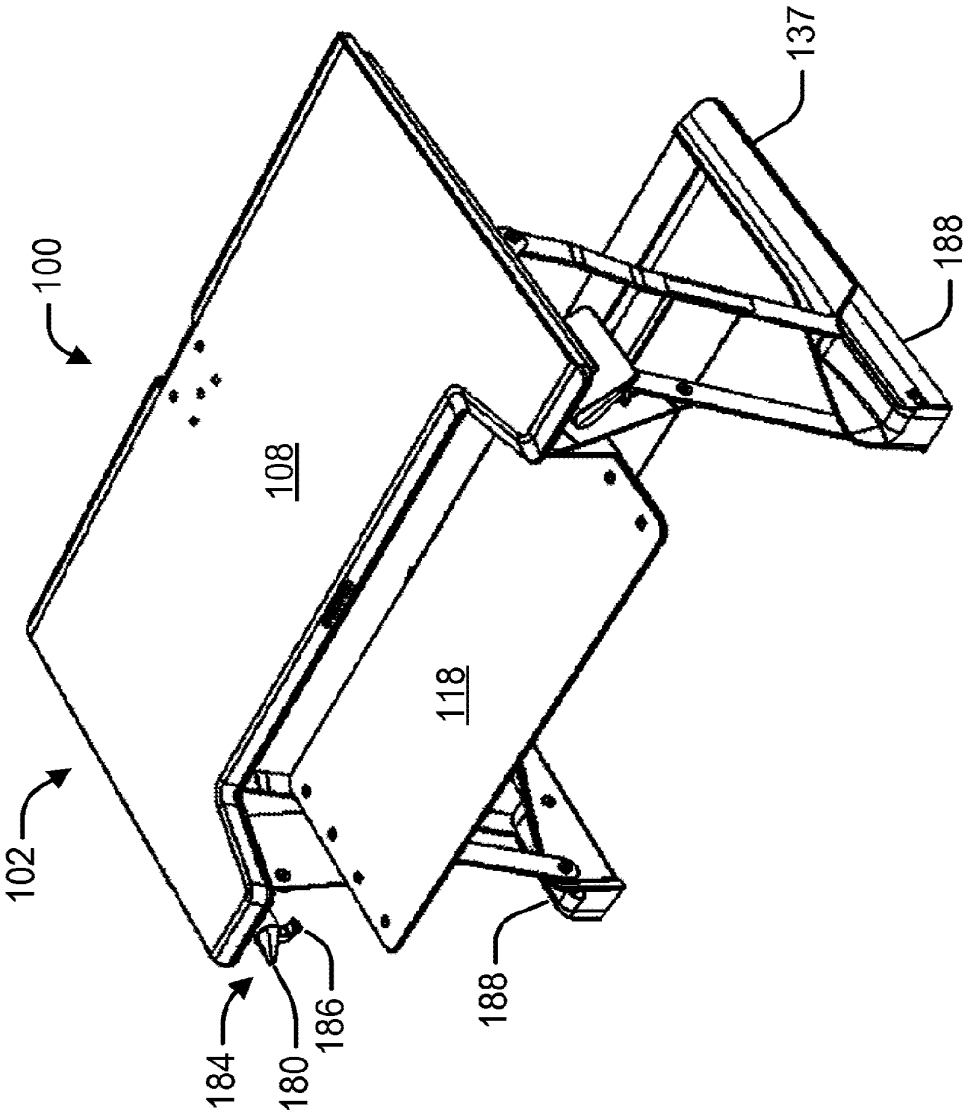


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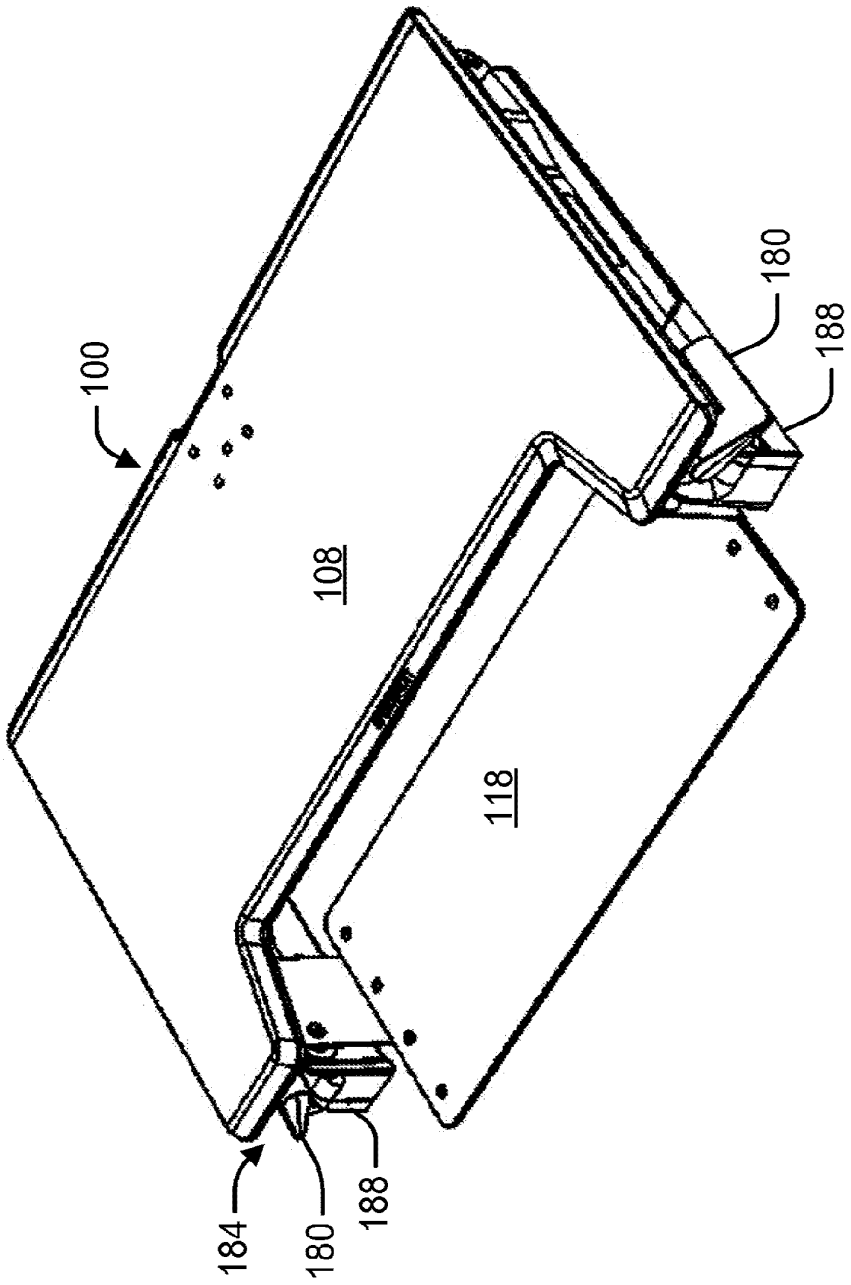


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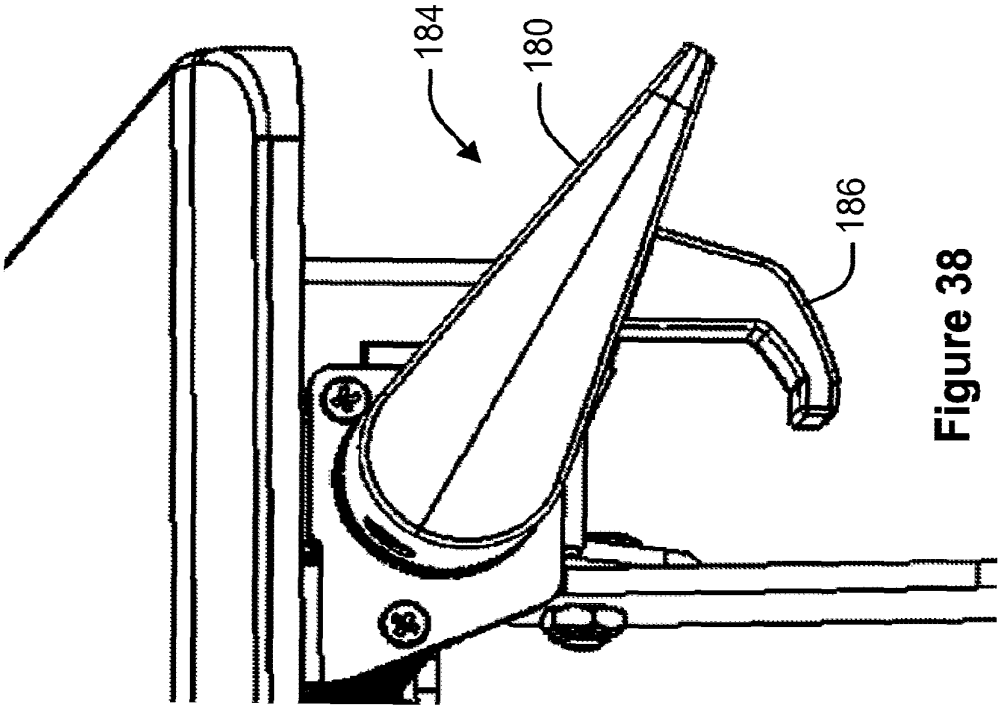


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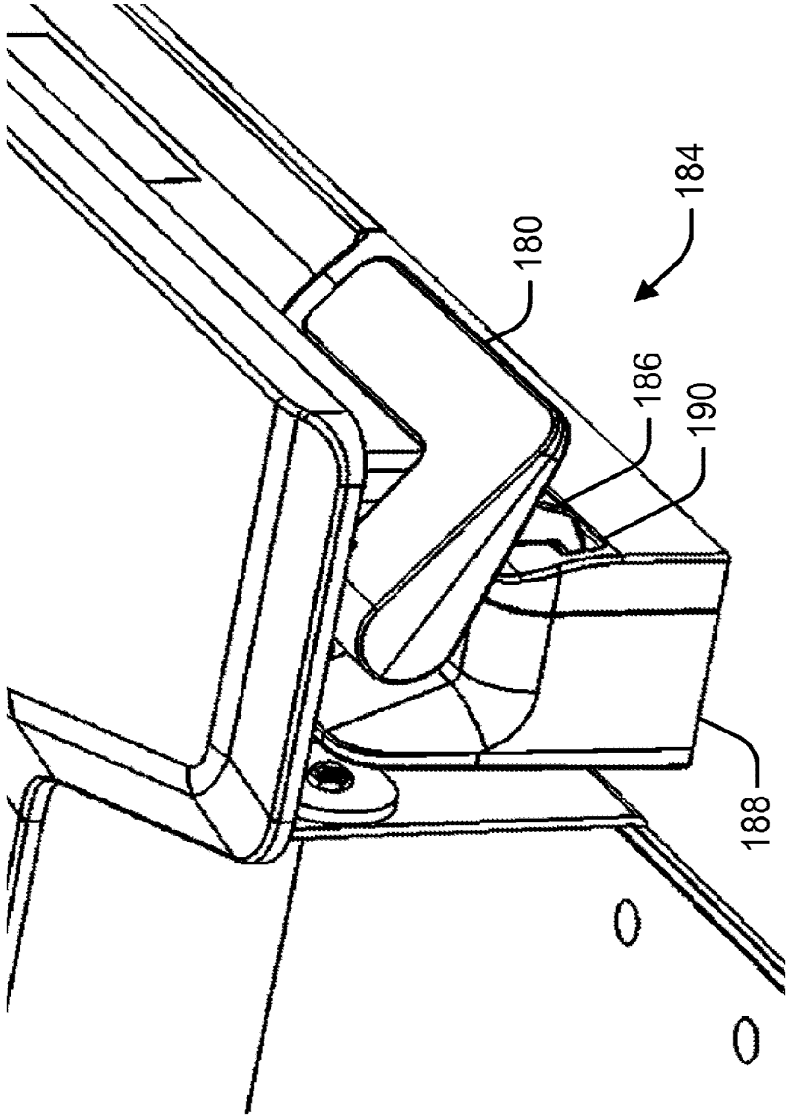


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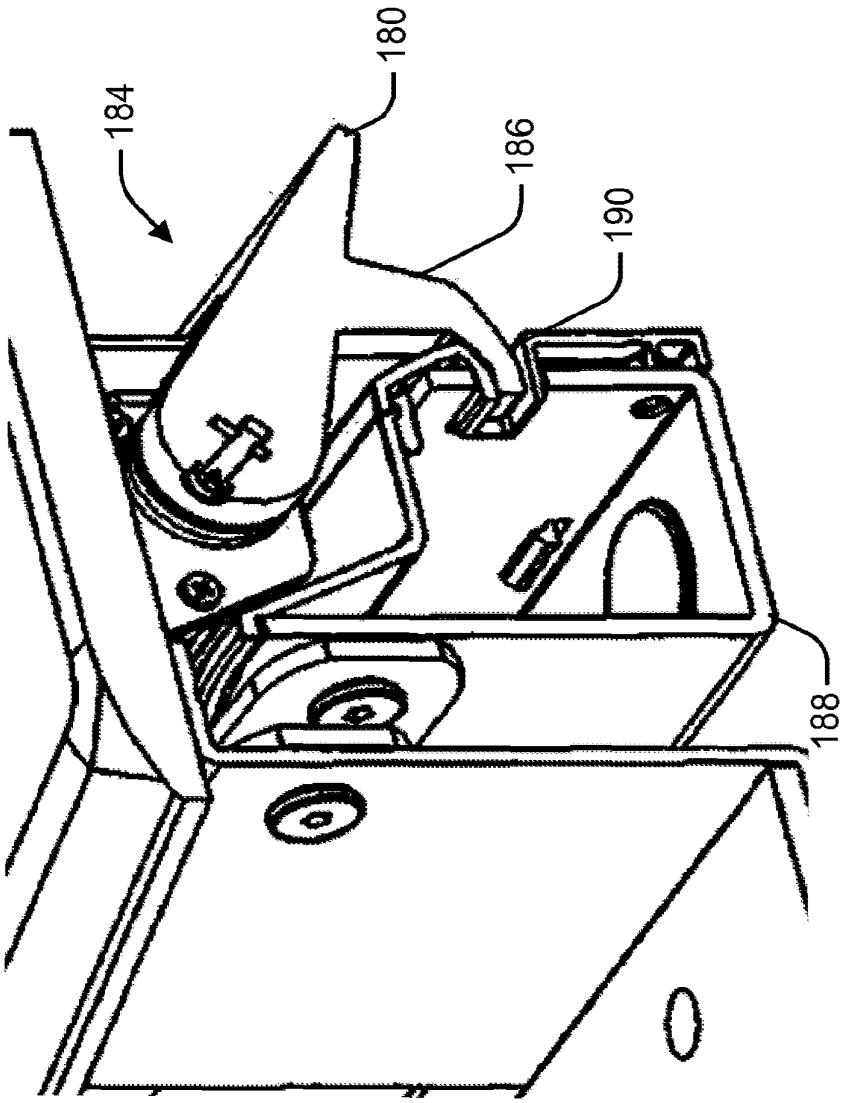


Figure 40

I531523

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(54)名稱

升降車與其高度顯示機構

LIFTING TROLLEY AND HEIGHT DISPLAY MECHANISM THEREOF

(57)摘要

一種升降車與其高度顯示機構，其高度顯示機構包括一高度指標單元、一收線器與一連動單元。高度顯示機構經由連動單元與載台高度變化相關的元件連動，藉此取得載台的高度資訊以於載台的高度顯示窗口中顯示高度資訊。高度顯示機構是以機構方式實現，並且可以即時顯示載台高度以提高使用的便利性。

A lifting trolley and a height display mechanism thereof are provided. The height display mechanism includes a height indicator unit, a rope receiver and a linking unit. The height display mechanism is linked to a device related to the height of a load platform through the linking unit, thereby obtaining the height information of the load platform and displaying the obtained height information through the height display window. The height display mechanism is implemented with mechanism manner and capable of displaying the height information of the load platform immediately, thereby increasing the usage convenience.

指定代表圖：

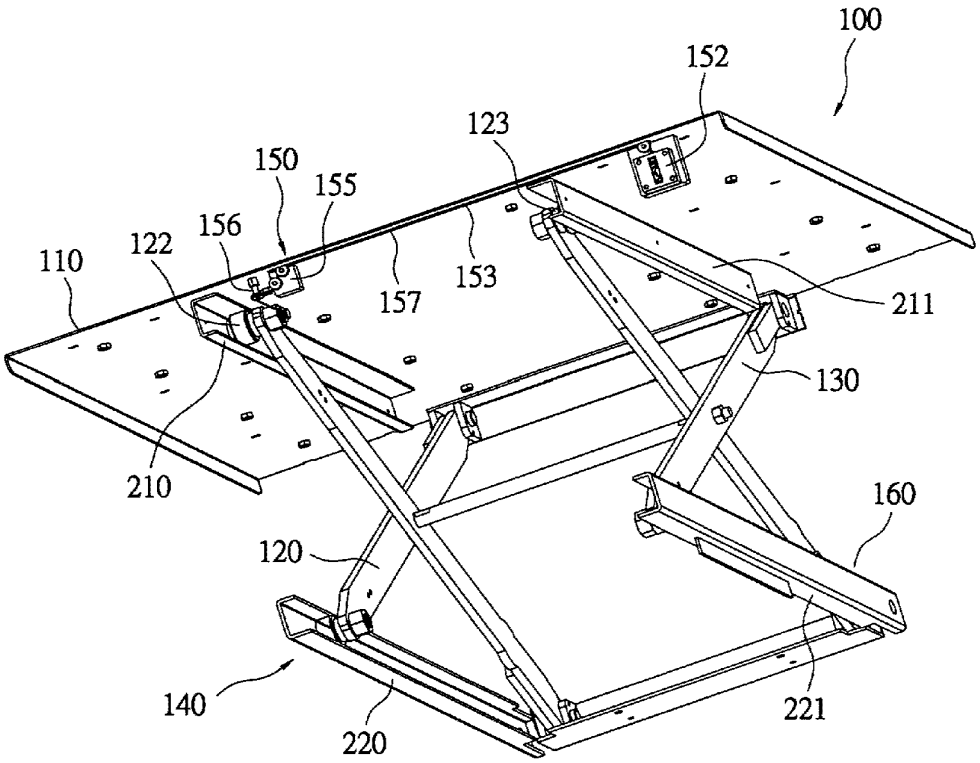


圖2

符號簡單說明：

100・・・升降車

110・・・載台

120・・・第一側支架

122、123・・・滑動件

130・・・第二側支架

140・・・支撐架

150・・・高度顯示機構

152・・・收線器

153・・・連動單元

155・・・滑輪組

156・・・滑輪

157・・・指標件

160・・・座體

210、211、220、221・・・滑動軌道

公告本

發明摘要

※ 申請案號：102144798

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B66F7/06 (2006.01)

【發明名稱】

升降車與其高度顯示機構

LIFTING TROLLEY AND HEIGHT DISPLAY MECHANISM THEREOF

【中文】

一種升降車與其高度顯示機構，其高度顯示機構包括一高度指標單元、一收線器與一連動單元。高度顯示機構經由連動單元與載台高度變化相關的元件連動，藉此取得載台的高度資訊以於載台的高度顯示窗口中顯示高度資訊。高度顯示機構是以機構方式實現，並且可以即時顯示載台高度以提高使用的便利性。

【英文】

A lifting trolley and a height display mechanism thereof are provided. The height display mechanism includes a height indicator unit, a rope receiver and a linking unit. The height display mechanism is linked to a device related to the height of a load platform through the linking unit, thereby obtaining the height information of the load platform and displaying the obtained height information through the height display window. The height display mechanism is implemented with mechanism manner and capable of displaying the height information of the load platform immediately, thereby increasing the usage convenience.

【代表圖】

【本案指定代表圖】：圖 2。

【本代表圖之符號簡單說明】：

升降車 100	收線器 152
載台 110	連動單元 153
第一側支架 120	滑輪組 155
滑動件 122、123	滑輪 156
第二側支架 130	指標件 157
支撐架 140	座體 160
高度顯示機構 150	滑動軌道 210、211、220、221

【本案若有化學式時，請揭示最能顯示發明特徵的化學式】：

發明專利說明書

（本說明書格式、順序，請勿任意更動）

【發明名稱】（中文/英文）

升降車與其高度顯示機構

LIFTING TROLLEY AND HEIGHT DISPLAY MECHANISM THEREOF

【技術領域】

本發明是關於一種升降車，且特別是關於一種可顯示載台高度的升降車與其高度顯示機構。

【先前技術】

升降車具有可調整高度的載台，其經常使用的支撐架結構爲 X 型支撐架，使用者可以依據工作需求調整支撐架以改變其桌面高度，但是使用者往往無法直接獲得其桌面的正確高度。

當使用需要得知載台高度時，使用者需要透過手動方式，利用例如捲尺、紅外線測距儀或雷射測距儀等測量工具來手動測量載台高度，但是這樣的量測方式相當不方便，也無法即時取得高度以進行載台高度調整。

【發明內容】

本發明提供一種具有載台高度顯示功能的升降車，其具有高度顯示機構，以機械連動的方式，達到即時顯示載台高度資訊的效果。

本發明實施例提出一種升降車，包括一載台、一支撐架與一高度顯示機構。載台具有一高度顯示窗口，支撐架用以設置該載台，其中該載台的高度係由該支撐架調整，該支撐架具有一滑動件，該滑動件的位置隨該載台的高度變化。高度顯示機構設置於該載

台，且經由該高度顯示窗口顯示該載台的高度。高度顯示機構包括一高度指標單元、一收線器與一連動單元。高度指標單元設置於該載台，並經由該高度顯示窗口顯示該載台的高度。收線器固設於該載台，而連動單元具有一第一端與一第二端，連動單元的該第一端連接於該收線器，連動單元的該第二端連接於該滑動件，該連動單元隨該滑動件的移動而帶動該高度指標單元以顯示該載台的高度。

在本發明一實施例中，上述該高度顯示機構更包括一滑輪組與一滑輪。滑輪組設置於該連動單元側邊，用以改變該連動單元的傳動方向。滑輪設置該連動單元側邊，用以改變該連動單元的傳動方向，其中，該滑輪組與該滑輪設置於該收線器與該滑動件之間。

在本發明一實施例中，該高度指標單元包括一高度指標尺與一指標件。高度指標尺設置於該載台的一上表面，而指標件連接於該連動單元上，隨該連動單元移動。

在本發明一實施例中，上述支撐架包括一座體、一滑動軌道、一第一側支架與一第二側支架。滑動軌道設置於該載台下方，用以設置該滑動件。第一側支架設置於該座體與該載台之間。第二側支架設置於該座體與該載台之間，其中該滑動件樞設於該第一側支架的一端並於該滑動軌道上滑動。

在本發明另一實施例中，高度指標單元包括一連動收線器與一指標帶。連動收線器與該收線器相互連動，而指標帶捲繞於該連動收線器與該收線器上，其中該連動單元帶動該收線器，使該收線器與該連動收線器傳動該指標帶。

從另一觀點來看，本發明另提出一種適用於升降車的高度顯示機構，其可設置於一升降車上，透過機構與升降車的載台連動以取得載台的高度資訊並即時顯示於載台的高度顯示窗口。高度顯示機構包括一高度指標單元、一收線器與一連動單元。高度指標

單元設置於該載台，並經由該高度顯示窗口顯示該載台的高度。收線器固設於該載台，而連動單元具有一第一端與一第二端，連動單元的該第一端連接於該收線器，連動單元的該第二端連接於該滑動件，該連動單元隨該滑動件的移動而帶動該高度指標單元以顯示該載台的高度。

綜上所述，本發明之升降車與其高度顯示機構係藉由機構方式與載台連動，藉此取得載台的高度資訊並且達到即時顯示的功效。高度顯示機構係以機械結構方式實現，沒有耗電的問題，使用者也不需另外使用量測工具進行高度量測，相當具有實用價值。

爲讓本發明之上述特徵和優點能更明顯易懂，下文特舉較佳實施例，並配合所附圖式，作詳細說明如下。

【圖式簡單說明】

圖 1 繪示本發明第一實施例的升降車的主要結構示意圖。

圖 2 繪示本發明第一實施例的升降車的主要結構示意圖。

圖 3 繪示本發明第一實施例的高度顯示機構 150 的結構圖。

圖 4 繪示本發明第二實施例的升降車的主要結構示意圖。

圖 5 繪示本發明第二實施例的升降車的主要結構示意圖。

圖 6 繪示本發明第二實施例的高度顯示機構 450 的結構圖。

圖 7 繪示本發明第二實施例的收線器 458 與連動收線器 452 的結構圖。

【實施方式】

在下文中，將藉由圖式說明本發明之實施例來詳細描述本發明，而圖式中的相同參考數字可用以表示類似的元件。有關本發明之前述及其他技術內容、特點與功效，在以下配合參考圖式之各實施例的詳細說明中，將可清楚的呈現。以下實施例中所提到的方向用語，例如：「上」、「下」、「前」、「後」、「左」、

「右」等，僅是參考附加圖式的方向。因此，使用的方向用語是用來說明，而並非用來限制本專利。並且，在下列各實施例中，採用相同的標號來表示相同或近似的元件。

[第一實施例]

圖 1 繪示本發明第一實施例的升降車的主要結構示意圖。升降車 100 包括支撐架 140、載台 110 與高度顯示機構 150，載台 110 上設置有高度顯示窗口 151，高度顯示機構 150 設置在載台 110 下方，並且可透過高度顯示窗口 151 顯示目前的載台 110 高度。高度顯示窗口 151 可以爲一開口或是透明的顯示窗口，如玻璃或塑膠所構成之蓋體，本實施例不限制其高度顯示窗口 151 的材質與結構。高度顯示窗口 151 可以設置於載台 110 的上表面以提供使用者看到。高度顯示機構 150 可選擇性的設置於載台 110 下方或側邊或支撐架 140 上等位置，本實施例不限制高度顯示機構 150 的設置位置。

本實施例圖 1 僅以升降車 100 的主體結構說明，但升降車 100 依照需求可以設置輪子、推把、油壓升降裝置、腳踏板升降機構等裝置(未繪示)，本實施例不限定高度顯示機構 150 所適用的升降車類型。

請參照圖 1 與圖 2，圖 2 繪示本發明第一實施例的升降車的主要結構示意圖。支撐架 140 主要包括座體 160、第一側支架 120、第二側支架 130 與滑動軌道 210、211、220、221 等結構。第一側支架 120 與第二側支架 130 爲 X 型支架，其兩端分別樞設於載台 110 與座體 160。滑動軌道 210、211 分別設置在載台 110 下方兩側，滑動軌道 220、221 分別設置在座體 160 上。支撐架 140 具有滑動件 122、123 以連接兩個側支架 120、130 與載台 110。滑動件 122 的一端樞設於第一側支架 120，另一端則可滑動的設置於滑動軌道 220。滑動件 123 的一端樞設於第二側支架 130，另一端則可

滑動的設置於滑動軌道 211。

載台 110 的高度可以經由調整第一側支架 120 與第二側支架 130 的開合角度來調整，而滑動件 122、123 會隨著載台 110 的高度調整在滑動軌道 220、221 滑動而產生相對應的位移。也就是說，滑動件 122、123 的位置是會隨著載台 110 的高度而變的。滑動件 122 的位移量與載台 110 的高度變化量可以由第一側支架 120 的長度與支架交叉角度，經由三角函數計算而得。值得注意的是，不同的 X 型支架結構，其滑動件 122 的位移量與載台 110 的高度變化量之間的關係也會有所不同。經由上述說明，本技術領域具有通常知識者應當可以經由圖 1 與圖 2 輕易推知其升降車 100 的載台 110 的高度調整結構原理，在此不再贅述。

請同時參照圖 3，圖 3 繪示本發明第一實施例的高度顯示機構 150 的結構圖。高度顯示機構 150 爲一機械式結構，利用載台 110 高度與滑動件 122 位移量之間的關係，以機構連動的方式來取得顯示載台 110 的高度。高度顯示機構 150 可以經由高度顯示窗口 151 顯示載台 110 的高度，讓使用者可以即時得知載台 110 的高度。高度顯示機構 150 包括高度指標單元 310、收線器 152、連動單元 153、滑輪組 155、滑輪 156，其中高度指標單元 310 包括高度指標尺 154 與指標件 157。收線器 152 固設於載台 110 的下方，用來回收連動單元 153。連動單元 153 的一端(第一端)連接於收線器 152，另一端(第二端)連接於滑動件 122。滑輪組 155 與滑輪 156 固設於載台 110 的下方並且位於連動單元 153 側邊，用以改變連動單元 153 的傳動方向。高度指標尺 154 具有高度指標並設置於載台 110 的上表面，指標件 157 則設置在連動單元 153，隨著連動單元 153 的收放而移動。

滑動件 122 由一滑輪 302 與一連接桿 320 所構成，滑輪 302 位於滑動軌道 210 上，第一側支架 120 樞接至連接桿 320。由於滑動件 122 的位置與載台 110 的高度相關，所以當載台 110 的高度

被調整時，滑動件 122 會隨之位移，藉此拉動連動單元 153 以造成指標件 157 的位移。換言之，指標件 157 的位移會與載台 110 的高度相關。此一相關關係可以預先計算以標記於高度指標尺 154 上，藉此顯示目前的載台 110 的高度，如圖 3 所示。使用者可以透過高度顯示窗口 151 觀察指標件 157 所指示的位置與高度指標尺 154 上的標示即時得知載台 110 的高度。

高度指標尺 154 上的高度標示需要依照不同的第一側支架 120 與第二側支架 130 的構造而變，其高度標示係由滑動件 122 的位移量與載台 110 高度變化量之間的關係而定，本技術領域具有通常知識者應可由上述實施例的說明中推知，在此不再贅述。指標件 157 設置於連動單元 153 上，其結構或形狀可以依照設計需求而定，本實施例不限制。

收線器 152 的內部具有繩索回收機構，例如扭簧等結構，可以提供繩索回收的驅動力。當連動單元 153 被滑動件 122 拉出時，驅動力會累積於收線器 152 內，當滑動件 122 反向滑動時(載台 110 的高度下降時)，收線器 152 會自動回收連動單元 153。收線器 152 的結構可以有多種實施方式，例如吊掛一重物於繩索的另一端或是使用彈簧連接於繩索另一端等皆可實現收線器 152 的功能，本實施例僅以扭簧式的收線器說明，但本實施例不限制收線器 152 的實現方式。

滑輪組 155 與滑輪 156 主要是用來改變連動單元 153 的傳動方向，讓連動單元 153 可以連接至滑動件 122。滑輪組 155 與滑輪 156 的數量與設置位置可以依照不同的升降車 100 結構而定或使用不同的滑輪結構實現，例如僅使用滑輪 156 或是僅使用滑輪組 155，或是以一軸桿來取代滑輪組 155 與滑輪 156。

上述高度顯示機構 150 係利用機械結構來達到載台 110 高度偵測與顯示，使用者不需而外使用高度量測裝置即可即時取得載台 110 的高度資訊，相當便利。

[第二實施例]

請參照圖 4，圖 4 繪示本發明第二實施例的升降車的主要結構示意圖。圖 4 與圖 1 實施例都是利用機械結構來實現載台高度顯示功能，其主要差異在於高度顯示機構 450 的構造不同。請同時參照圖 5 與圖 6，圖 5 繪示本發明第二實施例的升降車的主要結構示意圖。圖 6 繪示本發明第二實施例的高度顯示機構 450 的結構圖。

升降車 400 包括支撐架 440、載台 410 與高度顯示機構 450。載台 410 上設置有高度顯示窗口 451，而高度顯示機構 450 設置在載台 410 下方，並且可透過高度顯示窗口 451 顯示目前的載台 410 高度。支撐架 440 包括第一側支架 420、第二側支架 430、座體 460 與滑動軌道 405 等機構，其架構與上述第一實施例的支撐架 140 相同，在此不加贅述。載台 410 上具有高度顯示窗口 451，可以即時顯示載台 110 的高度。

高度顯示機構 450 爲一機械式結構，其包括收線器 458、連動收線器 452、指標帶 457、連動單元 453 與滑輪 456。連動收線器 452 與指標帶 457 構成高度指標單元 610，其中指標帶 457 上具有高度標示，並捲繞在收線器 458 與連動收線器 452 上。連動單元 453 的一端連接於收線器 458，另一端則連接於滑動件 422。滑動件 422 的移動會經由連動單元 453 帶動收線器 458 轉動，並且使得連動收線器 452 一併轉動。捲繞在收線器 458 與連動收線器 452 上之指標帶 457 也會一併被帶動。由於滑動件 422 的位置與載台 410 的高度相關，所以指標帶 457 的轉動量也會與載台 410 的高度相關，藉此即可取得載台 410 的高度並且透過高度顯示窗口 451 顯示。

指標帶 457 上的高度標示可以預先量測載台 410 的高度與指標帶 457 的轉動量之間的相對關係後訂定，不同的升降車結構，其

高度標示的間隔不同。同理，上述第一實施例中的高度指標尺 154 也具有相同的特性。指標帶 457 可以說是將一個高度指標尺直接纏繞在收線器 458 與連動收線器 452 上，使其隨著滑動件 422 轉動，藉此取得載台 410 的高度資訊。

請參照圖 7，圖 7 繪示本發明第二實施例的收線器 458 與連動收線器 452 的結構圖。連動收線器 452 包括軸桿 720 與設置其內部的扭簧 710 組成，其連動收線器 452 的外殼則可作爲捲繞指標帶 457 的滾筒使用。收線器 458 與連動收線器 452 的結構相似，不再贅述。連動單元 453 被滑動件 422 向外拉動時，收線器 458 會被連動單元 453 拉動並且累積驅動力於內部的扭簧(未繪示)上。收線器 458 的轉動會透過指標帶 457 傳動連動收線器 452，並且使連動收線器 452 累積驅動力。此時，指標帶 457 會隨之改變捲繞的長度以改變顯示於高度顯示窗口 451 的高度指標。

當滑動件 422 反向移動時(載台 410 高度下降)，收線器 458 會回收連動單元 453，而連動收線器 452 也會轉動以回收指標帶 457，藉此調整所顯示的高度指標。

收線器 458 與連動收線器 452 可以利用不同的結構實現繩索回收功能，例如以彈簧提供驅動力等，本實施例並不限制其實現方式。

上述第一與第二實施例中的滑動件 122、422 是以設置於滑動軌道 210、410 中的滑輪爲例說明，但本發明也可以採用支撐架 140、440 的其他元件取代。舉例來說，連動單元 153、453 也可以連接至 X 型支架下方設置於座體 160 上的滑動件，或者將連動單元 153、453 連接至 X 型支架靠近滑動件 122、422 的端部上。由於 X 型支架的一端也會隨著載台 110、410 的高度而產生移動，因此也可以取代滑動件 122、422 來拉動連動單元 153、453。連動單元 153、453 則可以使用繩索實現以使高度顯示機構 150、450 與載台 110、410 的高度連動。經由上述實施例的說明，本技術領域

具有通常知識者應當可以輕易推知其他實施結構細節，在此不再贅述。

綜上所述，本發明之升降車具有機構式的高度顯示機構，可以即時顯示載台的高度，實現自動化載台高度資料顯示的問題，提高了升降車的使用方便與實用性。

雖然本發明之實施例已揭露如上，然本發明並不受限於上述實施例，任何所屬技術領域中具有通常知識者，在不脫離本發明所揭露之範圍內，當可作些許之更動與調整，因此本發明之保護範圍應當以後附之申請專利範圍所界定者爲準。

【符號說明】

升降車 100
載台 110
第一側支架 120
滑動件 122、123
第二側支架 130
支撐架 140
高度顯示機構 150
高度顯示窗口 151
收線器 152
連動單元 153
高度指標尺 154
滑輪組 155
滑輪 156
指標件 157
座體 160
滑動軌道 210、211、220、221
滑輪 302
高度指標單元 310
連接桿 320
升降車 400
滑動軌道 405
載台 410
第一側支架 420
滑動件 422
第二側支架 430
支撐架 440
高度顯示機構 450
高度顯示窗口 451
連動收線器 452
連動單元 453
滑輪 456
指標帶 457
收線器 458
座體 460
高度指標單元 610
扭簧 710
軸桿 720

【生物材料寄存】

【序列表】

104 年 8 月 28 日修正替換頁

申請專利範圍

1、一種升降車，包括：

一載台，具有一高度顯示窗口；

一支撐架，用以設置該載台，其中該載台的高度係由該支撐架調整，該支撐架具有一滑動件，該滑動件的位置隨該載台的高度變化；以及

一高度顯示機構，設置於該載台，且經由該高度顯示窗口顯示該載台的高度，該高度顯示機構包括：

一高度指標單元，可活動的設置於該載台，顯露於該高度顯示窗口，並經由該高度顯示窗口顯示該載台的高度；

一收線器，固設於該載台；以及

一連動單元，可活動地連接於該高度指標單元，具有一第一端與一第二端，該連動單元的該第一端可活動地連接於該收線器，該連動單元的該第二端可活動地連接於該滑動件，該連動單元隨該滑動件的移動而帶動該高度指標單元以顯示該載台的高度。

2、如申請專利範圍第 1 項所述之升降車，其中該高度顯示機構更包括：

一滑輪組，設置於該連動單元側邊，用以改變該連動單元的傳動方向；以及

一滑輪，設置該連動單元側邊，用以改變該連動單元的傳動方向；其中，該滑輪組與該滑輪設置於該收線器與該滑動件之間。

3、如申請專利範圍第 1 項所述之升降車，其中該高度指標單元包括：

一高度指標尺，設置於該載台的一上表面；以及

一指標件，連接於該連動單元上，隨該連動單元移動。

4、如申請專利範圍第 1 項所述之升降車，其中該收線器具有一扭簧，提供一彈性力以捲繞該連動單元。

5、如申請專利範圍第1項所述之升降車，其中該支撐架包括：

一座體；

一滑動軌道，設置於該載台下方，用以設置該滑動件；

一第一側支架，設置於該座體與該載台之間；以及

一第二側支架，設置於該座體與該載台之間；

其中，該滑動件樞設於該第一側支架的一端並於該滑動軌道上滑動。

6、如申請專利範圍第1項所述之升降車，其中該高度顯示機構更包括：

一滑輪，設置該連動單元側邊，用以改變該連動單元的傳動方向；

其中，該滑輪設置於該收線器與該滑動件之間。

7、如申請專利範圍第1項所述之升降車，其中該高度指標單元包括：

一連動收線器，與該收線器相互連動；以及

一指標帶，捲繞於該連動收線器與該收線器上；

其中，該收線器與該連動收線器是可旋轉的，當該連動單元的第二端被該滑動件拉動時，該連動單元的第一端會連動該收線器，而使該收線器與該連動收線器以旋轉的方式帶動該指標帶。

8、一種高度顯示機構，設置於一升降車上，該升降車包括一載台與設置該載台的一支撐架，該載台具有一高度顯示窗口且該載台的高度係由該支撐架調整，該支撐架具有一滑動件，該滑動件的位置隨該載台的高度變化，該高度顯示機構包括：

一高度指標單元，可活動的設置於該載台，顯露於該高度顯示窗口，並經由該高度顯示窗口顯示該載台的高度；

一收線器，固設於該載台；以及

一連動單元，可活動地連接於該高度指標單元，具有一第一端與一第二端，該連動單元的該第一端可活動地連接於該收線器，該連動單元的該第二端可活動地連接於該滑動件，該連動單

元隨該滑動件的移動而帶動該高度指標單元以顯示該載台的高度。

9、如申請專利範圍第 8 項所述之高度顯示機構，其中該高度顯示機構更包括：

一滑輪組，設置於該連動單元側邊，用以改變該連動單元的傳動方向；以及

一滑輪，設置該連動單元側邊，用以改變該連動單元的傳動方向；其中，該滑輪組與該滑輪設置於該收線器與該滑動件之間。

10、如申請專利範圍第 8 項所述之高度顯示機構，其中該高度指標單元包括：

一高度指標尺，設置於該載台的一上表面；以及

一指標件，連接於該連動單元上，隨該連動單元移動。

11、如申請專利範圍第 8 項所述之高度顯示機構，其中該收線器具有一扭簧，提供一彈性力以捲繞該連動單元。

12、如申請專利範圍第 8 項所述之高度顯示機構，其中該高度顯示機構更包括：

一滑輪，設置該連動單元側邊，用以改變該連動單元的傳動方向；其中，該滑輪設置於該收線器與該滑動件之間。

13、如申請專利範圍第 8 項所述之高度顯示機構，其中該高度指標單元包括：

一連動收線器，與該收線器相互連動；以及

一指標帶，捲繞於該連動收線器與該收線器上；

其中，該收線器與該連動收線器是可旋轉的，當該連動單元的第二端被該滑動件拉動時，該連動單元的第一端會連動該收線器，而使該收線器與該連動收線器以旋轉的方式帶動該指標帶。

圖式

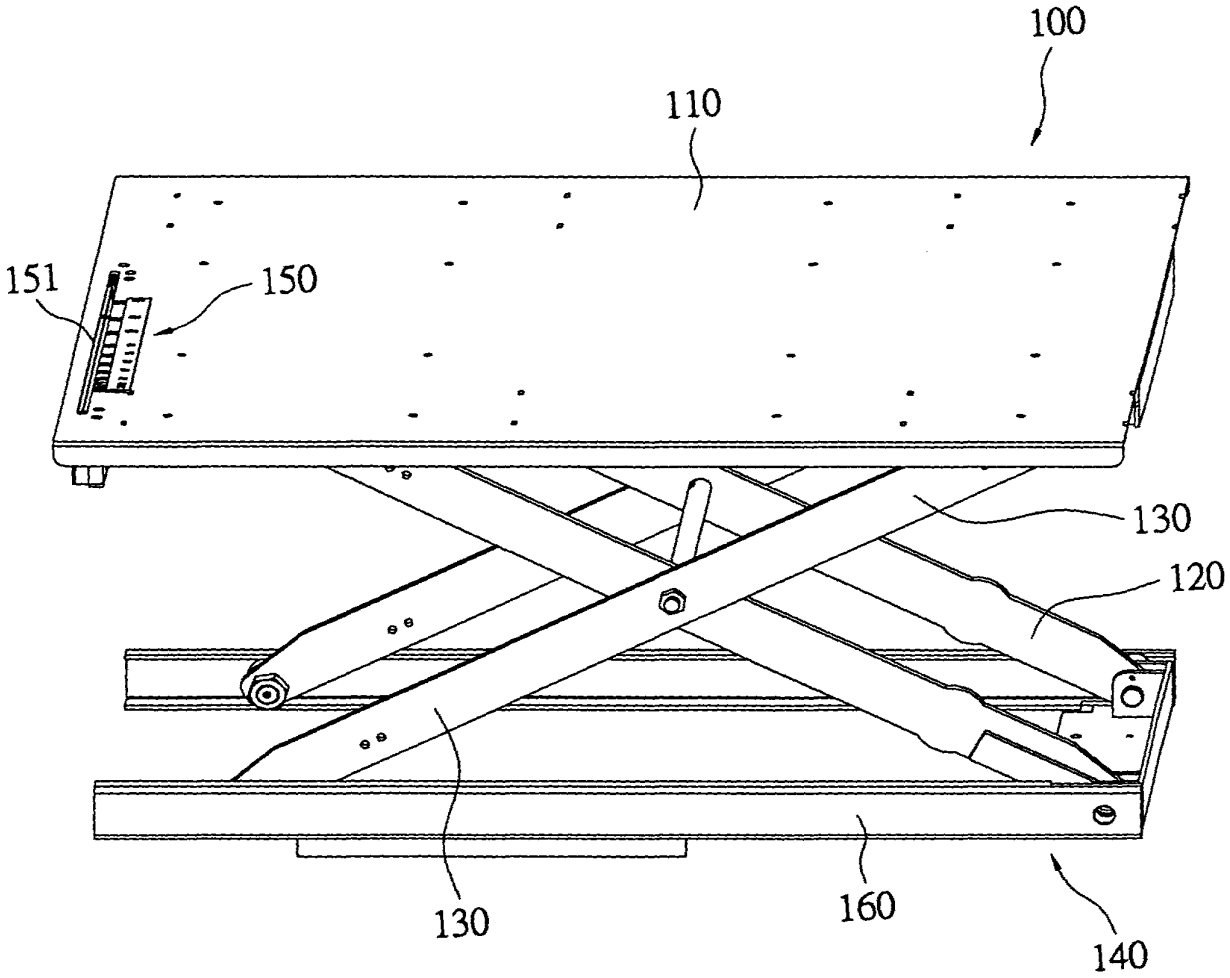


圖1

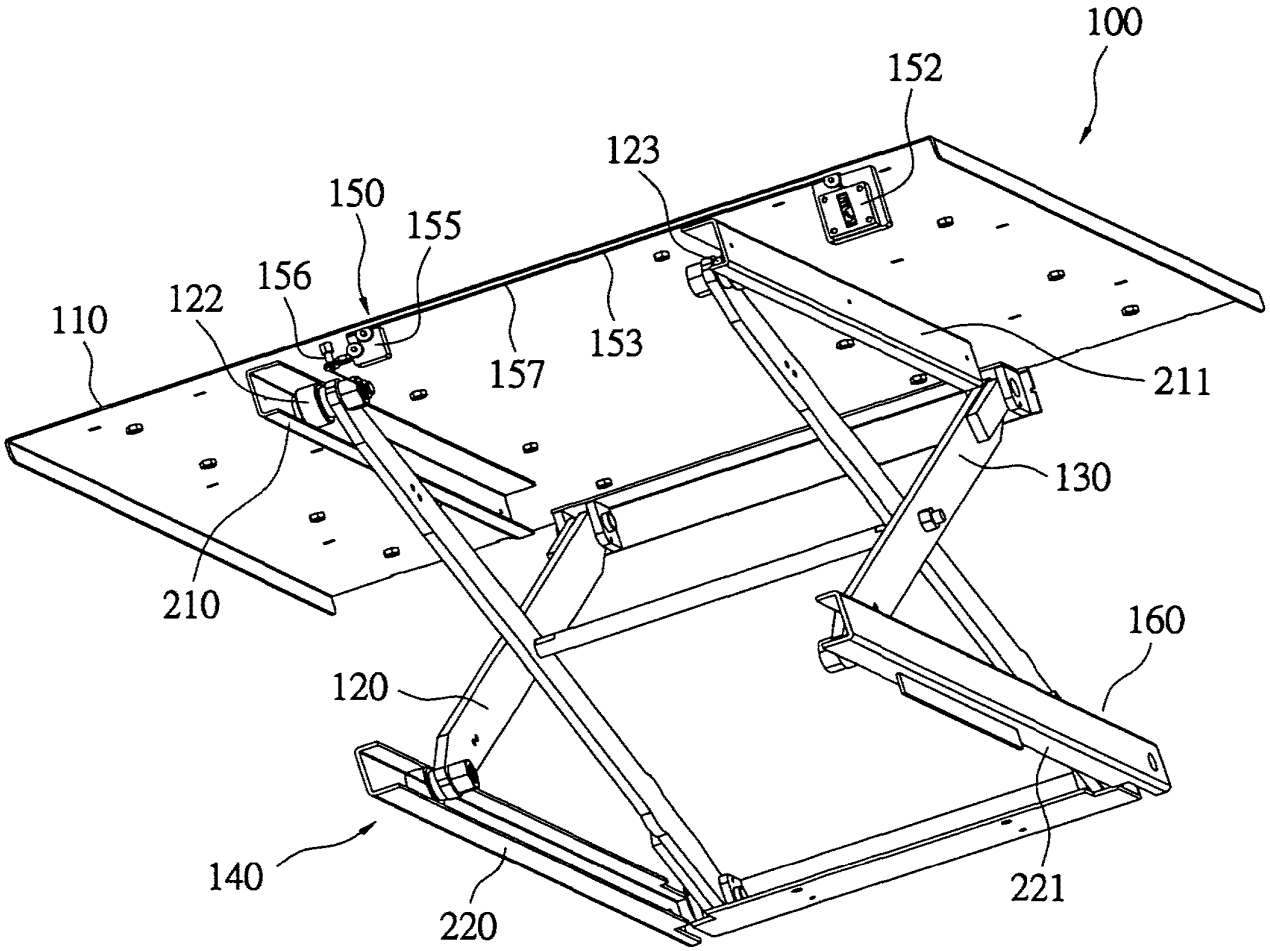

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圖2

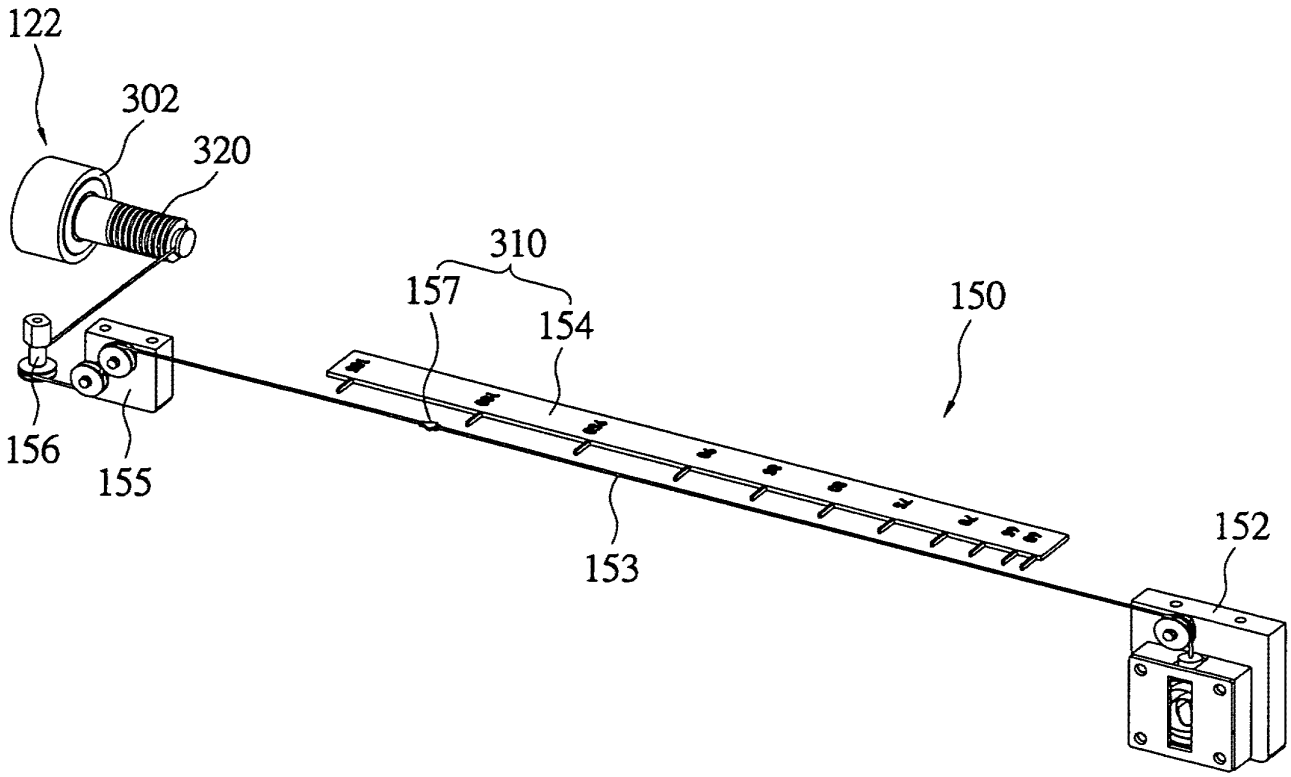


圖3

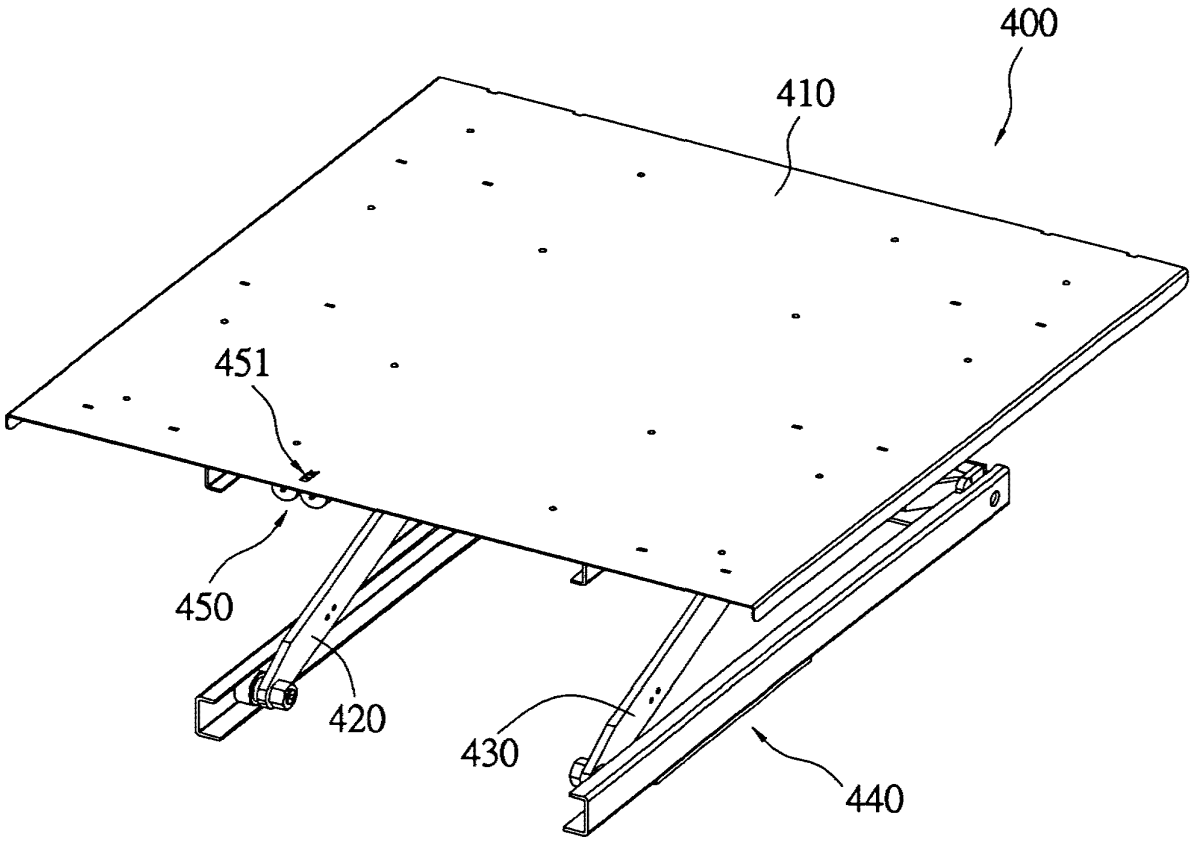


圖4

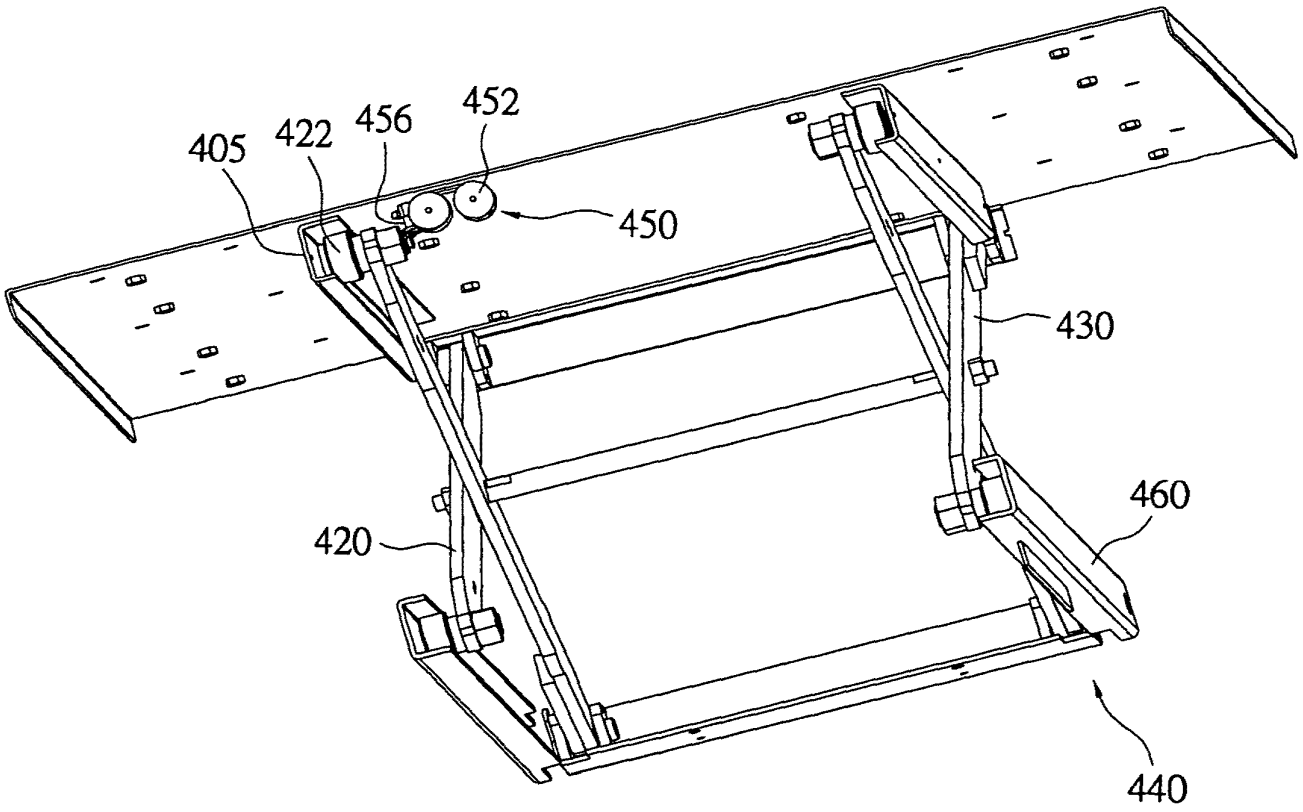


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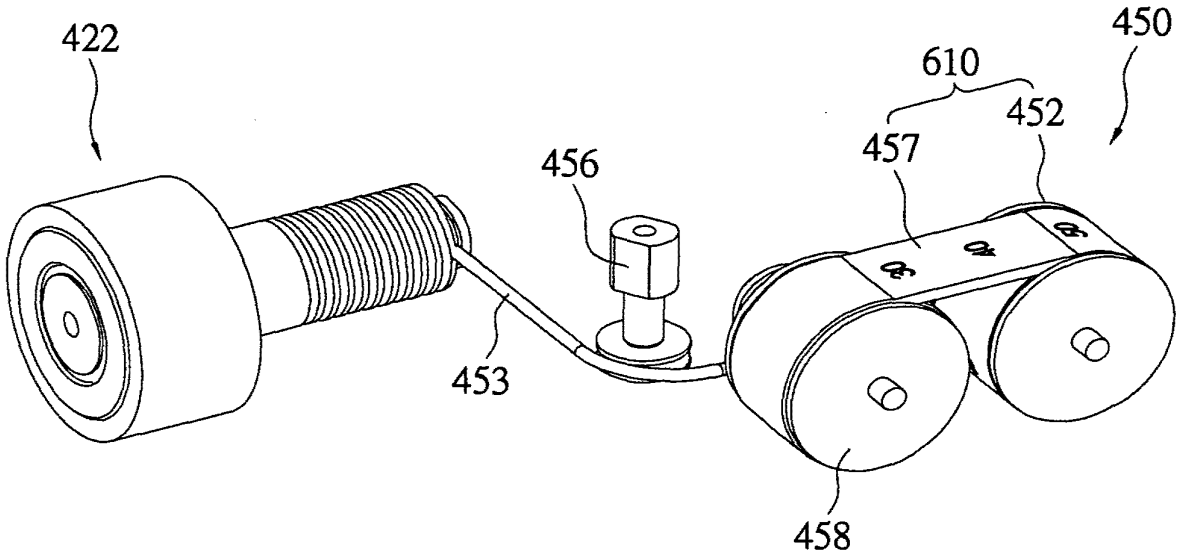


圖6

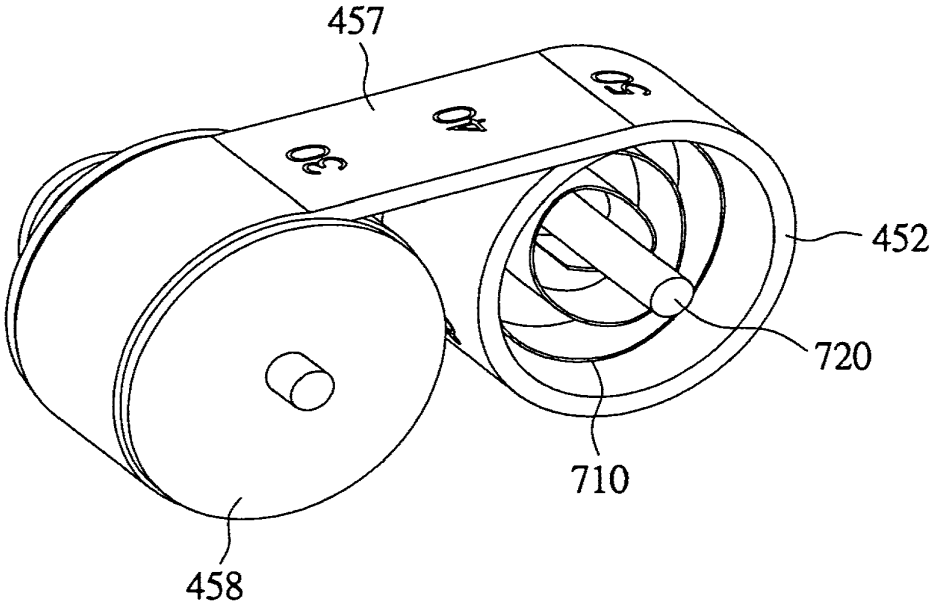


圖7

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CN 102689853 A,2012.09.26,

审查员 王慧军

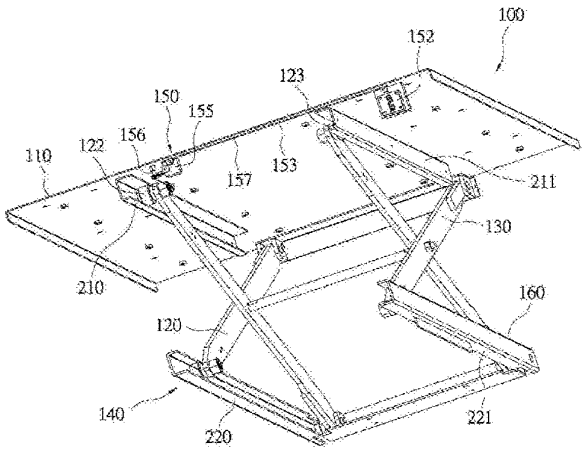
权利要求书2页 说明书6页 附图6页

(54)发明名称

升降车与其高度显示机构

(57)摘要

一种升降车与其高度显示机构，其高度显示机构包括一高度指标单元、一收线器与一连动单元。高度显示机构经由连动单元与载台高度变化相关的元件连动，借此取得载台的高度信息以于载台的高度显示窗口中显示高度信息。高度显示机构是以机械方式实现，并且可以即时显示载台高度以提高使用的便利性。



CN 104692286 B

1.一种升降车，其特征在于，包括：

一载台，具有一高度显示窗口；

一支撑架，用以设置该载台，其中该载台的高度是由该支撑架调整，该支撑架具有一滑动件，该滑动件的位置随该载台的高度变化；以及

一高度显示机构，设置于该载台，且经由该高度显示窗口显示该载台的高度，该高度显示机构包括：

一高度指标单元，设置于该载台，并经由该高度显示窗口显示该载台的高度；

一收线器，固设于该载台；以及

一连动单元，具有一第一端与一第二端，该连动单元的该第一端连接于该收线器，该连动单元的该第二端连接于该滑动件，该连动单元随该滑动件的移动而带动该高度指标单元以显示该载台的高度。

2.如权利要求1所述的升降车，其中该高度显示机构还包括：

一滑轮组，设置于该连动单元侧边，用以改变该连动单元的传动方向；以及

一滑轮，设置该连动单元侧边，用以改变该连动单元的传动方向；

其中，该滑轮组与该滑轮设置于该收线器与该滑动件之间。

3.如权利要求1所述的升降车，其中该高度指标单元包括：

一高度指标尺，设置于该载台的一上表面；以及

一指标件，连接于该连动单元上，随该连动单元移动。

4.如权利要求1所述的升降车，其中该收线器具有一扭簧，提供一弹性力以卷绕该连动单元。

5.如权利要求1所述的升降车，其中该支撑架包括：

一座体；

一滑动轨道，设置于该载台下方，用以设置该滑动件；

一第一侧支架，设置于该座体与该载台之间；以及

一第二侧支架，设置于该座体与该载台之间；

其中，该滑动件枢设于该第一侧支架的一端并于该滑动轨道上滑动。

6.如权利要求1所述的升降车，其中该高度显示机构还包括：

一滑轮，设置该连动单元侧边，用以改变该连动单元的传动方向；

其中，该滑轮设置于该收线器与该滑动件之间。

7.如权利要求1所述的升降车，其中该高度指标单元包括：

一连动收线器，与该收线器相互连动；以及

一指标带，卷绕于该连动收线器与该收线器上；

其中，该连动单元带动该收线器，使该收线器与该连动收线器传动该指标带。

8.一种高度显示机构，设置于一升降车上，该升降车包括一载台与设置于该载台的一支撑架，该载台具有一高度显示窗口且该载台的高度是由该支撑架调整，该支撑架具有一滑动件，该滑动件的位置随该载台的高度变化，其特征在于，该高度显示机构包括：

一高度指标单元，设置于该载台，并经由该高度显示窗口显示该载台的高度；

一收线器，固设于该载台；以及

一连动单元，具有一第一端与一第二端，该连动单元的该第一端连接于该收线器，该连

动单元的该第二端连接于该滑动件，该连动单元随该滑动件的移动而带动该高度指标单元以显示该载台的高度。

9.如权利要求8所述的高度显示机构，其中该高度显示机构还包括：

一滑轮组，设置于该连动单元侧边，用以改变该连动单元的传动方向；以及

一滑轮，设置该连动单元侧边，用以改变该连动单元的传动方向；

其中，该滑轮组与该滑轮设置于该收线器与该滑动件之间。

10.如权利要求8所述的高度显示机构，其中该高度指标单元包括：

一高度指标尺，设置于该载台的一上表面；以及

一指标件，连接于该连动单元上，随该连动单元移动。

11.如权利要求8所述的高度显示机构，其中该收线器具有一扭簧，提供一弹性力以卷绕该连动单元。

12.如权利要求8所述的高度显示机构，其中该高度显示机构还包括：

一滑轮，设置该连动单元侧边，用以改变该连动单元的传动方向；

其中，该滑轮设置于该收线器与该滑动件之间。

13.如权利要求8所述的高度显示机构，其中该高度指标单元包括：

一连动收线器，与该收线器相互连动；以及

一指标带，卷绕于该连动收线器与该收线器上；

其中，该连动单元带动该收线器，使该收线器与该连动收线器传动该指标带。

升降车与其高度显示机构

技术领域

[0001] 本发明涉及一种升降车，尤其涉及一种可显示载台高度的升降车与其高度显示机构。

背景技术

[0002] 升降车具有可调整高度的载台，其经常使用的支撑架结构为X型支撑架，使用者可以依据工作需求调整支撑架以改变其桌面高度，但是使用者往往无法直接获得其桌面的正确高度。

[0003] 当使用者需要得知载台高度时，使用者需要通过手动方式，利用例如卷尺、红外线测距仪或激光测距仪等测量工具来手动测量载台高度，但是这样的测量方式相当不方便，也无法即时取得高度以进行载台高度调整。

发明内容

[0004] 本发明提供一种具有载台高度显示功能的升降车，其具有高度显示机构，以机械连动的方式，达到即时显示载台高度信息的效果。

[0005] 本发明提供一种升降车，包括一载台、一支撑架与一高度显示机构。该载台具有一高度显示窗口，支撑架用以设置该载台，其中该载台的高度是由该支撑架调整，该支撑架具有一滑动件，该滑动件的位置随该载台的高度变化。高度显示机构设置于该载台，且经由该高度显示窗口显示该载台的高度。高度显示机构包括一高度指标单元、一收线器与一连动单元。高度指标单元设置于该载台，并经由该高度显示窗口显示该载台的高度。收线器固设于该载台，而连动单元具有一第一端与一第二端，连动单元的该第一端连接于该收线器，连动单元的该第二端连接于该滑动件，该连动单元随该滑动件的移动而带动该高度指标单元以显示该载台的高度。

[0006] 在本发明一实施例中，上述该高度显示机构还包括一滑轮组与一滑轮。滑轮组设置于该连动单元侧边，用以改变该连动单元的传动方向。滑轮设置于该连动单元侧边，用以改变该连动单元的传动方向，其中，该滑轮组与该滑轮设置于该收线器与该滑动件之间。

[0007] 在本发明一实施例中，该高度指标单元包括一高度指标尺与一指标件。高度指标尺设置于该载台的一上表面，而指标件连接于该连动单元上，随该连动单元移动。

[0008] 在本发明一实施例中，上述支撑架包括一座体、一滑动轨道、一第一侧支架与一第二侧支架。滑动轨道设置于该载台下方，用以设置该滑动件。第一侧支架设置于该座体与该载台之间。第二侧支架设置于该座体与该载台之间，其中该滑动件枢设于该第一侧支架的一端并于该滑动轨道上滑动。

[0009] 在本发明另一实施例中，高度指标单元包括一连动收线器与一指标带。连动收线器与该收线器相互连动，而指标带卷绕于该连动收线器与该收线器上，其中该连动单元带动该收线器，使该收线器与该连动收线器传动该指标带。

[0010] 从另一观点来看，本发明另提出一种适用于升降车的高度显示机构，其可设置于

一升降车上，通过机构与升降车的载台连动以取得载台的高度信息并即时显示于载台的高度显示窗口。高度显示机构包括一高度指标单元、一收线器与一连动单元。高度指标单元设置于该载台，并经由该高度显示窗口显示该载台的高度。收线器固设于该载台，而连动单元具有一第一端与一第二端，连动单元的该第一端连接于该收线器，连动单元的该第二端连接于该滑动件，该连动单元随该滑动件的移动而带动该高度指标单元以显示该载台的高度。

[0011] 综上所述，本发明的升降车与其高度显示机构是通过机械方式与载台连动，借此取得载台的高度信息并且达到即时显示的功效。高度显示机构是以机械结构方式实现，没有耗电的问题，使用者也不需另外使用测量工具进行高度测量，相当具有实用价值。

[0012] 为让本发明之上述特征和优点能更明显易懂，下文特举较佳实施例，并配合所附附图，作详细说明如下。

附图说明

[0013] 图1绘示本发明第一实施例的升降车的主要结构示意图。

[0014] 图2绘示本发明第一实施例的升降车的主要结构示意图。

[0015] 图3绘示本发明第一实施例的高度显示机构150的结构图。

[0016] 图4绘示本发明第二实施例的升降车的主要结构示意图。

[0017] 图5绘示本发明第二实施例的升降车的主要结构示意图。

[0018] 图6绘示本发明第二实施例的高度显示机构450的结构图。

[0019] 图7绘示本发明第二实施例的收线器458与连动收线器452的结构图。

[0020] 其中，附图标记说明如下：

[0021] 升降车100

[0022] 载台110

[0023] 第一侧支架120

[0024] 滑动件122、123

[0025] 第二侧支架130

[0026] 支撑架140

[0027] 高度显示机构150

[0028] 高度显示窗口151

[0029] 收线器152

[0030] 连动单元153

[0031] 高度指标尺154

[0032] 滑轮组155

[0033] 滑轮156

[0034] 指标件157

[0035] 座体160

[0036] 滑动轨道210、211、220、221

[0037] 滑轮302

[0038] 高度指标单元310

[0039] 连接杆320

[0040] 升降车400

[0041] 滑动轨道405

[0042] 载台410

[0043] 第一侧支架420

[0044] 滑动件422

[0045] 第二侧支架430

[0046] 支撑架440

[0047] 高度显示机构450

[0048] 高度显示窗口451

[0049] 连动收线器452

[0050] 连动单元453

[0051] 滑轮456

[0052] 指标带457

[0053] 收线器458

[0054] 座体460

[0055] 高度指标单元610

[0056] 扭簧710

[0057] 轴杆720

具体实施方式

[0058] 在下文中，将通过附图说明本发明的实施例来详细描述本发明，而附图中的相同参考数字可用以表示类似的元件。有关本发明的前述及其他技术内容、特点与功效，在以下配合参考附图的各实施例的详细说明中，将可清楚的呈现。以下实施例中所提到的方向用语，例如：“上”、“下”、“前”、“后”、“左”、“右”等，仅是参考附图的方向。因此，使用的方向用语是用来说明，而并非用来限制本发明。并且，在下列各实施例中，采用相同的标号来表示相同或近似的元件。

[0059] [第一实施例]

[0060] 图1绘示本发明第一实施例的升降车的主要结构示意图。升降车100包括支撑架140、载台110与高度显示机构150，载台110上设置有高度显示窗口151，高度显示机构150设置在载台110下方，并且可通过高度显示窗口151显示目前的载台110高度。高度显示窗口151可以为一开口或是透明的显示窗口，如玻璃或塑胶所构成的盖体，本实施例不限制其高度显示窗口151的材质与结构。高度显示窗口151可以设置于载台110的上表面以提供使用者看到。高度显示机构150可选择性的设置于载台110下方或侧边或支撑架140上等位置，本实施例不限制高度显示机构150的设置位置。

[0061] 本实施例图1仅以升降车100的主体结构说明，但升降车100依照需求可以设置轮子、推把、油压升降装置、脚踏板升降机构等装置(未绘示)，本实施例不限定高度显示机构150所适用的升降车类型。

[0062] 请参照图1与图2，图2绘示本发明第一实施例的升降车的主要结构示意图。支撑架

140主要包括座体160、第一侧支架120、第二侧支架130与滑动轨道210、211、220、221等结构。第一侧支架120与第二侧支架130为X型支架，其两端分别枢设于载台110与座体160。滑动轨道210、211分别设置在载台110下方两侧，滑动轨道220、221分别设置在座体160上。支撑架140具有滑动件122、123以连接两个侧支架120、130与载台110。滑动件122的一端枢设于第一侧支架120，另一端则可滑动的设置于滑动轨道220。滑动件123的一端枢设于第二侧支架130，另一端则可滑动的设置于滑动轨道211。

[0063] 载台110的高度可以经由调整第一侧支架120与第二侧支架130的开合角度来调整，而滑动件122、123会随着载台110的高度调整在滑动轨道220、221滑动而产生相对应的位移。也就是说，滑动件122、123的位置是会随着载台110的高度而变的。滑动件122的位移量与载台110的高度变化量可以由第一侧支架120的长度与支架交叉角度，经由三角函数计算而得。值得注意的是，不同的X型支架结构，其滑动件122的位移量与载台110的高度变化量之间的关系也会有所不同。经由上述说明，本领域普通技术人员应当可以经由图1与图2轻易推知其升降车100的载台110的高度调整结构原理，在此不再赘述。

[0064] 请同时参照图3，图3绘示本发明第一实施例的高度显示机构150的结构图。高度显示机构150为一机械式结构，利用载台110高度与滑动件122位移量之间的关系，以机构连动的方式来取得显示载台110的高度。高度显示机构150可以经由高度显示窗口151显示载台110的高度，让使用者可以即时得知载台110的高度。高度显示机构150包括高度指标单元310、收线器152、连动单元153、滑轮组155、滑轮156，其中高度指标单元310包括高度指标尺154与指标件157。收线器152固设于载台110的下方，用来回收连动单元153。连动单元153的一端(第一端)连接于收线器152，另一端(第二端)连接于滑动件122。滑轮组155与滑轮156固设于载台110的下方并且位于连动单元153侧边，用以改变连动单元153的传动方向。高度指标尺154具有高度指标并设置于载台110的上表面，指标件157则设置在连动单元153，随着连动单元153的收放而移动。

[0065] 滑动件122由一滑轮302与一连接杆320所构成，滑轮302位于滑动轨道210上，第一侧支架120枢接至连接杆320。由于滑动件122的位置与载台110的高度相关，所以当载台110的高度被调整时，滑动件122会随之位移，借此拉动连动单元153以造成指标件157的位移。换言之，指标件157的位移会与载台110的高度相关。此一相关关系可以预先计算以标记于高度指标尺154上，借此显示目前的载台110的高度，如图3所示。使用者可以通过高度显示窗口151观察指标件157所指示的位置与高度指标尺154上的标示即时得知载台110的高度。

[0066] 高度指标尺154上的高度标示需要依照不同的第一侧支架120与第二侧支架130的构造而变，其高度标示是由滑动件122的位移量与载台110高度变化量之间的关系而定，本领域普通技术人员应可由上述实施例的说明中推知，在此不再赘述。指标件157设置于连动单元153上，其结构或形状可以依照设计需求而定，本实施例不限制。

[0067] 收线器152的内部具有绳索回收机构，例如扭簧等结构，可以提供绳索回收的驱动力。当连动单元153被滑动件122拉出时，驱动力会累积于收线器152内，当滑动件122反向滑动时(载台110的高度下降时)，收线器152会自动回收连动单元153。收线器152的结构可以有多种实施方式，例如吊挂一重物于绳索的另一端或是使用弹簧连接于绳索另一端等皆可实现收线器152的功能，本实施例仅以扭簧式的收线器说明，但本实施例不限制收线器152的实现方式。

[0068] 滑轮组155与滑轮156主要是用来改变连动单元153的传动方向，让连动单元153可以连接至滑动件122。滑轮组155与滑轮156的数量与设置位置可以依照不同的升降车100结构而定或使用不同的滑轮结构实现，例如仅使用滑轮156或是仅使用滑轮组155，或是以一轴杆来取代滑轮组155与滑轮156。

[0069] 上述高度显示机构150利用机械结构来达到载台110高度检测与显示，使用者不需另外使用高度测量装置即可即时取得载台110的高度信息，相当便利。

[0070] [第二实施例]

[0071] 请参照图4，图4绘示本发明第二实施例的升降车的主要结构示意图。图4与图1实施例都是利用机械结构来实现载台高度显示功能，其主要差异在于高度显示机构450的构造不同。请同时参照图5与图6，图5绘示本发明第二实施例的升降车的主要结构示意图。图6绘示本发明第二实施例的高度显示机构450的结构图。

[0072] 升降车400包括支撑架440、载台410与高度显示机构450。载台410上设置有高度显示窗口451，而高度显示机构450设置在载台410下方，并且可通过高度显示窗口451显示目前的载台410高度。支撑架440包括第一侧支架420、第二侧支架430、座体460与滑动轨道405等机构，其架构与上述第一实施例的支撑架140相同，在此不加赘述。载台410上具有高度显示窗口451，可以即时显示载台110的高度。

[0073] 高度显示机构450为一机械式结构，其包括收线器458、连动收线器452、指标带457、连动单元453与滑轮456。连动收线器452与指标带457构成高度指标单元610，其中指标带457上具有高度标示，并卷绕在收线器458与连动收线器452上。连动单元453的一端连接于收线器458，另一端则连接于滑动件422。滑动件422的移动会经由连动单元453带动收线器458转动，并且使得连动收线器452一并转动。卷绕在收线器458与连动收线器452上之指标带457也会一并被带动。由于滑动件422的位置与载台410的高度相关，所以指标带457的转动量也会与载台410的高度相关，借此即可取得载台410的高度并且通过高度显示窗口451显示。

[0074] 指标带457上的高度标示可以预先测量载台410的高度与指标带457的转动量之间的相对关系后订定，不同的升降车结构，其高度标示的间隔不同。同理，上述第一实施例中的高度指标尺154也具有相同的特性。指标带457可以说是将一个高度指标尺直接缠绕在收线器458与连动收线器452上，使其随着滑动件422转动，借此取得载台410的高度信息。

[0075] 请参照图7，图7绘示本发明第二实施例的收线器458与连动收线器452的结构图。连动收线器452包括轴杆720与设置其内部的扭簧710组成，其连动收线器452的外壳则可作为卷绕指标带457的滚筒使用。收线器458与连动收线器452的结构相似，不再赘述。连动单元453被滑动件422向外拉动时，收线器458会被连动单元453拉动并且累积驱动力于内部的扭簧(未绘示)上。收线器458的转动会通过指标带457传动连动收线器452，并且使连动收线器452累积驱动力。此时，指标带457会随之改变卷绕的长度以改变显示于高度显示窗口451的高度指标。

[0076] 当滑动件422反向移动时(载台410高度下降)，收线器458会回收连动单元453，而连动收线器452也会转动以回收指标带457，借此调整所显示的高度指标。

[0077] 收线器458与连动收线器452可以利用不同的结构实现绳索回收功能，例如以弹簧提供驱动力等，本实施例并不限制其实现方式。

[0078] 上述第一与第二实施例中的滑动件122、422是以设置于滑动轨道210、410中的滑轮为例说明，但本发明也可以采用支撑架140、440的其他元件取代。举例来说，连动单元153、453也可以连接至X型支架下方设置于座体160上的滑动件，或者将连动单元153、453连接至X型支架靠近滑动件122、422的端部上。由于X型支架的一端也会随着载台110、410的高度而产生移动，因此也可以取代滑动件122、422来拉动连动单元153、453。连动单元153、453则可以使用绳索实现以使高度显示机构150、450与载台110、410的高度连动。经由上述实施例的说明，本领域普通技术人员应当可以轻易推知其他实施结构细节，在此不再赘述。

[0079] 综上所述，本发明的升降车具有机构式的高度显示机构，可以即时显示载台的高度，实现自动化载台高度信息显示的问题，提高了升降车的使用方便与实用性。

[0080] 虽然本发明的实施例已公开如上，然本发明并不受限于上述实施例，任何本领域普通技术人员，在不脱离本发明所公开的范围内，当可作些许更动与调整，因此本发明的保护范围应当以后附的权利要求的范围为准。

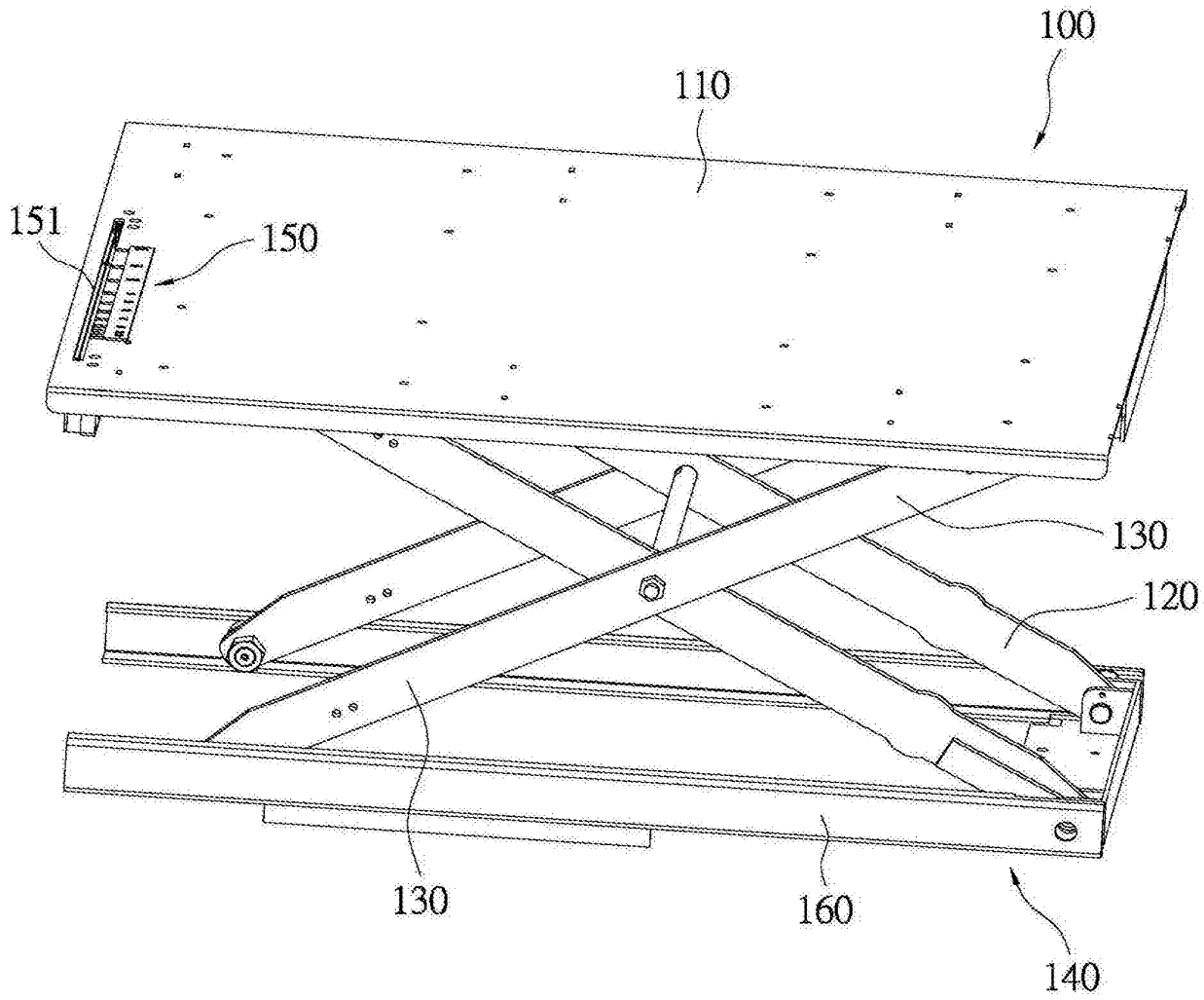


图1

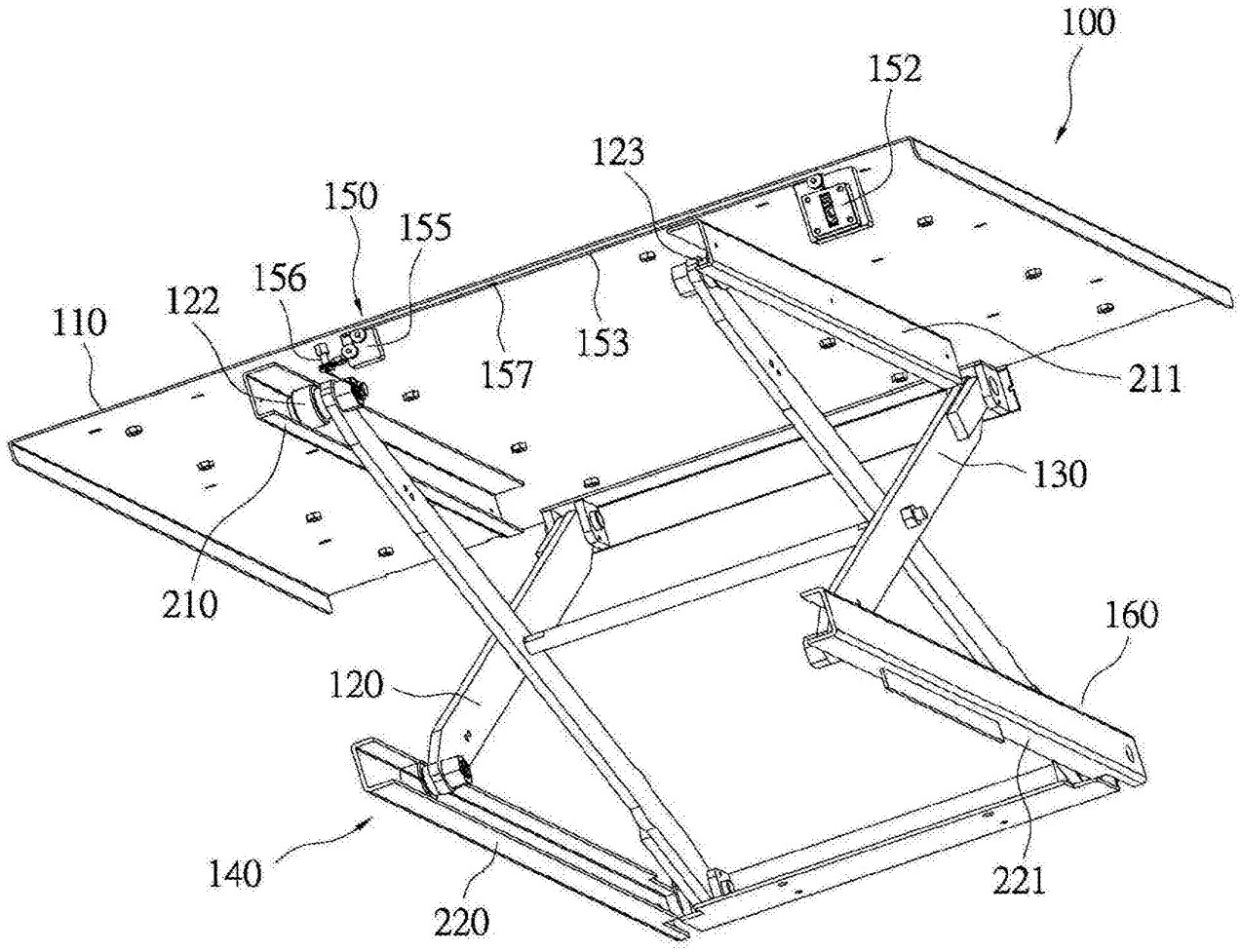

100
152
123
150
155
156
122
110
157
153
211
130
210
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120
140
221
220

图2

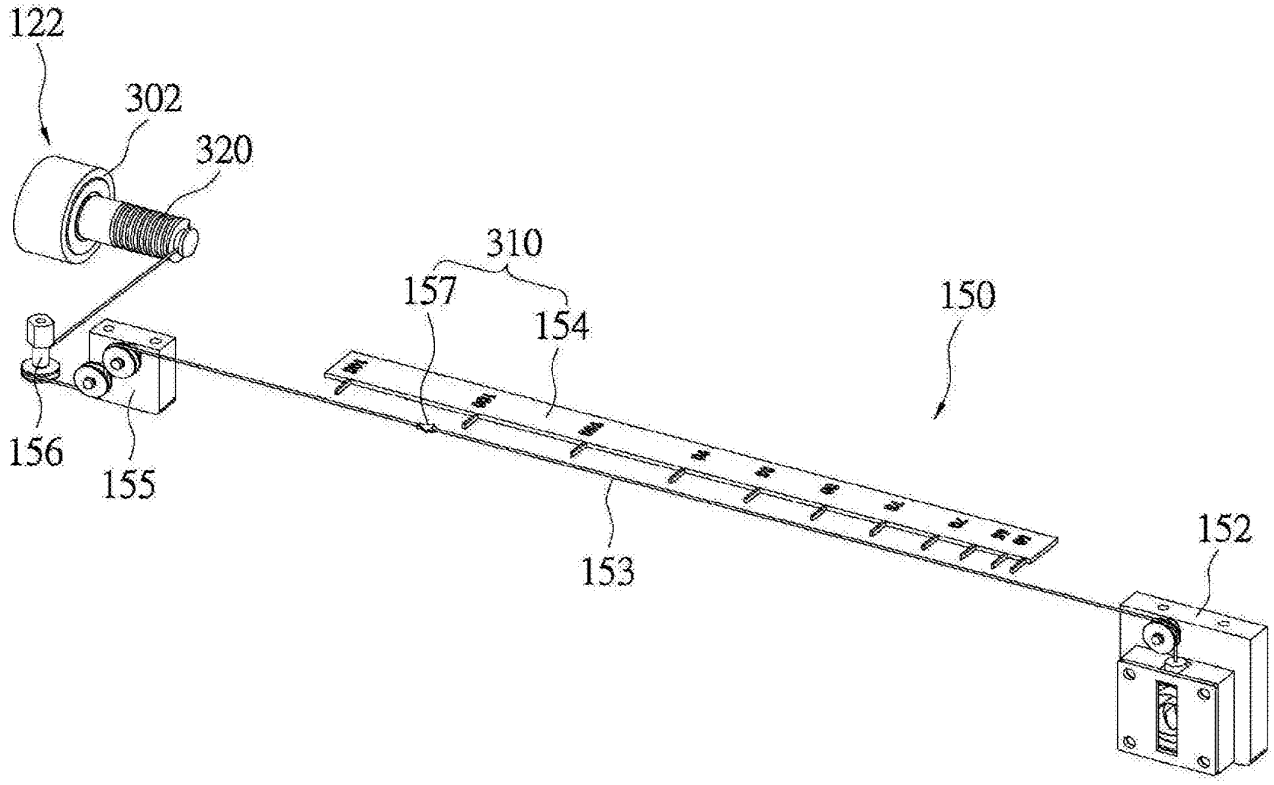


图3

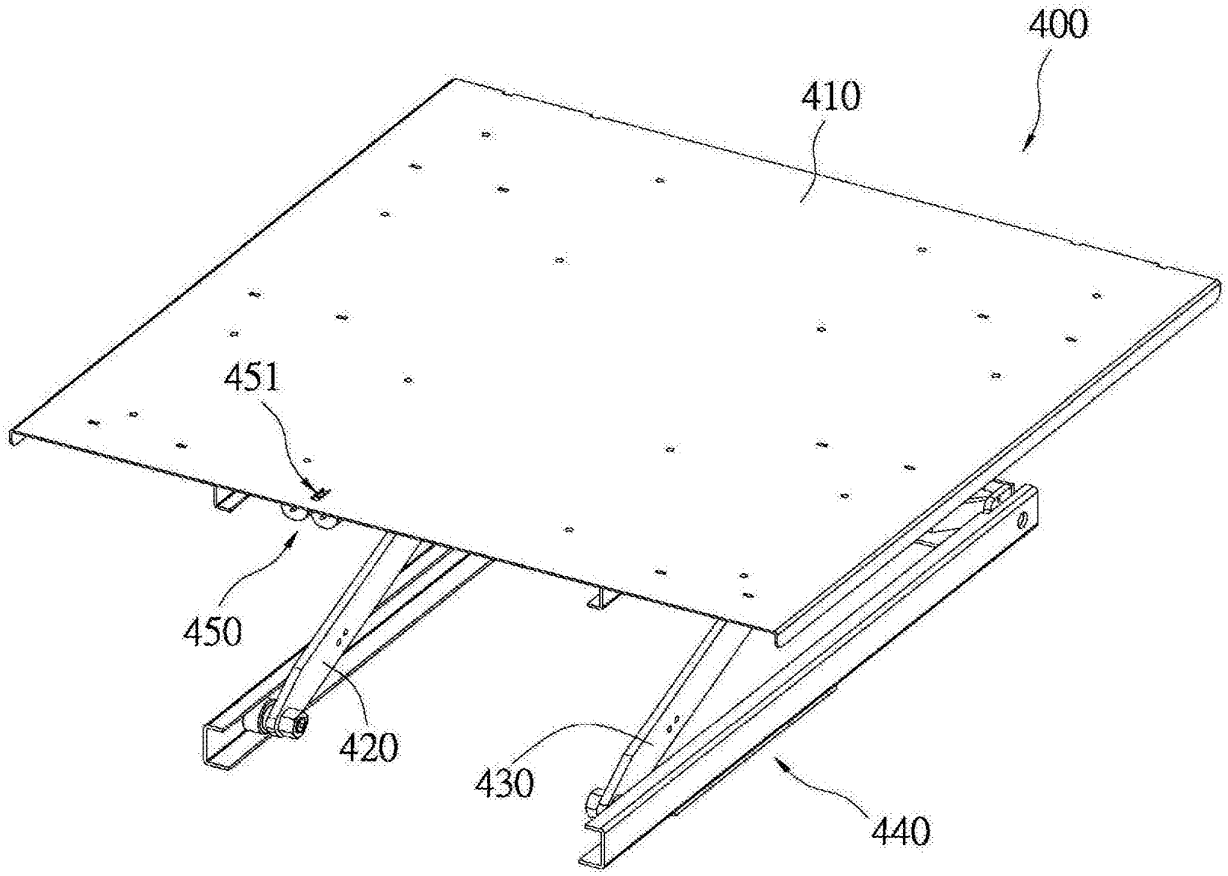


图4

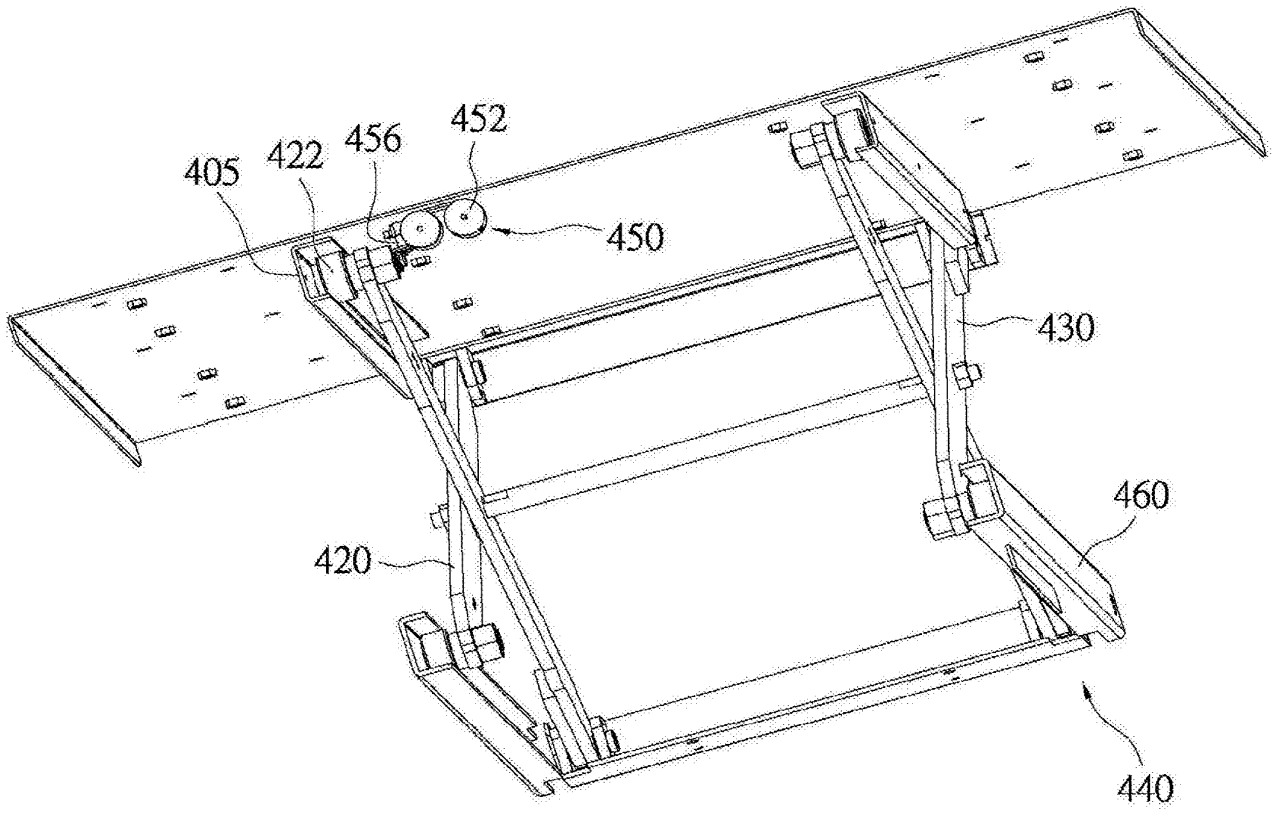

405
422
456
452
450
430
460
420
440

图5

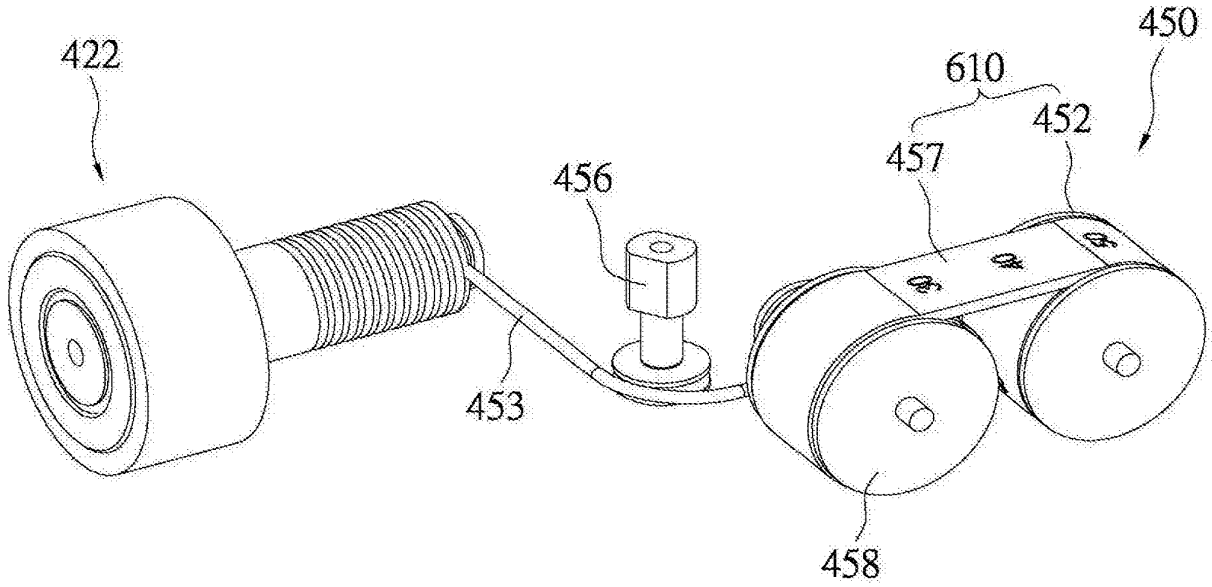

422
450
610
452
457
456
453
458

图6

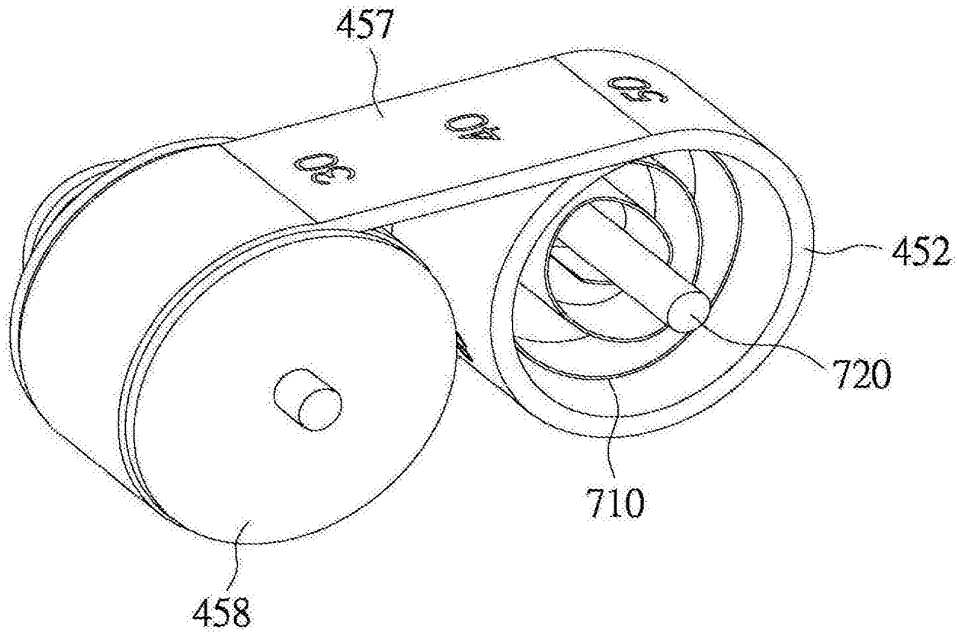


图7

PTO/SB/08a (01-22)
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(Not for submission under 37 CFR 1.99)

Application Number	17493830
Filing Date	2021-10-04
First Named Inventor	Nathan Mark Poniatowski
Art Unit	3637
Examiner Name	Janet Marie WILKENS
Attorney Docket Number	1001-001US13

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	1	D832623	S1	2018-11-06	Flaherty et al.	
	2	3727245	A	1973-04-17	Gerth	
	3	4097941	A	1978-07-04	Merkel	
	4	4249749	A	1981-02-10	Collier	
	5	4382573	A	1983-05-10	Aondetto	
	6	4534544	A	1985-08-13	Heide	
	7	4558847	A	1985-12-17	Coates	
	8	4611823	A	1986-09-16	Haas	

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	Attorney Docket Number	1001-001US13

	9	5074000	A	1991-12-24	Soltani et al.	
	10	5580027	A	1996-12-03	Brodersen	
	11	6550740	B1	2003-04-22	Burer	
	12	7568675	B2	2009-08-04	Catton	
	13	7988232	B2	2011-08-02	Weber et al.	
	14	8800976	B2	2014-08-12	Bethina et al.	
	15	9133976	B2	2015-09-15	Lin et al.	
	16	9440559	B2	2016-09-13	Gundall et al.	
	17	9961991	B1	2018-05-08	Chen	

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	1	20070295882	A1	2007-12-27	Catton	
	2	20100257671	A1	2010-10-14	Shimada et al.	
	3	20120060291	A1	2012-03-15	Gamman et al.	
	4	20130340655	A1	2013-12-26	Flaherty	
	5	20140339747	A1	2014-11-20	Bethina et al.	
	6	20140360411	A1	2014-12-11	Hatter	
	7	20150231992	A1	2015-08-20	Gundall et al.	
	8	20180160799	A1	2018-06-14	Westergård et al.	

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	1	2014216002	AU	A1	2015-03-19	Flaherty et al.		

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	2	5691386	AU	A	1986-11-05	Elkuch et al.		
	3	580874	AU	B2	1989-02-02	Johansson		
	4	2814945	CA	C	2019-04-30	Flaherty et al.		
	5	101711220	CN	B	2013-11-20	Shimada et al.		☒
	6	103653780	CN	A	2014-03-26	Flaherty et al.		☒
	7	104540707	CN	B	2017-05-03	Gundall et al.		☒
	8	104692286	CN	B	2017-04-12	Lin et al.		☒
	9	108024625	CN	B	2021-08-03	Swartz et al.		☒
	10	204541230	CN	U	2015-08-12	黄发水		☒
	11	204949970	CN	U	2016-01-13	项乐宏 et al.		☒
	12	69111809	DE	T2	1996-04-18	Lindahl		☒

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	13	0342779	EP	B1	1993-05-12	Brodersen et al.		☐
	14	0448340	EP	B1	1996-02-21	Brodersen et al.		☐
	15	2252835	FR	A1	1975-06-27	BENMOURA PIERRE		☒
	16	101747132	KR	B1	2017-06-27	김진태 et al.		☒
	17	2000346	NL	C2	2008-05-29	Duiven		☒
	18	1531523	TW	B	2016-05-01	林傳凱 et al.		☒
	19	1986006054	WO	A1	1986-10-23	Johansson		☐
	20	1988005759	WO	A1	1988-08-11	Johansson		☐
	21	1991011979	WO	A1	1991-08-22	MÄKELÄINEN et al.		☐
	22	2008002373	WO	A2	2008-01-03	Catton		☐
	23	2014027010	WO	A1	2014-02-20	Gundall et al.		☒

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	24	2015160825	WO	A2	2015-10-22	Ergun et al.		☐
	25	2016129971	WO	A1	2016-08-18	Kim et al.		☒
	26	2016187212	WO	A1	2016-11-24	MARTIN		☐
	27	2016200318	WO	A1	2016-12-15	Freedesk et al.		☐
	28	2017053200	WO	A1	2017-03-30	SWARTZ et al.		☐
	29	3606053	WO	A1	1986-10-23	Elkuch et al.		☒

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Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	Attorney Docket Number	1001-001US13

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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	Examiner Name	Janet Marie WILKENS
	Attorney Docket Number	1001-001US13

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Daniel T. Lund/	Date (YYYY-MM-DD)	2023-04-23
Name/Print	Daniel T. Lund	Registration Number	58614

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

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Doc Code: A.NE.AFCP
Document Description: After Final Consideration Pilot Program Request

PTO/SB/434 (05-13)

CERTIFICATION AND REQUEST FOR CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0

Practitioner Docket No.:	Application No.:	Filing Date:
1001-001US13	17493830	October 4, 2021
First Named Inventor:	**Title:**	
Nathan Poniatowski	DESKTOP WORKSPACE THAT ADJUSTS VERTICALLY	

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS CONSIDERATION UNDER THE AFTER FINAL CONSIDERATION PILOT PROGRAM 2.0 (AFCP 2.0) OF THE ACCOMPANYING RESPONSE UNDER 37 CFR 1.116.

1. The above-identified application is (i) an original utility, plant, or design nonprovisional application filed under 35 U.S.C. 111(a) [a continuing application (*e.g.*, a continuation or divisional application) is filed under 35 U.S.C. 111(a) and is eligible under (i)], or (ii) an international application that has entered the national stage in compliance with 35 U.S.C. 371(c).
2. The above-identified application contains an outstanding final rejection.
3. Submitted herewith is a response under 37 CFR 1.116 to the outstanding final rejection. The response includes an amendment to at least one independent claim, and the amendment does not broaden the scope of the independent claim in any aspect.
4. This certification and request for consideration under AFCP 2.0 is the only AFCP 2.0 certification and request filed in response to the outstanding final rejection.
5. Applicant is willing and available to participate in any interview requested by the examiner concerning the present response.
6. This certification and request is being filed electronically using the Office's electronic filing system (EFS-Web).
7. Any fees that would be necessary consistent with current practice concerning responses after final rejection under 37 CFR 1.116, *e.g.*, extension of time fees, are being concurrently filed herewith. [There is no additional fee required to request consideration under AFCP 2.0.]
8. By filing this certification and request, applicant acknowledges the following:
    - Reissue applications and reexamination proceedings are not eligible to participate in AFCP 2.0.
    - The examiner will verify that the AFCP 2.0 submission is compliant, *i.e.*, that the requirements of the program have been met (see items 1 to 7 above). For compliant submissions:
        - The examiner will review the response under 37 CFR 1.116 to determine if additional search and/or consideration (i) is necessitated by the amendment and (ii) could be completed within the time allotted under AFCP 2.0. If additional search and/or consideration is required but cannot be completed within the allotted time, the examiner will process the submission consistent with current practice concerning responses after final rejection under 37 CFR 1.116, *e.g.*, by mailing an advisory action.
        - If the examiner determines that the amendment does not necessitate additional search and/or consideration, or if the examiner determines that additional search and/or consideration is required and could be completed within the allotted time, then the examiner will consider whether the amendment places the application in condition for allowance (after completing the additional search and/or consideration, if required). If the examiner determines that the amendment does not place the application in condition for allowance, then the examiner will contact the applicant and request an interview.
            - The interview will be conducted by the examiner, and if the examiner does not have negotiation authority, a primary examiner and/or supervisory patent examiner will also participate.
            - If the applicant declines the interview, or if the interview cannot be scheduled within ten (10) calendar days from the date that the examiner first contacts the applicant, then the examiner will proceed consistent with current practice concerning responses after final rejection under 37 CFR 1.116.

Signature	Date
/Daniel T. Lund/	May 1, 2023
Name (Print/Typed)	**Practitioner Registration No.**
Daniel T. Lund	58614

***Note**: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below*.*

☑ * Total of 1 forms are submitted.

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

REMARKS

Claims 2–4, 7–19, 21, 23–30, and 32–33 are pending, with claims 11, 16, 21, and 26 being independent. Claims 2–4, 7–9, 12–13, 15–17, 21, and 32 are amended. Claims 1, 5–6, 20, 22, and 31 are canceled. Claim 33 is new. Applicant respectfully requests allowance of the currently pending claims for the following reasons:

Allowable Subject Matter

The Office Action indicates that independent claim 11 and its dependent claims 10, 14 and independent claim 26 and its dependent claims 25 and 28 are allowed. The Office Action further indicates that dependent claims 21, 22 and 31 recite allowable subject matter.

Independent claims 11 and 26 and the claims dependent thereon remain in condition for allowance for at least the reasons set forth by the Office Action.

In addition, independent claim 16 has been amended to include the elements of allowable claim 22. Accordingly, independent claim 16 as amended and the claims dependent thereon is in condition for allowance for at least the reasons set forth by the Office Action.

Likewise, independent claim 21 has been amended to independent form. Accordingly, independent claim 21 as amended is in condition for allowance for at least the reasons set forth by the Office Action.

In this manner, each of the prior art rejections presented by Office Action are now moot, and all pending claims are in condition for allowance.

New Claim

New claim 33 is dependent on independent claim 16 and is in condition for allowance for at least the reasons independent claim 16 is in condition for allowance. For example, support from new claim 33 comes from at least paragraph [0039] of Applicant's specification as filed.

CONCLUSION

All claims in this application are in condition for allowance. Applicant does not acquiesce to any statements presented by the Office Action unless expressly acknowledged herein. Applicant respectfully requests reconsideration and prompt allowance of all pending claims.

In the event that all pending claims are not found allowable, Applicant requests the Examiner telephone the below-signed representative to discuss this application and expedite prosecution.

Date: May 1, 2023

By:
/Daniel T. Lund/
Daniel T. Lund, Reg. No. 58,614
Lund IP PLLC
Tel.: 651.968.0800
Customer No.: 155431

Electronic Patent Application Fee Transmittal

Application Number:	17493830
Filing Date:	04-Oct-2021
Title of Invention:	DESKTOP WORKSPACE THAT ADJUSTS VERTICALLY
First Named Inventor/Applicant Name:	Nathan Mark Poniatowski
Filer:	Daniel Thomas Lund
Attorney Docket Number:	1001-001US13

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
INDEPENDENT CLAIMS IN EXCESS OF 3	2201	1	192	192
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**192**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

App. No.:	17/493,830	Examiner:	WILKENS, Janet Marie
Filed:	October 4, 2021	Group Art Unit:	3637
Inventor:	Nathan Poniatowski	Confirmation No.	4682
Title:	DESKTOP WORKSPACE THAT ADJUSTS VERTICALLY	Customer No.:	155431
		Docket No.:	1001-001US13

Mail Stop AF
Commissioner for Patents
PO Box 1450
Alexandria, VA 2313-1450

I HEREBY CERTIFY THAT THIS CORRESPONDENCE, ALONG WITH ANY REFERRED TO AS BEING ATTACHED OR ENCLOSED, IS BEING TRANSMITTED VIA EFS-WEB TO THE USPTO ON MAY 1, 2023.
/DANIEL T. LUND/, REG. NO. 58,614

AMENDMENT

Dear Commissioner:

This submission is responsive to the Office Action dated February 1, 2023.

Amendments to the Claims begin on page 2 of this paper.

Remarks begin on page 9 of this paper.

The Commissioner is authorized to charge any fees due to Deposit Account No. 60-2335.

Electronic Acknowledgement Receipt

EFS ID:	47934856
Application Number:	17493830
International Application Number:	
Confirmation Number:	4682
Title of Invention:	DESKTOP WORKSPACE THAT ADJUSTS VERTICALLY
First Named Inventor/Applicant Name:	Nathan Mark Poniatowski
Customer Number:	155431
Filer:	Daniel Thomas Lund
Filer Authorized By:	
Attorney Docket Number:	1001-001US13
Receipt Date:	02-MAY-2023
Filing Date:	04-OCT-2021
Time Stamp:	00:55:27
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$192
RAM confirmation Number	E202352155545001
Deposit Account	602335
Authorized User	Daniel Lund

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	After Final Consideration Program Request	sb0434.pdf	226487 e71b4fa48905c9441463071bdfb43f6419837e8f	no	2
Warnings:					
Information:					
2		Amendment.pdf	181057 5f19ac8272d343335eb3b75a903b8ebf4d87c7fe	yes	10

Multipart Description/PDF files in .zip description

Document Description	Start	End
Response After Final Action	1	1
Claims	2	8
Applicant Arguments/Remarks Made in an Amendment	9	10

Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	37934 dc50a5661efbf040beebdfa793ee6f13d6dca005	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	445478		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (09-11)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 17/493,830	Filing Date 10/04/2021	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $240 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	05/02/2023	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 28	Minus	** 30	= 0		x $40 =	0
	Independent (37 CFR 1.16(h))	* 5	Minus	*** 4	= 1		x $192 =	192
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	192

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/NICOLE C LAWRENCE/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

AMENDMENTS TO THE CLAIMS

1 (Canceled).

2 (Currently Amended): The desktop workspace of claim 11 [[1]], wherein the ~~platform~~ element further includes four legs that support the elevated platform surface above the work surface platform, each of the four legs being proximate to one of four corners of the elevated platform surface.

3 (Currently Amended): The desktop workspace of claim 11 [[1]], wherein the ~~platform~~ element includes four sides including a bottom side on the work surface platform, a top side forming the elevated platform surface and two sidewalls that support the elevated platform surface above the bottom side and the work surface platform.

4 (Currently Amended): The desktop workspace of claim 11 [[1]], further comprising a computer monitor sitting on the elevated platform surface.

5-6 (Canceled).

7 (Currently Amended): The desktop workspace of claim 11 [[1]], wherein one end of the gas spring is fixed to the work surface platform.

8 (Currently Amended): The desktop workspace of claim 11 [[1]], wherein the gas spring is attached directly to the one of the [[first]] set of pivot arms.

9 (Currently Amended): The desktop workspace of claim 11 [[1]], wherein the gas spring is attached to the scissoring pivot point.

10 (Previously Presented): The desktop workspace of claim 11, wherein the gas spring is a first spring, the desktop workspace comprising a pair of springs attached to the height adjustment mechanism to assist in the elevation of the work surface platform, the pair of springs including the first spring and a second spring.

11 (Previously Presented): A desktop workspace that adjusts vertically, comprising:

a work surface platform;

an element sitting on the work surface platform, the element including an elevated platform surface above the work surface platform;

a base configured to sit on an existing platform; and

a height adjustment mechanism connecting the work surface platform and the base, the height adjustment mechanism including:

a set of pivot arms that connect at a scissoring pivot point creating a scissoring motion when raising and lowering the work surface platform to various heights;

a base pivot point fixed relative to the base and connecting the base and the set of pivot arms;

a platform pivot point fixed relative to the work surface platform and connecting the work surface platform and the set of pivot arms;

a sliding mechanism on an end of an arm of the set of pivot arms between the end of the arm and either the work surface platform or the base; and

a gas spring that assists in elevation of the work surface platform by applying a force to one of the set of pivot arms as part of the scissoring motion,

wherein the gas spring, the set of pivot arms, the base pivot point, and the platform pivot point align side-by-side when the desktop workspace is in a fully lowered position such that the desktop workspace adjusts vertically.

12 (Currently Amended): The desktop workspace of claim 11 [[1]], wherein the sliding mechanism is a first sliding mechanism, the desktop workspace further comprising a second sliding mechanism, wherein either the first sliding mechanism or the second sliding mechanism is attached or slides along the work surface platform, and the other of the first sliding mechanism and the second sliding mechanism is attached to or slides along the base.

13 (Currently Amended): The desktop workspace of claim 11 [[1]], wherein the scissoring motion when raising and lowering the work surface platform to various heights of the height adjustment mechanism moves the work surface platform in a straight vertical direction relative to the base.

14 (Previously Presented): The desktop workspace of claim 11, wherein the gas spring acts as a locking device that holds the work surface platform at various vertical heights above the base.

15 (Currently Amended): The desktop workspace of claim 11 [[1]], wherein the sliding mechanism includes a wheel mounted on the end of the arm of the [[first]] set of pivot arms.

16 (Currently Amended): A desktop workspace that adjusts vertically, comprising:

a work surface platform;

a platform element sitting on the work surface platform, the platform element including an elevated platform surface above the work surface platform; and

a height adjustment mechanism configured raise and lower the work surface platform relative to an existing platform, the height adjustment mechanism including:

a first set of pivot arms that connect at a scissoring pivot point creating a scissoring motion when raising and lowering the work surface platform to various heights;

a second set of pivot arms;

an element that connects the first set of pivot arms to the second set of pivot arms;

bottom pivots directly locatable the existing platform;

platform pivot points fixed relative to the work surface platform and connecting the work surface platform and the first set of pivot arms;

a first sliding mechanism on an end of a first arm of the first set of pivot arms between the end of the first arm and the work surface platform;

a second sliding mechanism on an end of a second arm of the first set of pivot arms between the end of the second arm and the existing platform; and

a spring that assists in elevation of the work surface platform by applying a force to one of the first set of pivot arms as part of the scissoring motion,

wherein one end of the spring is fixed to the work surface platform.

17 (Currently Amended): The desktop workspace of claim 16, wherein the platform element further includes four legs that hold the elevated platform surface above the work surface platform, each of the four legs being proximate to one of four corners of the elevated platform surface.

18 (Previously Presented): The desktop workspace of claim 16, wherein the platform element includes four sides including a bottom side on the work surface platform, a top side forming the elevated platform surface and two sidewalls that hold the elevated platform surface above the bottom side and the work surface platform.

19 (Original): The desktop workspace of claim 16, further comprising a computer monitor sitting on the elevated platform surface.

20 (Canceled).

21 (Currently Amended): ~~The desktop workspace of claim 16~~
A desktop workspace that adjusts vertically, comprising:

a work surface platform;

a platform element sitting on the work surface platform, the platform element including an elevated platform surface above the work surface platform; and

a height adjustment mechanism configured raise and lower the work surface platform relative to an existing platform, the height adjustment mechanism including:

a first set of pivot arms that connect at a scissoring pivot point creating a scissoring motion when raising and lowering the work surface platform to various heights;

a second set of pivot arms;

an element that connects the first set of pivot arms to the second set of pivot arms;

bottom pivots directly locatable the existing platform;

platform pivot points fixed relative to the work surface platform and connecting the work surface platform and the first set of pivot arms;

a first sliding mechanism on an end of a first arm of the first set of pivot arms between the end of the first arm and the work surface platform;

a second sliding mechanism on an end of a second arm of the first set of pivot arms between the end of the second arm and the existing platform; and

a spring that assists in elevation of the work surface platform by applying a force to one of the first set of pivot arms as part of the scissoring motion,

wherein the spring extends between the work surface platform and the element that connects the first set of pivot arms to the second set of pivot arms.

22 (Canceled).

23 (Previously Presented): The desktop workspace of claim 16, wherein the spring is attached directly to the first set of pivot arms.

24 (Previously Presented): The desktop workspace of claim 16, wherein the spring is attached to the scissoring pivot point.

25 (Previously Presented): The desktop workspace of claim 26, wherein the gas spring is a first spring, the desktop workspace comprising a pair of springs attached to the height adjustment mechanism to assist in the elevation of the work surface platform, the pair of springs including the first spring and a second spring.

26 (Previously Presented): A desktop workspace that adjusts vertically, comprising:

a work surface platform;

an element sitting on the work surface platform, the element including an elevated platform surface above the work surface platform; and

a height adjustment mechanism configured raise and lower the work surface platform relative to an existing platform, the height adjustment mechanism including:

a set of pivot arms that connect at a scissoring pivot point creating a scissoring motion when raising and lowering the work surface platform to various heights;

bottom pivots directly locatable the existing platform;

platform pivot points fixed relative to the work surface platform and connecting the work surface platform and the set of pivot arms;

a first sliding mechanism on an end of a first arm of the set of pivot arms between the end of the first arm and the work surface platform;

a second sliding mechanism on an end of a second arm of the set of pivot arms between the end of the second arm and the existing platform; and

a gas spring that assists in elevation of the work surface platform by applying a force to one of the set of pivot arms as part of the scissoring motion,

wherein the gas spring, the set of pivot arms, the bottom pivots, and the platform pivot points align side-by-side when the desktop workspace is in a fully lowered position such that the desktop workspace adjusts vertically.

27 (Original): The desktop workspace of claim 16, wherein the scissoring motion when raising and lowering the work surface platform to the various heights of the height adjustment mechanism moves the work surface platform in a straight vertical direction relative to the existing platform.

28 (Previously Presented): The desktop workspace of claim 26, wherein the gas spring acts as a locking device that holds the work surface platform at various vertical heights above the existing platform.

29 (Original): The desktop workspace of claim 16, wherein the first sliding mechanism includes a wheel between the end of the first arm and the existing platform, the wheel being directly rollable on top of the existing platform.

30 (Original): The desktop workspace of claim 29, wherein the wheel is a first wheel, wherein the second sliding mechanism includes a second wheel mounted on the end of the second arm.

31 (Canceled).

32 (Currently Amended): The desktop workspace of claim 7, wherein the spring is attached directly to the one of the [[first]] set of pivot arms.

33 (New): The desktop workspace of claim 16, further comprising one or multiple stationary pieces of material connecting the bottom pivots to one another.

Electronic Patent Application Fee Transmittal

Application Number:	17493830
Filing Date:	04-Oct-2021
Title of Invention:	DESKTOP WORKSPACE THAT ADJUSTS VERTICALLY
First Named Inventor/Applicant Name:	Nathan Mark Poniatowski
Filer:	Daniel Thomas Lund
Attorney Docket Number:	1001-001US13

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	2806	1	104	104
		Total in USD ($)		**104**

Electronic Acknowledgement Receipt

EFS ID:	47956939
Application Number:	17493830
International Application Number:	
Confirmation Number:	4682
Title of Invention:	DESKTOP WORKSPACE THAT ADJUSTS VERTICALLY
First Named Inventor/Applicant Name:	Nathan Mark Poniatowski
Customer Number:	155431
Filer:	Daniel Thomas Lund
Filer Authorized By:	
Attorney Docket Number:	1001-001US13
Receipt Date:	05-MAY-2023
Filing Date:	04-OCT-2021
Time Stamp:	12:05:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$104
RAM confirmation Number	E202355C05476326
Deposit Account	602335
Authorized User	Daniel Lund

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	IDS.pdf	1282168 4519f4a16c089578cb5a55ee82def52080d96356	no	4
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	38015 90e3e9cbe78a8775cfed65dae20ea10d4f0e087e	no	2
Warnings:					
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		Total Files Size (in bytes):	1320183		

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

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PTO/SB/08a (01-22)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17493830
Filing Date	2021-10-04
First Named Inventor	Nathan Mark Poniatowski
Art Unit	3637
Examiner Name	Janet Marie WILKENS
Attorney Docket Number	1001-001US13

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7793597	B2	2010-09-14	Bart et al.	

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17493830
	Filing Date	2021-10-04
	First Named Inventor	Nathan Mark Poniatowski
	Art Unit	3637
	Examiner Name	Janet Marie WILKENS
	Attorney Docket Number	1001-001US13

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Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17493830
	Filing Date	2021-10-04
	First Named Inventor	Nathan Mark Poniatowski
	Art Unit	3637
	Examiner Name	Janet Marie WILKENS
	Attorney Docket Number	1001-001US13

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☒ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Daniel T. Lund/	Date (YYYY-MM-DD)	2023-05-05
Name/Print	Daniel T. Lund	Registration Number	58614

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Examiner-Initiated Interview Summary	**Application No.** 17/493,830	**Applicant(s)** Poniatowski, Nathan Mark		
	Examiner JANET M WILKENS	**Art Unit** 3637	**AIA (First Inventor to File) Status** Yes	**Page** 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	**Title**	**Type**
JANET M WILKENS	Primary Examiner	Telephonic
Daniel T Lund	Attorney	

Date of Interview: 16 May 2023

Issues Discussed:

35 U.S.C. 112

New proposed claim 33 claims stationary pieces of material which form the base of one of the disclosed embodiments. Claim 16, to which claim 33 depends, is directed to another disclosed embodiment specifically without a base. Therefore, the combination of the embodiments would be new matter if the amendment was to be entered.

Proposed Amendment(s)

It was suggested to modify claim 33 in line 1 to say "claim 11, the base further comprising..." to depend this claim with the appropriate independent claim and to specify to what member the pieces of material belong. Because of the reference of Clarke (3,282,566), it was suggested to modify claim 11, in line 17, to read "force directly to one of the set of pivot arms..." to clear up any similarities. Mr Lund talked with Mr. Poniatowski about the proposed amendments. They decided they would file an RCE so as to have additional time to consider the direction they wanted to go with the claims in this application.

	/JANET M WILKENS/ Primary Examiner, Art Unit 3637

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

AFCP 2.0 Decision	Application No.	Applicant(s)	
	17/493,830	Poniatowski, Nathan Mark	
	Examiner	Art Unit	AIA (FITF) Status
	JANET M WILKENS	3637	Yes

This is in response to the After Final Consideration Pilot request filed 02 May 2023.

1. **Improper Request** – The AFCP 2.0 request is improper for the following reason(s) and the after final amendment submitted with the request will be treated under pre-pilot procedure.

   ☐ An AFCP 2.0 request form PTO/SB/434 (or equivalent document) was not submitted.

   ☐ A non-broadening amendment to at least one independent claim was not submitted.

   ☐ The request is not the first proper AFCP 2.0 request submitted in response to the most recent final rejection.

   ☐ Other: _____

2. **Proper Request**

   A. After final amendment submitted with the request will not be treated under AFCP 2.0.
   The after final amendment cannot be reviewed and a search conducted within the guidelines of the pilot program.

   ☐ The after final amendment will be treated under pre-pilot procedure.

   B. Updated search and/or completed additional consideration.
   The examiner performed an updated search and/or completed additional consideration of the after final amendment within the time authorized for the pilot program. The result(s) of the updated search and/or completed additional consideration are:

   ☐ 1. All of the rejections in the most recent final Office action are overcome and a Notice of Allowance is issued herewith.

   ☐ 2. The after final amendment would not overcome all of the rejections in the most recent final Office action . See attached interview summary for further details.

   ☐ 3. The after final amendment was reviewed, and it raises a new issue(s). See attached interview summary for further details.

   ☑ 4. The after final amendment raises new issues, but would overcome all of the rejections in the most recent final Office action. A decision on determining allowability could not be made within the guidelines of the pilot. See attached interview summary for further details, including any newly discovered prior art.

   ☐ 5. Other: _____

   Examiner Note: Please attach an interview summary when necessary as described above.

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-22)
Approved for use through 05/31/2024. OMB 0651-0031
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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

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Attorney Docket Number	1001-001US13

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	D832623	S1	2018-11-06	Flaherty et al.	
	2	3727245	A	1973-04-17	Gerth	
	3	4097941	A	1978-07-04	Merkel	
	4	4249749	A	1981-02-10	Collier	
	5	4382573	A	1983-05-10	Aondetto	
	6	4534544	A	1985-08-13	Heide	
	7	4558847	A	1985-12-17	Coates	
	8	4611823	A	1986-09-16	Haas	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.M.W/

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	9	5074000	A	1991-12-24	Soltani et al.	
	10	5580027	A	1996-12-03	Brodersen	
	11	6550740	B1	2003-04-22	Burer	
	12	7568675	B2	2009-08-04	Catton	
	13	7988232	B2	2011-08-02	Weber et al.	
	14	8800976	B2	2014-08-12	Bethina et al.	
	15	9133976	B2	2015-09-15	Lin et al.	
	16	9440559	B2	2016-09-13	Gundall et al.	
	17	9961991	B1	2018-05-08	Chen	

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	1	20070295882	A1	2007-12-27	Catton	
	2	20100257671	A1	2010-10-14	Shimada et al.	
	3	20120060291	A1	2012-03-15	Gamman et al.	
	4	20130340655	A1	2013-12-26	Flaherty	
	5	20140339747	A1	2014-11-20	Bethina et al.	
	6	20140360411	A1	2014-12-11	Hatter	
	7	20150231992	A1	2015-08-20	Gundall et al.	
	8	20180160799	A1	2018-06-14	Westergård et al.	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2014216002	AU	A1	2015-03-19	Flaherty et al.		

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	2	5691386	AU	A	1986-11-05	Elkuch et al.		
	3	580874	AU	B2	1989-02-02	Johansson		
	4	2814945	CA	C	2019-04-30	Flaherty et al.		
	5	101711220	CN	B	2013-11-20	Shimada et al.		X
	6	103653780	CN	A	2014-03-26	Flaherty et al.		☒
	7	104540707	CN	B	2017-05-03	Gundall et al.		☒
	8	104692286	CN	B	2017-04-12	Lin et al.		☒
	9	108024625	CN	B	2021-08-03	Swartz et al.		☒
	10	204541230	CN	U	2015-08-12	黄发水		☒
	11	204949970	CN	U	2016-01-13	项乐宏 et al.		☒
	12	69111809	DE	T2	1996-04-18	Lindahl		☒

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	13	0342779	EP	B1	1993-05-12	Brodersen et al.		☐
	14	0448340	EP	B1	1996-02-21	Brodersen et al.		☐
	15	2252835	FR	A1	1975-06-27	BENMOURA PIERRE		☒
	16	101747132	KR	B1	2017-06-27	김진태 et al.		☒
	17	2000346	NL	C2	2008-05-29	Duiven		☒
	18	531523	TW	B	2016-05-01	林傳凱 et al.		☒
	19	1986006054	WO	A1	1986-10-23	Johansson		☐
	20	1988005759	WO	A1	1988-08-11	Johansson		☐
	21	1991011979	WO	A1	1991-08-22	MÄKELÄINEN et al.		☐
	22	2008002373	WO	A2	2008-01-03	Catton		☐
	23	2014027010	WO	A1	2014-02-20	Gundall et al.		☒

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	24	2015160825	WO	A2	2015-10-22	Ergun et al.		☐
	25	2016129971	WO	A1	2016-08-18	Kim et al.		☒
	26	2016187212	WO	A1	2016-11-24	MARTIN		☐
	27	2016200318	WO	A1	2016-12-15	Freedesk et al.		☐
	28	2017053200	WO	A1	2017-03-30	SWARTZ et al.		☐
	29	8606053	WO	A1	1986-10-23	Elkuch et al.		☒

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
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	17/493,830	Poniatowski, Nathan Mark
	Examiner	Art Unit
	JANET M WILKENS	3637

CPC - Searched*		
Symbol	**Date**	**Examiner**
A47B1/03; 21/0314,00,02,03,04	09/26/2022	JMW
A47B9/16; 2021/0321,0364,0335	09/26/2022	JMW
A47B3/00; 61/00	09/26/2022	JMW
A47B3/02,0809,0815; 2003/025	09/26/2022	JMW
updated search	01/25/2023	JMW
updated search	05/16/2023	JMW

CPC Combination Sets - Searched*		
Symbol	**Date**	**Examiner**

US Classification - Searched*			
Class	**Subclass**	**Date**	**Examiner**
312	208.1,223.3	09/26/2022	JMW
248	421,562,588, 585,431 ,432,439	09/26/2022	JMW
108	147,144.11,145,93, 96,116-118,120.43, 138,50.01,50.02,28	09/26/2022	JMW
updated search		01/25/2023	JMW
updated search		05/16/2023	JMW

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

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	Examiner	Art Unit
	JANET M WILKENS	3637

Search Notes		
Search Notes	**Date**	**Examiner**
updated search from parent cases	09/26/2022	JMW
updated search	01/25/2023	JMW
updated search	05/16/2023	JMW

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US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**

			JPO; DERWENT; IBM_TDB)				
L3686	591	A47B2003/025.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3687	2630	108/116-118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3688	36	("4052944" | "4765583" | "5125606" | "5131614" | "5143341" | "5263423" | "5355811" | "5593128" | "5732928").pn. OR ("5893540").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3689	48	(Artificial Intelligence) More like doc: KR-20110006306-U Text: (KR-200416871-Y1 OR KR-20140006320-U OR CN-108813920-A OR TW-201033508-A OR KR-20160002687-U OR CN-110934419-A OR US-20100237666-A1 OR WO-2021226487-A1 OR US-20210345768-A1 OR CN-113812797-A OR CN-110623417-A OR CN-110786639-A OR CN-106165968-B OR AU-2014283918-A1 OR IE-S84540-Y1 OR CN-110115422-A OR GB-2439522-A OR WO-2008028306-A3 OR CN-2473993-Y OR CN-110973828-A).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3690	1700	248/421,562,588,585,431,432,439.ccls. AND (gas OR pneumatic OR spring)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

			SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3691	948	108/147,145,93,96.ccls. AND (gas OR pneumatic OR spring)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3692	39	(Artificial Intelligence) More like doc: US-10568416-B1 Text: (US-10244861-B1 OR US-11147366-B1 OR US-10575630-B1 OR US-11140977-B1 OR US-11134773-B1 OR US-11160367-B1 OR US-11388989-B1 OR US-11134774-B1 OR US-10893748-B1 OR US-11388991-B1 OR US-11395544-B1 OR US-9504316-B1 OR WO-2017184206-A1 OR US-20130014674-A1 OR US-20160037909-A1 OR US-20180103752-A1 OR US-10258149-B2 OR EP-3593671-B1 OR US-20140238279-A1 OR US-9681746-B1).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3693	14	"201230022"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3694	0	"JP201230022"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3695	0	"JP2012030022"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD,	OR	ON	ON	2022/09/21 01:52 PM

			DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3696	76	fin ADJ reinforcement SAME (tube OR column OR cylinder)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3697	61	triangle ADJ reinforcement SAME (tube OR column OR cylinder)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3698	16	("20160338486"|"11134773"|"11109671"|"10542817"|"20140041554"). PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3699	2404	A47B9/10.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3700	49	"6857493"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3701	18	"2018125227"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3702	9	"20180125227"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD,	OR	ON	ON	2022/09/21 01:52 PM

			DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3703	161	("10258148"|"20160249737"|"9815672"|"4448386"|"9681746"|"10869549"|"20170071332"|"4843978"|"5037163"|"6179261"|"7841570"|"8684339"|"9809136"|"D830739"|"D901959"|"10499730"|"20050120922"|"20090145336"|"4659052"|"20030213415"|"4702454"|"10258149"|"1318564"|"20080000393"|"20100242174"|"20200029685"|"20200107633"|"4558648"|"5829948"|"6701853"|"7946551"|"8015638"|"8671853"|"9504316"|"11134773"|"10244861"|"10575630"|"11140977"|"11147366"|"5251864"|"10123613"|"10542817"|"10544019"|"20160353880"|"4221280"|"4449262"|"4549720"|"4717112"|"5211367"|"6076785"|"6176456"|"6269753"|"6516478"|"6792876"|"7207629"|"7575205"|"9854904"|"20140144352"|"20150289641"|"7677518"|"D845037"|"20070001077"|"20180213929"|"4640488"|"4753419"|"9668572"|"10023355"|"10264877"|"10524565"|"20070080564"|"2937003"|"4941641"|"4967672"|"4995130"|"5257767"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"7845665"|"8303062"|"8544391"|"9055810"|"9480332"|"9554644"|"9993068"|"11160367"|"20150028787"|"3823915"|"3826457"|"11083282"|"2843418"|"5957426"|"10413055"|"20070266912"|"20180279770"|"20190269237"|"3295800"|"529408	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		7"|"6938866"|"7048236"|"8132518"|"8490933"|"8950343"|"9049923"|"9232855"|"11134774"|"D854775"|"9326598"|"20150216296"|"20190110588"|"20190183239"|"4709972"|"5048784"|"6098961"|"6148739"|"7188813"|"9955780"|"20180125227"|"10893748"|"4741512"|"8931750"|"6857493"|"10114352"|"5722513"|"20030042380"|"20160338486"|"20180177289"|"4625657"|"4826123"|"6273382"|"7204193"|"D870490"|"10517390"|"20170354245"|"D302893"|"5400720"|"10568416"|"20120188302"|"20170196351"|"7246784"|"10018298"|"10306977"|"20120097822"|"20130193392"|"4577821"|"5588377"|"5765797"|"5836562"|"6488248"|"6533479"|"6672430"|"7950338"|"8469152"|"9981571").PN.					
L3704	70	("1318564" | "2937003" | "3295800" | "4221280" | "4558648" | "4577821" | "4843978" | "5588377" | "5626323" | "5829948" | "5957426" | "6098961" | "6269753" | "6516478" | "6533479" | "6722618" | "6742768" | "8132518" | "8671853" | "9049923" | "9055810" | "9326598" | "9480332" | "9504316" | "9554644" | "20030213415" | "20040035332" | "20040040480" | "20070080564" | "20080000393" | "20090090832" | "20090200437" | "20110001033" | "20110024958" | "20120097822" | "20130145972" | "20130193392" | "20140144352" | "20150232005" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20150375896" | "20160338486" | "20170174486" | "20180008037").pn. OR ("10244861").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3705	39	(Artificial Intelligence) More like doc: US-10244861-B1 Text: (US-10568416-B1 OR US-11147366-B1 OR US-10575630-B1 OR US-11388989-B1 OR US-11140977-B1 OR US-11134773-B1 OR US-11160367-B1 OR US-11134774-B1 OR US-10893748-B1 OR US-11388991-B1 OR US-11395544-B1 OR US-9504316-B1 OR WO-2017184206-A1 OR US-20130014674-A1 OR US-20140245932-A1 OR US-20160037909-A1 OR US-20180103752-A1 OR US-10258149-B2 OR US-20140238279-A1 OR US-9681746-B1).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3706	26	("4221280" | "4577821" | "4995130" | "5186038" | "5322143" | "5588377" | "9161616" | "D845037" | "10264877" | "10517390" | "20100012909" | "20140041554" | "20160338486" | "20170354245" | "20180055214" | "20180146775").pn. OR ("10869549").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3707	36	(Artificial Intelligence) More like doc: US-10869549-B2 Text: (US-11382419-B2 OR US-20210052067-A1 OR US-20220257006-A1 OR US-20180192769-A1 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO,	OR	ON	ON	2022/09/21 01:52 PM

		CN-206338567-U OR US-11324310-B2 OR US-20220218100-A1 OR US-20210015248-A1 OR US-10820688-B2 OR WO-2019119920-A1 OR CN-214855133-U OR CN-210383111-U OR AU-2018388926-A1 OR US-10856651-B2 OR US-10986918-B2 OR CN-110325077-B OR CA-3110698-A1 OR KR-20110018576-A OR CN-110325077-A OR US-11134774-B1).did.	MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3708	498714	Zheng.in. AND (desk OR table)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3709	96476	Zheng.in. AND (desk OR table) AND gas	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3710	367	Zheng.in. AND (desk OR table) AND gas ADJ spring	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3711	1286	(desk OR table) SAME (cross OR X) SAME gas ADJ spring	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3712	53	(Artificial Intelligence) More like doc: CN-204561316-U Text: (CN-204561320-U OR CN-204561505-U OR CN-206380909-U OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2022/09/21 01:52 PM

		CN-206525754-U OR CN-106377063-A OR CN-206565530-U OR CN-206659424-U OR CN-203407686-U OR CN-205106786-U OR CN-105534016-A OR CN-109953482-A OR CN-208573198-U OR CN-107280230-A OR US-10448731-B2 OR US-10188204-B2 OR US-20180199704-A1 OR WO-2018170012-A1 OR CN-108497692-A OR CN-204580308-U OR US-20180199705-A1).did.	IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3713	36	ironing ADJ board SAME (gas OR pneumatic) ADJ spring	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3714	483	D06F AND (gas OR pneumatic) ADJ spring	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3715	2200	D06F AND three SAME legs	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3716	774	D06F AND three SAME legs AND pivot$4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3717	40	(Artificial Intelligence) More like doc: CN-103422335-A Text: (CN-103541202-A OR CN-103422335-B OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2022/09/21 01:52 PM

		CN-103541202-B OR CN-102628210-A OR FR-2990960-A1 OR EP-2666906-A2 OR US-8776410-B2 OR US-20130340301-A1 OR EP-2666906-B1 OR CA-2815319-C OR CA-2815319-A1 OR FR-2990961-A1 OR RU-2619020-C2 OR RU-2013122960-A OR US-20130312297-A1 OR EP-2666905-A2 OR US-8776411-B2 OR ES-2524240-T3 OR CN-104894826-A OR RU-2619021-C2).did.	HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3718	4567	A47B AND (gas OR pneumatic) ADJ spring	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3719	252	A47B AND (gas OR pneumatic) ADJ spring AND three SAME legs	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3720	679	108/118,120,43,138,50.01,50.02.ccls. AND spring	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3721	94159	pivot$4 WITH rod WITH sleeve	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3722	4856	pivot$4 WITH rod WITH sleeve SAME legs	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L3723	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3724	70	("1318564" | "2937003" | "3295800" | "4221280" | "4558648" | "4577821" | "4843978" | "5588377" | "5626323" | "5829948" | "5957426" | "6098961" | "6269753" | "6516478" | "6533479" | "6722618" | "6742768" | "8132518" | "8671853" | "9049923" | "9055810" | "9326598" | "9480332" | "9504316" | "9554644" | "20030213415" | "20040035332" | "20040040480" | "20070080564" | "20080000393" | "20090090832" | "20090200437" | "20110001033" | "20110024958" | "20120097822" | "20130145972" | "20130193392" | "20140144352" | "20150232005" | "20150375896" | "20160338486" | "20170174486" | "20180008037").pn. OR ("10244861").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

L3725	35	("2003/0213415").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3726	38	("2994093" | "3365072" | "3491705" | "3495873" | "3897102" | "4264102" | "4470630" | "4686910" | "5246265" | "5926871" | "5950259").pn. OR ("6213555").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3727	8	("3365072").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3728	96	("1495991" | "3023063" | "3391960" | "3592144" | "4619386" | "4672898" | "4852499" | "4909159" | "5177665" | "5359349" | "5438936").pn. OR ("5673628").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3729	36	("5673628" | "5687945" | "6378829" | "D473562" | "6632170" | "D494183" | "6863252" | "6896231" | "7124755" | "7207537" | "7540457" | "7922137" | "8083196" | "8272604" | "8413943" | "8636257" | "8727290" | "20050006542" | "20050121578" | "20060261227" | "20070040089" | "20100108828" | "20100198052" | "20120175474" | "20120205503" | "20120273630" | "20140091193" | "20140226281").pn. OR ("9133982").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3730	51	("1382783" | "1460697" | "2508974" | "2839260" | "3170665" | "3734439" | "3840204" | "3910538" | "4131259" | "4143652" | "4402481" | "4458870" | "4491435" | "4535923" | "4721276" | "4997156" | "5370570" | "5484129"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "5609565" | "5723808" | "5964439" | "6170598" | "6325350" | "6431505" | "6457616" | "6575417").pn. OR ("6896231").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3731	1	("1794838").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3732	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3733	17703	A47B21/0314,00,02,03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3734	1350	A47B21/0314,00,02,03.cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3735	162	("3140894"|"4926760"|"5588377"|"7640869"|"9113703"|"9615655"|"20160120300"|"6974185"|"9161616"|"5649493"|"8544391"|"9055810"|"9480332"|"9554644"|"201 60249737"|"2531856"|"3494662"|"8016305"|"9644378"|"9681746"|"2922685"|"9326598"|"9625929"|"3161161"|"8936306").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3736	88	("2156148"|"20040040480"|"20080203865"|"20130139736"|"20140041554"|"20150216296"|"20150289641"|"20160286951"|"20160338486"|"3245366"|"4691888"|"5588377"|"8544391"|"93	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		26598"|"9480332"|"9504316").PN.					
L3737	1313	312/208.1,223.3.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3738	0	248/421,562,588, "585,431,432,439".cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3739	0	248/421,562,588,585,431,432,439.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3740	3921	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3741	2881	248/421,562,588,585.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3742	1060	248/431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3743	3035	108/147,144.11,145,93.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L3744	1049	108/96,116.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3745	3238	108/118,120,43,138,50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3746	1877	108/118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3747	1396	108/50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3748	550	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"52	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		11367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"20180103752"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.					
L3749	25	("3282566" | "4273306" | "5400720" | "5632209" | "5649493" | "9326598" | "20130340655" | "20140360414" | "20150289641" | "20180055214").pn. OR ("10517390").urpn. AND (PGPB | USPT |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		USOC).dbnm.					
L3750	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3751	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3752	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3753	56	("D166377" | "D280478" | "D304112" | "D352845" | "D371687" | "D395969" | "D415910" | "D424828" | "D435368" | "D435986" | "D436268" | "D464212" | "D530939" | "D612643" | "D644046" | "D671338" | "D681979" | "D694044" | "D716074" | "D733476"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "D734413" | "D771981" | "D771982" | "9504316" | "D781617" | "D781618" | "D781619" | "D784050" | "20080178779" | "20130139736" | "20150096472" | "20160106205" | "20160278515" | "20170105518" | "20170196351" | "20170290413" | "20170354245").pn. OR ("D830739").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3754	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3755	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3756	2081	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD,	OR	ON	ON	2022/09/21 01:52 PM

			DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3757	10819	(A47B3/00 OR A47B61/00).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3758	182	(A47B3/00 OR A47B61/00).cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3759	3649	A47B3/02,0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3760	1712	A47B3/0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3761	513	(A47B3/02 AND A47B2003/025).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3762	1267876	(desk$4 OR table$4) AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3763	5666298	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD,	OR	ON	ON	2022/09/21 01:52 PM

		arm)((pnuematic OR gas) ADJ spring OR actuator)	DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3764	3703	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3765	869	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3766	91	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3767	305	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3768	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3769	202	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM

		015638"|"9681746"|"10 258148"|"10306977"|"1 318564"|"20030213415 "|"20050120922"|"2008 0000393"|"2017035424 5"|"20200107633"|"455 8648"|"4702454"|"5829 948"|"6701853"|"80156 38"|"D302893"|"102448 61"|"7575205"|"105428 17"|"20160353880"|"52 11367"|"10893748"|"49 95130"|"9504316"|"D83 0739"|"10544019"|"105 75630"|"4221280"|"444 9262"|"4549720"|"5251 864"|"6269753"|"65164 78"|"6792876"|"720762 9"|"10524565"|"475341 9"|"4941641"|"8303062" |"8544391"|"9480332"|" 9554644"|"2016030988 9"|"5257767"|"2015028 9641"|"20180103752"|" 10023355"|"200700805 64"|"20150289641"|"29 37003"|"4995130"|"540 0720"|"5626323"|"5926 876"|"6533229"|"67023 72"|"6722618"|"674276 8"|"9055810"|"7845665" |"4967672"|"201002421 74"|"9049923"|"104130 55"|"20070266912"|"20 200029685"|"3295800"| "4741512"|"5294087"|"5 957426"|"7048236"|"84 90933"|"8950343"|"923 2855"|"9993068"|"9326 598"|"D854775"|"10123 613"|"10258149"|"2014 0144352"|"2015021629 6"|"6076785"|"6098961" |"9815672"|"9955780"|" 20180177289"|"767751 8"|"8931750"|"1049973 0"|"20160051042"|"607 6785"|"4741512"|"2009 0145336"|"2016033848 6"|"7204193"|"7950338" |"8132518"|"200700010 77"|"5400720"|"D30289 3"|"10517390"|"105684 16"|"20120097822"|"20 130193392"|"20170196 351"|"3826457"|"45778 21"|"5588377"|"576579 7"|"6533479"|"6672430"					

		|"8469152"|"10018298"|"9981571").PN.					
L3770	67	"5400720"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3771	84	"4577821"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3772	24	(Artificial Intelligence) More like doc: US-D854775-S Text: (WO-0068597-A1 OR DE-4336662-A1 OR US-5694864-A OR AT-149474-T OR US-D378155-S OR US-D375602-S OR US-D346254-S OR US-D825131-S OR US-D814736-S OR US-D640440-S OR US-D837970-S OR TW-201522199-A OR TW-I531523-B OR US-20100012909-A1 OR US-D794629-S OR US-D834861-S OR US-D927102-S OR US-D706344-S OR US-D815832-S OR US-D775524-S).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3773	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3774	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3775	29	("20100198374"|"6062148"|"20140137773"|"20120174833"|"7789025"|"20160127809"|"5884882"|"7077068"|"20080255794"|"20140247155"|"9082239"|"20080255794"|"6595144"|"6831829"|"7780578"|"8947215"|"20130204438"|"6546880"|"7517029"|"20130116092"|"20140096706"|"8485945"|"20140247146"|"5323695"|"8587439"|"8690578"|"20140137773"|"20160128467"|"20130321346"|"20140096706"|"20140247154"|"20160260019").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3776	27	("10244861"|"20180213	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		929"|"9326598"|"9681746"|"8931750"|"7246784"|"10114352"|"5957426"|"5722513"|"4640488"|"5251864"|"4448386"|"4702454"|"2843418"|"9668572"|"20070001077"|"4753419"|"11083282"|"20170196351"|"D854775"|"20160249737"|"20120188302"|"10575630").PN.	USOCR; JPO)				01:52 PM
L3777	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3778	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3779	406	wilkens.xp. AND bracket AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3780	159	wilkens.xp. AND stack$4 AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L3781	298	wilkens.xp. AND A47B88/$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3782	16	("1680081" | "1686783" | "1902795" | "1994424" | "3094363" | "3275396" | "3298768" | "4285560").pn. OR ("10888157").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3783	43	"3275396"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3784	60	("2001744" | "2070960" | "2610824" | "3032319" | "3110476" | "3174722" | "3282566" | "3379411" | "3982718" | "4221280" | "4403680" | "4526346" | "4682750" | "4688760" | "4690250" | "4754713" | "4764075" | "4858888" | "4890692" | "4899987" | "4921074" | "5192053" | "5299906" | "5322143" | "5460460" | "5829948" | "6182796" | "6464205" | "6601826" | "6672430" | "6814188" | "7213686" | "20060126966" | "20060279728" | "20070017748" | "20070235266").pn. OR ("8469152").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3785	37	("4061237" | "4249749" | "4288195" | "4504041" | "4613272" | "4979592" | "5018931" | "6394419" | "6431319" | "6679479" | "8015638" | "8469152" | "8888070" | "9422141"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "9463966" | "9540220" | "20030075657" | "20050042068" | "20110262261" | "20140014886" | "20140027693" | "20150028787" | "20150298949").pn. OR ("9815672").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3786	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3787	47	"5861051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3788	1	"58-61051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3789	38	"102013008020"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3790	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3791	17703	A47B21/0314,00,02,03.	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		cpc.	USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L3792	1350	A47B21/0314,00,02,03.cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3793	162	("3140894"|"4926760"|"5588377"|"7640869"|"9113703"|"9615655"|"20160120300"|"6974185"|"9161616"|"5649493"|"8544391"|"9055810"|"9480332"|"9554644"|"20160249737"|"2531856"|"3494662"|"8016305"|"9644378"|"9681746"|"2922685"|"9326598"|"9625929"|"3161161"|"8936306").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3794	88	("2156148"|"20040040480"|"20080203865"|"20130139736"|"20140041554"|"20150216296"|"20150289641"|"20160286951"|"20160338486"|"3245366"|"4691888"|"5588377"|"8544391"|"9326598"|"9480332"|"9504316").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3795	1313	312/208.1,223.3.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3796	0	248/421,562,588, "585,431,432,439".cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3797	0	248/421,562,588,585,431,432,439.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2022/09/21 01:52 PM

			AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3798	3921	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3799	2881	248/421,562,588,585.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3800	1060	248/431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3801	3035	108/147,144.11,145,93.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3802	1049	108/96,116.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3803	3238	108/118,120,43,138,50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3804	1877	108/118,120,43,138.ccl	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		s.	USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L3805	1396	108/50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3806	550	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"20180103752"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.				
L3807	25	("3282566" | "4273306" | "5400720" | "5632209" | "5649493" | "9326598" | "20130340655" | "20140360414" | "20150289641" | "20180055214").pn. OR ("10517390").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3808	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3809	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3810	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3811	56	("D166377" | "D280478" | "D304112" | "D352845" | "D371687" | "D395969" | "D415910" | "D424828" | "D435368" | "D435986" | "D436268" | "D464212" | "D530939" | "D612643" | "D644046" | "D671338" | "D681979" | "D694044" | "D716074" | "D733476" | "D734413" | "D771981" | "D771982" | "9504316" | "D781617" | "D781618" | "D781619" | "D784050" | "20080178779" | "20130139736" | "20150096472" | "20160106205" | "20160278515" | "20170105518" | "20170196351" | "20170290413" | "20170354245").pn. OR ("D830739").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3812	50	("3472183" | "3820631" | "4488326" | "4741512"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3813	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3814	2081	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3815	10819	(A47B3/00 OR A47B61/00).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3816	182	(A47B3/00 OR A47B61/00).cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L3817	3649	A47B3/02,0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3818	1712	A47B3/0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3819	513	(A47B3/02 AND A47B2003/025).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3820	1267876	(desk$4 OR table$4) AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3821	5666298	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm)((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3822	3703	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3823	869	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L3824	91	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3825	305	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3826	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3827	202	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM

		|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"20180103752"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.				
L3828	67	"5400720"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3829	84	"4577821"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3830	24	(Artificial Intelligence)	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		More like doc: US-D854775-S Text: (WO-0068597-A1 OR DE-4336662-A1 OR US-5694864-A OR AT-149474-T OR US-D378155-S OR US-D375602-S OR US-D346254-S OR US-D825131-S OR US-D814736-S OR US-D640440-S OR US-D837970-S OR TW-201522199-A OR TW-I531523-B OR US-20100012909-A1 OR US-D794629-S OR US-D834861-S OR US-D927102-S OR US-D706344-S OR US-D815832-S OR US-D775524-S).did.	USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L3831	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3832	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" |				

		"20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3833	29	("20100198374"|"6062148"|"20140137773"|"20120174833"|"7789025"|"20160127809"|"5884882"|"7077068"|"20080255794"|"20140247155"|"9082239"|"20080255794"|"6595144"|"6831829"|"7780578"|"8947215"|"20130204438"|"6546880"|"7517029"|"20130116092"|"20140096706"|"8485945"|"20140247146"|"5323695"|"8587439"|"8690578"|"20140137773"|"20160128467"|"20130321346"|"20140096706"|"20140247154"|"20160260019").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3834	27	("10244861"|"20180213929"|"9326598"|"9681746"|"8931750"|"7246784"|"10114352"|"5957426"|"5722513"|"4640488"|"5251864"|"4448386"|"4702454"|"2843418"|"9668572"|"20070001077"|"4753419"|"11083282"|"20170196351"|"D854775"|"20160249737"|"20120188302"|"10575630").PN.	(US-PGPUB; USPAT; USOCR; JPO)	OR	ON	ON	2022/09/21 01:52 PM
L3835	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3836	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3837	406	wilkens.xp. AND bracket AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3838	159	wilkens.xp. AND stack$4 AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3839	298	wilkens.xp. AND A47B88/$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3840	16	("1680081" | "1686783" | "1902795" | "1994424" | "3094363" | "3275396" | "3298768" | "4285560").pn. OR ("10888157").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3841	43	"3275396"	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

			USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L3842	60	("2001744" | "2070960" | "2610824" | "3032319" | "3110476" | "3174722" | "3282566" | "3379411" | "3982718" | "4221280" | "4403680" | "4526346" | "4682750" | "4688760" | "4690250" | "4754713" | "4764075" | "4858888" | "4890692" | "4899987" | "4921074" | "5192053" | "5299906" | "5322143" | "5460460" | "5829948" | "6182796" | "6464205" | "6601826" | "6672430" | "6814188" | "7213686" | "20060126966" | "20060279728" | "20070017748" | "20070235266").pn. OR ("8469152").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3843	37	("4061237" | "4249749" | "4288195" | "4504041" | "4613272" | "4979592" | "5018931" | "6394419" | "6431319" | "6679479" | "8015638" | "8469152" | "8888070" | "9422141" | "9463966" | "9540220" | "20030075657" | "20050042068" | "20110262261" | "20140014886" | "20140027693" | "20150028787" | "20150298949").pn. OR ("9815672").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3844	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3845	47	"5861051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3846	1	"58-61051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3847	38	"102013008020"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3848	5	"20190116976"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3849	10	"20200003258"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3850	2	"20210214986"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3851	41	"4741512"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

			SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3852	139	"7677518"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3853	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3854	17703	A47B21/0314,00,02,03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3855	1350	A47B21/0314,00,02,03.cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3856	162	("3140894"|"4926760"|"5588377"|"7640869"|"9113703"|"9615655"|"20160120300"|"6974185"|"9161616"|"5649493"|"8544391"|"9055810"|"9480332"|"9554644"|"201 60249737"|"2531856"|"3494662"|"8016305"|"9644378"|"9681746"|"2922685"|"9326598"|"9625929"|"3161161"|"8936306").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3857	88	("2156148"|"20040040480"|"20080203865"|"20130139736"|"20140041554"|"20150216296"|"20150289641"|"20160286951"|"20160338486"|"3245366"|"4691888"|"5588377"|"8544391"|"93	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		26598"|"9480332"|"9504316").PN.					
L3858	1313	312/208.1,223.3.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3859	0	248/421,562,588, "585,431,432,439".cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3860	0	248/421,562,588,585,431,432,439.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3861	3921	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3862	2881	248/421,562,588,585.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3863	1060	248/431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3864	3035	108/147,144.11,145,93.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L3865	1049	108/96,116.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3866	3238	108/118,120,43,138,50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3867	1877	108/118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3868	1396	108/50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3869	550	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"52	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		11367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"20180103752"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.					
L3870	25	("3282566" | "4273306" | "5400720" | "5632209" | "5649493" | "9326598" | "20130340655" | "20140360414" | "20150289641" | "20180055214").pn. OR ("10517390").urpn. AND (PGPB | USPT |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		USOC).dbnm.					
L3871	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3872	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3873	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3874	56	("D166377" | "D280478" | "D304112" | "D352845" | "D371687" | "D395969" | "D415910" | "D424828" | "D435368" | "D435986" | "D436268" | "D464212" | "D530939" | "D612643" | "D644046" | "D671338" | "D681979" | "D694044" | "D716074" | "D733476"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "D734413" | "D771981" | "D771982" | "9504316" | "D781617" | "D781618" | "D781619" | "D784050" | "20080178779" | "20130139736" | "20150096472" | "20160106205" | "20160278515" | "20170105518" | "20170196351" | "20170290413" | "20170354245").pn. OR ("D830739").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3875	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3876	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3877	2081	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD,	OR	ON	ON	2022/09/21 01:52 PM

			DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3878	10819	(A47B3/00 OR A47B61/00).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3879	182	(A47B3/00 OR A47B61/00).cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3880	3649	A47B3/02,0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3881	1712	A47B3/0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3882	513	(A47B3/02 AND A47B2003/025).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3883	1267876	(desk$4 OR table$4) AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3884	5666298	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD,	OR	ON	ON	2022/09/21 01:52 PM

		arm)((pnuematic OR gas) ADJ spring OR actuator)	DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3885	3703	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3886	869	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3887	91	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3888	305	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3889	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3890	202	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM

		015638"|"9681746"|"10 258148"|"10306977"|"1 318564"|"20030213415 "|"20050120922"|"2008 0000393"|"2017035424 5"|"20200107633"|"455 8648"|"4702454"|"5829 948"|"6701853"|"80156 38"|"D302893"|"102448 61"|"7575205"|"105428 17"|"20160353880"|"52 11367"|"10893748"|"49 95130"|"9504316"|"D83 0739"|"10544019"|"105 75630"|"4221280"|"444 9262"|"4549720"|"5251 864"|"6269753"|"65164 78"|"6792876"|"720762 9"|"10524565"|"475341 9"|"4941641"|"8303062" |"8544391"|"9480332"|" 9554644"|"2016030988 9"|"5257767"|"2015028 9641"|"20180103752"|" 10023355"|"200700805 64"|"20150289641"|"29 37003"|"4995130"|"540 0720"|"5626323"|"5926 876"|"6533229"|"67023 72"|"6722618"|"674276 8"|"9055810"|"7845665" |"4967672"|"201002421 74"|"9049923"|"104130 55"|"20070266912"|"20 200029685"|"3295800"| "4741512"|"5294087"|"5 957426"|"7048236"|"84 90933"|"8950343"|"923 2855"|"9993068"|"9326 598"|"D854775"|"10123 613"|"10258149"|"2014 0144352"|"2015021629 6"|"6076785"|"6098961" |"9815672"|"9955780"|" 20180177289"|"767751 8"|"8931750"|"1049973 0"|"20160051042"|"607 6785"|"4741512"|"2009 0145336"|"2016033848 6"|"7204193"|"7950338" |"8132518"|"200700010 77"|"5400720"|"D30289 3"|"10517390"|"105684 16"|"20120097822"|"20 130193392"|"20170196 351"|"3826457"|"45778 21"|"5588377"|"576579 7"|"6533479"|"6672430"					

		|"8469152"|"10018298"|"9981571").PN.					
L3891	67	"5400720"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3892	84	"4577821"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3893	24	(Artificial Intelligence) More like doc: US-D854775-S Text: (WO-0068597-A1 OR DE-4336662-A1 OR US-5694864-A OR AT-149474-T OR US-D378155-S OR US-D375602-S OR US-D346254-S OR US-D825131-S OR US-D814736-S OR US-D640440-S OR US-D837970-S OR TW-201522199-A OR TW-I531523-B OR US-20100012909-A1 OR US-D794629-S OR US-D834861-S OR US-D927102-S OR US-D706344-S OR US-D815832-S OR US-D775524-S).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3894	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3895	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3896	29	("20100198374"|"6062148"|"20140137773"|"20120174833"|"7789025"|"20160127809"|"5884882"|"7077068"|"20080255794"|"20140247155"|"9082239"|"20080255794"|"6595144"|"6831829"|"7780578"|"8947215"|"20130204438"|"6546880"|"7517029"|"20130116092"|"20140096706"|"8485945"|"20140247146"|"5323695"|"8587439"|"8690578"|"20140137773"|"20160128467"|"20130321346"|"20140096706"|"20140247154"|"20160260019").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3897	27	("10244861"|"20180213	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		929"|"9326598"|"9681746"|"8931750"|"7246784"|"10114352"|"5957426"|"5722513"|"4640488"|"5251864"|"4448386"|"4702454"|"2843418"|"9668572"|"20070001077"|"4753419"|"11083282"|"20170196351"|"D854775"|"20160249737"|"20120188302"|"10575630").PN.	USOCR; JPO)				01:52 PM
L3898	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3899	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3900	406	wilkens.xp. AND bracket AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3901	159	wilkens.xp. AND stack$4 AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L3902	298	wilkens.xp. AND A47B88/$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3903	16	("1680081" | "1686783" | "1902795" | "1994424" | "3094363" | "3275396" | "3298768" | "4285560").pn. OR ("10888157").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3904	43	"3275396"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3905	60	("2001744" | "2070960" | "2610824" | "3032319" | "3110476" | "3174722" | "3282566" | "3379411" | "3982718" | "4221280" | "4403680" | "4526346" | "4682750" | "4688760" | "4690250" | "4754713" | "4764075" | "4858888" | "4890692" | "4899987" | "4921074" | "5192053" | "5299906" | "5322143" | "5460460" | "5829948" | "6182796" | "6464205" | "6601826" | "6672430" | "6814188" | "7213686" | "20060126966" | "20060279728" | "20070017748" | "20070235266").pn. OR ("8469152").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3906	37	("4061237" | "4249749" | "4288195" | "4504041" | "4613272" | "4979592" | "5018931" | "6394419" | "6431319" | "6679479" | "8015638" | "8469152" | "8888070" | "9422141"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "9463966" | "9540220" | "20030075657" | "20050042068" | "20110262261" | "20140014886" | "20140027693" | "20150028787" | "20150298949").pn. OR ("9815672").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3907	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3908	47	"5861051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3909	1	"58-61051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3910	38	"102013008020"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3911	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3912	17703	A47B21/0314,00,02,03.	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		cpc.	USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L3913	1350	A47B21/0314,00,02,03.cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3914	162	("3140894"|"4926760"|"5588377"|"7640869"|"9113703"|"9615655"|"20160120300"|"6974185"|"9161616"|"5649493"|"8544391"|"9055810"|"9480332"|"9554644"|"201 60249737"|"2531856"|"3494662"|"8016305"|"9644378"|"9681746"|"2922685"|"9326598"|"9625929"|"3161161"|"8936306").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3915	88	("2156148"|"20040040480"|"20080203865"|"20130139736"|"20140041554"|"20150216296"|"20150289641"|"20160286951"|"20160338486"|"3245366"|"4691888"|"5588377"|"8544391"|"9326598"|"9480332"|"9504316").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3916	1313	312/208.1,223.3.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3917	0	248/421,562,588, "585,431,432,439".cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3918	0	248/421,562,588,585,431,432,439.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2022/09/21 01:52 PM

			AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3919	3921	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3920	2881	248/421,562,588,585.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3921	1060	248/431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3922	3035	108/147,144.11,145,93.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3923	1049	108/96,116.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3924	3238	108/118,120,43,138,50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3925	1877	108/118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT,	OR	ON	ON	2022/09/21 01:52 PM

			AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3926	1396	108/50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3927	550	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"201002421	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		74"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.					
L3928	25	("3282566" | "4273306" | "5400720" | "5632209" | "5649493" | "9326598" | "20130340655" | "20140360414" | "20150289641" | "20180055214").pn. OR ("10517390").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3929	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3930	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3931	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3932	56	("D166377" | "D280478" | "D304112" | "D352845" | "D371687" | "D395969" | "D415910" | "D424828" | "D435368" | "D435986" | "D436268" | "D464212" | "D530939" | "D612643" | "D644046" | "D671338" | "D681979" | "D694044" | "D716074" | "D733476" | "D734413" | "D771981" | "D771982" | "9504316" | "D781617" | "D781618" | "D781619" | "D784050" | "20080178779" | "20130139736" | "20150096472" | "20160106205" | "20160278515" | "20170105518" | "20170196351" | "20170290413" | "20170354245").pn. OR ("D830739").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3933	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3934	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3935	2081	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3936	10819	(A47B3/00 OR A47B61/00).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3937	182	(A47B3/00 OR A47B61/00).cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/09/21 01:52 PM

			IBM_TDB)				
L3938	3649	A47B3/02,0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3939	1712	A47B3/0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3940	513	(A47B3/02 AND A47B2003/025).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3941	1267876	(desk$4 OR table$4) AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3942	5666298	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm)((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3943	3703	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3944	869	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/09/21 01:52 PM

			IBM_TDB)				
L3945	91	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3946	305	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3947	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3948	202	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM

		9554644"|"2016030988 9"|"5257767"|"2015028 9641"|"20180103752"|" 10023355"|"200700805 64"|"20150289641"|"29 37003"|"4995130"|"540 0720"|"5626323"|"5926 876"|"6533229"|"67023 72"|"6722618"|"674276 8"|"9055810"|"7845665" |"4967672"|"201002421 74"|"9049923"|"104130 55"|"20070266912"|"20 200029685"|"3295800"| "4741512"|"5294087"|"5 957426"|"7048236"|"84 90933"|"8950343"|"923 2855"|"9993068"|"9326 598"|"D854775"|"10123 613"|"10258149"|"2014 0144352"|"2015021629 6"|"6076785"|"6098961" |"9815672"|"9955780"|" 20180177289"|"767751 8"|"8931750"|"1049973 0"|"20160051042"|"607 6785"|"4741512"|"2009 0145336"|"2016033848 6"|"7204193"|"7950338" |"8132518"|"200700010 77"|"5400720"|"D30289 3"|"10517390"|"105684 16"|"20120097822"|"20 130193392"|"20170196 351"|"3826457"|"45778 21"|"5588377"|"576579 7"|"6533479"|"6672430" |"8469152"|"10018298"| "9981571").PN.				
L3949	67	"5400720"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3950	84	"4577821"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3951	24	(Artificial Intelligence) More like doc:	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2022/09/21 01:52 PM

		US-D854775-S Text: (WO-0068597-A1 OR DE-4336662-A1 OR US-5694864-A OR AT-149474-T OR US-D378155-S OR US-D375602-S OR US-D346254-S OR US-D825131-S OR US-D814736-S OR US-D640440-S OR US-D837970-S OR TW-201522199-A OR TW-I531523-B OR US-20100012909-A1 OR US-D794629-S OR US-D834861-S OR US-D927102-S OR US-D706344-S OR US-D815832-S OR US-D775524-S).did.	AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3952	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3953	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" |				

		"20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3954	29	("20100198374"|"6062148"|"20140137773"|"20120174833"|"7789025"|"20160127809"|"5884882"|"7077068"|"20080255794"|"20140247155"|"9082239"|"20080255794"|"6595144"|"6831829"|"7780578"|"8947215"|"20130204438"|"6546880"|"7517029"|"20130116092"|"20140096706"|"8485945"|"20140247146"|"5323695"|"8587439"|"8690578"|"20140137773"|"20160128467"|"20130321346"|"20140096706"|"20140247154"|"20160260019").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3955	27	("10244861"|"20180213929"|"9326598"|"9681746"|"8931750"|"7246784"|"10114352"|"5957426"|"5722513"|"4640488"|"5251864"|"4448386"|"4702454"|"2843418"|"9668572"|"20070001077"|"4753419"|"11083282"|"20170196351"|"D854775"|"20160249737"|"20120188302"|"10575630").PN.	(US-PGPUB; USPAT; USOCR; JPO)	OR	ON	ON	2022/09/21 01:52 PM
L3956	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3957	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3958	406	wilkens.xp. AND bracket AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3959	159	wilkens.xp. AND stack$4 AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3960	298	wilkens.xp. AND A47B88/$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3961	16	("1680081" | "1686783" | "1902795" | "1994424" | "3094363" | "3275396" | "3298768" | "4285560").pn. OR ("10888157").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3962	43	"3275396"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2022/09/21 01:52 PM

			AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3963	60	("2001744" | "2070960" | "2610824" | "3032319" | "3110476" | "3174722" | "3282566" | "3379411" | "3982718" | "4221280" | "4403680" | "4526346" | "4682750" | "4688760" | "4690250" | "4754713" | "4764075" | "4858888" | "4890692" | "4899987" | "4921074" | "5192053" | "5299906" | "5322143" | "5460460" | "5829948" | "6182796" | "6464205" | "6601826" | "6672430" | "6814188" | "7213686" | "20060126966" | "20060279728" | "20070017748" | "20070235266").pn. OR ("8469152").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3964	37	("4061237" | "4249749" | "4288195" | "4504041" | "4613272" | "4979592" | "5018931" | "6394419" | "6431319" | "6679479" | "8015638" | "8469152" | "8888070" | "9422141" | "9463966" | "9540220" | "20030075657" | "20050042068" | "20110262261" | "20140014886" | "20140027693" | "20150028787" | "20150298949").pn. OR ("9815672").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3965	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		(PGPB | USPT | USOC).dbnm.					
L3966	47	"5861051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3967	1	"58-61051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3968	38	"102013008020"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3969	5	"20190116976"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3970	10	"20200003258"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3971	2	"20210214986"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3972	41	"4741512"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L3973	139	"7677518"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3974	24	("10114352"|"10244861"|"10575630"|"11083282"|"20070001077"|"20120188302"|"20160249737"|"20170196351"|"20180213929"|"2843418"|"4448386"|"4640488"|"4702454"|"4753419"|"5251864"|"5722513"|"5957426"|"7246784"|"8931750"|"9326598"|"9668572"|"9681746"|"D854775").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3975	70	("1318564" | "2937003" | "3295800" | "4221280" | "4558648" | "4577821" | "4843978" | "5588377" | "5626323" | "5829948" | "5957426" | "6098961" | "6269753" | "6516478" | "6533479" | "6722618" | "6742768" | "8132518" | "8671853" | "9049923" | "9055810" | "9326598" | "9480332" | "9504316" | "9554644" | "20030213415" | "20040035332" | "20040040480" | "20070080564" | "20080000393" | "20090090832" | "20090200437" | "20110001033" | "20110024958" | "20120097822" | "20130145972" | "20130193392" | "20140144352" | "20150232005" | "20150375896" | "20160338486" | "20170174486" | "20180008037").pn. OR ("10244861").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

L3976	27	("10114352"|"10244861"|"10575630"|"11083282"|"11134773"|"20030213415"|"20070001077"|"20120188302"|"20160249737"|"20170196351"|"20180213929"|"2843418"|"4448386"|"4640488"|"4702454"|"4753419"|"5251864"|"5722513"|"5957426"|"7246784"|"8931750"|"9326598"|"9668572"|"9681746"|"9815672"|"D854775").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3977	70	("1234569" | "1318564" | "2156148" | "2630359" | "4926760" | "5497706" | "5588377" | "5833200" | "6182935" | "6701853" | "7849789" | "8015638" | "8544391" | "8936306").pn. OR ("9326598").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3978	25	("383610" | "4640488" | "5211369" | "7246784" | "7637468" | "7677518" | "8439334" | "8844894" | "9326598" | "10092089" | "20070295882" | "20130145972" | "20140264215" | "20150014609" | "20160249737" | "20180008037" | "20180146775" | "20180177289" | "20180279770" | "20180332957" | "20180360208" | "20200298599").pn. OR ("11083282").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3979	18	("2016/0249737").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3980	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3981	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3982	37	("2766088" | "D716074" | "9326598" | "9504316" | "D781617" | "D781618" | "20030230222" | "20150289641" | "20170290413" | "20170354245" | "20180055214" | "20180125227").pn. OR ("D845037").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3983	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3984	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR,	OR	ON	ON	2022/09/21 01:52 PM

			GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L3985	17	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM
L3986	135828	hydraulic WITH gas WITH (spring OR cylinder)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3987	727	hydraulic WITH gas WITH (spring OR cylinder) AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3988	263	hydraulic WITH gas WITH (spring OR cylinder) AND A47B AND desk	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3989	139	"7677518"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3990	114	"7677518"	(US-PGPUB; USPAT; USOCR; EPO)	OR	ON	ON	2022/09/21 01:52 PM
L3991	114	"7677518"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3992	129	("4691886" | "4729533" | "5037054" | "5044284" | "5174223" | "5200859" | "5287815" | "5405204" | "5445353" | "5564668" | "5636711" | "D393382" | "5829948" | "5938622" | "5961231" | "6286812" | "6585214" | "6736469"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "6905102" | "7111825" | "7383786").pn. OR ("7677518").urpn. AND (PGPB | USPT | USOC).dbnm.					
L3993	10	("6857493"|"5400720").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3994	37	"1142343"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3995	2	("6857493"|"5400720").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3996	104	("10114352"|"10244861"|"10575630"|"11083282"|"20070001077"|"20120188302"|"20160249737"|"20170196351"|"20180213929"|"2843418"|"4448386"|"4640488"|"4702454"|"4753419"|"5251864"|"5722513"|"5957426"|"7246784"|"8931750"|"9326598"|"9668572"|"9681746"|"D854775").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L3997	24	("10114352"|"10244861"|"10575630"|"11083282"|"20070001077"|"20120188302"|"20160249737"|"20170196351"|"20180213929"|"2843418"|"4448386"|"4640488"|"4702454"|"4753419"|"5251864"|"5722513"|"5957426"|"7246784"|"8931750"|"9326598"|"9668572"|"9681746"|"D854775").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L3998	132	("10018298" OR "10023355" OR "10123613" OR "10258148" OR "10258149" OR "10264877" OR "10306977" OR	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/21 01:52 PM

		"10413055" OR "10499730" OR "10517390" OR "10524565" OR "10542817" OR "10544019" OR "10568416" OR "10869549" OR "10893748" OR "11134773" OR "11134774" OR "11140977" OR "11147366" OR "11160367" OR "1318564" OR "20030042380" OR "20030213415" OR "20050120922" OR "20070080564" OR "20070266912" OR "20080000393" OR "20090145336" OR "20100242174" OR "20120097822" OR "20130193392" OR "20140144352" OR "20150028787" OR "20150216296" OR "20150289641" OR "20160338486" OR "20160353880" OR "20170071332" OR "20170354245" OR "20180177289" OR "20180279770" OR "20190110588" OR "20190183239" OR "20190269237" OR "20200029685" OR "20200107633" OR "2937003" OR "3295800" OR "3823915" OR "3826457" OR "4221280" OR "4449262" OR "4549720" OR "4558648" OR "4577821" OR "4625657" OR "4659052" OR "4709972" OR "4717112" OR "4741512" OR "4826123" OR "4843978" OR "4941641" OR "4967672" OR				

		"4995130" OR "5037163" OR "5048784" OR "5211367" OR "5257767" OR "5294087" OR "5400720" OR "5588377" OR "5626323" OR "5765797" OR "5829948" OR "5836562" OR "5926876" OR "6076785" OR "6098961" OR "6148739" OR "6176456" OR "6179261" OR "6269753" OR "6273382" OR "6488248" OR "6516478" OR "6533229" OR "6533479" OR "6672430" OR "6701853" OR "6702372" OR "6722618" OR "6742768" OR "6792876" OR "6938866" OR "7048236" OR "7188813" OR "7204193" OR "7207629" OR "7575205" OR "7677518" OR "7841570" OR "7845665" OR "7946551" OR "7950338" OR "8015638" OR "8132518" OR "8303062" OR "8469152" OR "8490933" OR "8544391" OR "8671853" OR "8684339" OR "8950343" OR "9049923" OR "9055810" OR "9232855" OR "9480332" OR "9504316" OR "9554644" OR "9809136" OR "9815672" OR					

		"9854904" OR "9955780" OR "9981571" OR "9993068" OR "D302893" OR "D830739" OR "D845037" OR "D870490" OR "D901959").pn.					
L3999	27	("2531856" | "3727245" | "4611823" | "5447319" | "5722513" | "6974185" | "8016305" | "8544391" | "9326598" | "20040040480").pn. OR ("9480332").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4000	2481	A47B67/005.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4001	2113	(A47B3/00 OR A47B61/00).cpc. AND (gear OR shaft)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4002	48	wilkens.xp. AND lift SAME table	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4003	34	(Artificial Intelligence) More like doc: US-8950343-B2 Text: (US-20140041554-A1 OR TW-M445388-U OR US-10092089-B1 OR JP-2018520740-A OR GB-2341790-A OR DK-179639-B1 OR US-20180160799-A1 OR WO-2016200318-A1 OR EP-3307108-A1 OR CN-107708486-A OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

		WO-2016200318-A8 OR WO-2018137739-A1 OR US-9713375-B1 OR DK-201700050-A1 OR US-20180103752-A1 OR US-10258149-B2 OR US-20180255919-A1 OR JP-2017513663-A OR US-10542817-B2 OR US-20150272316-A1).did.	JPO; DERWENT; IBM_TDB)				
L4004	132	("20180125227" OR "10018298" OR "10023355" OR "10114352" OR "10123613" OR "10244861" OR "10258149" OR "10264877" OR "10306977" OR "10413055" OR "10524565" OR "10542817" OR "10544019" OR "10568416" OR "10575630" OR "10869549" OR "11083282" OR "11140977" OR "11147366" OR "1318564" OR "20030042380" OR "20030213415" OR "20070001077" OR "20070080564" OR "20070266912" OR "20080000393" OR "20100242174" OR "20120097822" OR "20120188302" OR "20130193392" OR "20150216296" OR "20160338486" OR "20160353880" OR "20170071332" OR "20170196351" OR "20180177289" OR "20180213929" OR "20180279770" OR "20190110588" OR "20190183239" OR "20190269237" OR "20200029685" OR "20200107633" OR "2843418" OR "2937003" OR	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/21 01:52 PM

		"3295800" OR "4221280" OR "4448386" OR "4449262" OR "4549720" OR "4558648" OR "4577821" OR "4625657" OR "4640488" OR "4702454" OR "4709972" OR "4717112" OR "4753419" OR "4826123" OR "4843978" OR "4941641" OR "4967672" OR "4995130" OR "5037163" OR "5048784" OR "5211367" OR "5251864" OR "5257767" OR "5294087" OR "5400720" OR "5588377" OR "5626323" OR "5722513" OR "5765797" OR "5829948" OR "5836562" OR "5926876" OR "5957426" OR "6076785" OR "6098961" OR "6148739" OR "6176456" OR "6179261" OR "6269753" OR "6273382" OR "6488248" OR "6516478" OR "6533229" OR "6533479" OR "6672430" OR "6701853" OR "6702372" OR "6722618" OR "6742768" OR "6792876" OR "6938866" OR "7048236" OR "7188813" OR "7204193" OR "7207629" OR "7246784" OR "7575205" OR "7841570" OR					

		"7845665" OR "7946551" OR "7950338" OR "8015638" OR "8132518" OR "8303062" OR "8469152" OR "8490933" OR "8544391" OR "8671853" OR "8684339" OR "8950343" OR "9049923" OR "9055810" OR "9232855" OR "9326598" OR "9480332" OR "9504316" OR "9554644" OR "9668572" OR "9681746" OR "9809136" OR "9854904" OR "9955780" OR "9981571" OR "9993068" OR "D830739" OR "D870490" OR "D901959").pn.					
L4005	26	("4221280" | "4577821" | "4995130" | "5186038" | "5322143" | "5588377" | "9161616" | "D845037" | "10264877" | "10517390" | "20100012909" | "20140041554" | "20160338486" | "20170354245" | "20180055214" | "20180146775").pn. OR ("10869549").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4006	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" |				

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L4007	87	("1318564" | "2937003" | "3295800" | "4221280" | "4558648" | "4577821" | "4843978" | "5037163" | "5211367" | "5257767" | "5588377" | "5626323" | "5829948" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533479" | "6701853" | "6722618" | "6742768" | "6792876" | "7677518" | "7841570" | "7950338" | "8132518" | "8544391" | "8671853" | "8684339" | "8931750" | "9049923" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "10159336" | "10244861" | "10258148" | "10258149" | "10499730" | "10542817" | "20030213415" | "20040040480" | "20070080564" | "20080000393" | "20120097822" | "20130193392" | "20130199420" | "20140144352" | "20140158026" | "20150232005" | "20150368082" | "20150375896" | "20160051042" | "20160106205" | "20160170402" | "20160260019" | "20160309889" | "20160338486" | "20160353880" | "20170174486" | "20170360192" | "20180008037" | "20180125227" | "20180177289" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20180279770" | "20180360208" | "20190110588" | "20190269237" | "20200029685").pn. OR ("10893748").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4008	162	("1824822" | "2545515" | "2579577" | "2581023" | "2630359" | "2727799" | "2798641" | "3203373" | "3245366" | "3347184" | "3727245" | "3888451" | "4032103" | "4073240" | "4130069" | "4194452" | "4515086" | "4534544" | "4558847" | "4577821" | "4589621" | "4625657" | "4728118" | "4981052" | "4981085" | "5039054" | "5048784" | "5083512" | "5088676" | "5174223" | "5192053" | "5251864" | "5322025" | "5325794" | "5375514" | "5394809" | "5490466" | "5503086" | "5549052" | "5553550" | "5588377" | "5649493" | "5680820" | "5687655" | "5778799" | "5794911" | "5823120" | "5833198" | "5938340" | "5967059" | "6026755" | "6038986" | "6283047" | "6286441" | "6378446" | "6439657" | "6510803" | "6516478" | "6520091" | "6603157" | "6691626" | "6701853" | "6874431" | "6991199" | "7048236" | "7059254" | "7201108" | "7246784" | "7385376" | "7548051" | "7642759" | "7654208" | "7677518" | "7690317" | "7849789" | "7887014" | "7950338" | "8065966" | "8132518" | "8439319" | "8544391" | "8671853" | "8783639" | "8800454" | "8931750" | "8950343" | "9049923" | "9055810" | "9072645" | "9113703" | "9668572" | "20020189505" | "20030213415" | "20040187742" | "20040227443" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20050041721" | "20050248239" | "20060037518" | "20060038383" | "20060157628" | "20070163475" | "20070259554" | "20070266912" | "20070295882" | "20080308016" | "20090179121" | "20100242174" | "20100257671" | "20110120351" | "20110168062" | "20110247532" | "20130014674" | "20130139736" | "20130145972" | "20130199420" | "20130340655" | "20140020606" | "20140041554" | "20140144352" | "20140158026" | "20140165882" | "20140360411" | "20150164218" | "20150216296" | "20150231992" | "20150250303" | "20150289641" | "20160120300" | "20160198853" | "20160278515" | "20160338486" | "20170354245" | "20170360188" | "20180103752" | "20180146775" | "20180160799" | "20180213929" | "20180279772").pn. OR ("10542817").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4009	87	("1318564" | "2937003" | "3295800" | "4221280" | "4558648" | "4577821" | "4843978" | "5037163" | "5211367" | "5257767" | "5588377" | "5626323" | "5829948" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533479" | "6701853" | "6722618" | "6742768" | "6792876" | "7677518"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "7841570" | "7950338" | "8132518" | "8544391" | "8671853" | "8684339" | "8931750" | "9049923" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "10159336" | "10244861" | "10258148" | "10258149" | "10499730" | "10542817" | "20030213415" | "20040040480" | "20070080564" | "20080000393" | "20120097822" | "20130193392" | "20130199420" | "20140144352" | "20140158026" | "20150232005" | "20150368082" | "20150375896" | "20160051042" | "20160106205" | "20160170402" | "20160260019" | "20160309889" | "20160338486" | "20160353880" | "20170174486" | "20170360192" | "20180008037" | "20180125227" | "20180177289" | "20180279770" | "20180360208" | "20190110588" | "20190269237" | "20200029685").pn. OR ("10893748").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4010	33	("136357" | "2624535" | "2733109" | "3001559" | "4967672" | "5588377" | "5636711" | "5829948" | "7032872" | "7059616" | "7677518" | "20140144352").pn. OR ("8950343").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4011	8	("2012/0188302").urpn. AND (PGPB | USPT |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		USOC).dbnm.					
L4012	22	("2005/0120922").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4013	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4014	17703	A47B21/0314,00,02,03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4015	1350	A47B21/0314,00,02,03.cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4016	162	("3140894"|"4926760"|"5588377"|"7640869"|"9113703"|"9615655"|"20160120300"|"6974185"|"9161616"|"5649493"|"8544391"|"9055810"|"9480332"|"9554644"|"20160249737"|"2531856"|"3494662"|"8016305"|"9644378"|"9681746"|"2922685"|"9326598"|"9625929"|"3161161"|"8936306").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4017	88	("2156148"|"20040040480"|"20080203865"|"20130139736"|"20140041554"|"20150216296"|"20150289641"|"20160286951"|"20160338486"|"3245366"|"4691888"|"5588377"|"8544391"|"9326598"|"9480332"|"9504316").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4018	1313	312/208.1,223.3.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

			SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4019	0	248/421,562,588, "585,431,432,439".cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4020	0	248/421,562,588,585,431,432,439.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4021	3921	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4022	2881	248/421,562,588,585.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4023	1060	248/431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4024	3035	108/147,144.11,145,93.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4025	1049	108/96,116.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

			SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4026	3238	108/118,120,43,138,50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4027	1877	108/118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4028	1396	108/50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4029	550	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"475341	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		9"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"20180103752"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.					
L4030	25	("3282566" | "4273306" | "5400720" | "5632209" | "5649493" | "9326598" | "20130340655" | "20140360414" | "20150289641" | "20180055214").pn. OR ("10517390").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4031	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4032	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4033	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4034	56	("D166377" | "D280478" | "D304112" | "D352845" | "D371687" | "D395969" | "D415910" | "D424828" | "D435368" | "D435986" | "D436268" | "D464212" | "D530939" | "D612643" | "D644046" | "D671338" | "D681979" | "D694044" | "D716074" | "D733476" | "D734413" | "D771981" | "D771982" | "9504316" | "D781617" | "D781618" | "D781619" | "D784050" | "20080178779" | "20130139736" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20150096472" | "20160106205" | "20160278515" | "20170105518" | "20170196351" | "20170290413" | "20170354245").pn. OR ("D830739").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4035	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4036	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4037	2081	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4038	10819	(A47B3/00 OR A47B61/00).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT,	OR	ON	ON	2022/09/21 01:52 PM

			AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4039	182	(A47B3/00 OR A47B61/00).cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4040	3649	A47B3/02,0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4041	1712	A47B3/0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4042	513	(A47B3/02 AND A47B2003/025).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4043	1267876	(desk$4 OR table$4) AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4044	5666298	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm)((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4045	3703	(desk$4 OR table$4) AND (X OR cross) ADJ	(US-PGPUB; USPAT; USOCR; FIT (AP, AT,	OR	ON	ON	2022/09/21 01:52 PM

		(member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4046	869	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4047	91	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4048	305	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4049	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4050	202	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM

		948"|"6701853"|"80156 38"|"D302893"|"102448 61"|"7575205"|"105428 17"|"20160353880"|"52 11367"|"10893748"|"49 95130"|"9504316"|"D83 0739"|"10544019"|"105 75630"|"4221280"|"444 9262"|"4549720"|"5251 864"|"6269753"|"65164 78"|"6792876"|"720762 9"|"10524565"|"475341 9"|"4941641"|"8303062" |"8544391"|"9480332"|" 9554644"|"2016030988 9"|"5257767"|"2015028 9641"|"20180103752"|" 10023355"|"200700805 64"|"20150289641"|"29 37003"|"4995130"|"540 0720"|"5626323"|"5926 876"|"6533229"|"67023 72"|"6722618"|"674276 8"|"9055810"|"7845665" |"4967672"|"201002421 74"|"9049923"|"104130 55"|"20070266912"|"20 200029685"|"3295800"| "4741512"|"5294087"|"5 957426"|"7048236"|"84 90933"|"8950343"|"923 2855"|"9993068"|"9326 598"|"D854775"|"10123 613"|"10258149"|"2014 0144352"|"2015021629 6"|"6076785"|"6098961" |"9815672"|"9955780"|" 20180177289"|"767751 8"|"8931750"|"1049973 0"|"20160051042"|"607 6785"|"4741512"|"2009 0145336"|"2016033848 6"|"7204193"|"7950338" |"8132518"|"200700010 77"|"5400720"|"D30289 3"|"10517390"|"105684 16"|"20120097822"|"20 130193392"|"20170196 351"|"3826457"|"45778 21"|"5588377"|"576579 7"|"6533479"|"6672430" |"8469152"|"10018298"| "9981571").PN.				
L4051	67	"5400720"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

			SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4052	84	"4577821"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4053	24	(Artificial Intelligence) More like doc: US-D854775-S Text: (WO-0068597-A1 OR DE-4336662-A1 OR US-5694864-A OR AT-149474-T OR US-D378155-S OR US-D375602-S OR US-D346254-S OR US-D825131-S OR US-D814736-S OR US-D640440-S OR US-D837970-S OR TW-201522199-A OR TW-I531523-B OR US-20100012909-A1 OR US-D794629-S OR US-D834861-S OR US-D927102-S OR US-D706344-S OR US-D815832-S OR US-D775524-S).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4054	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4055	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4056	29	("20100198374"|"6062148"|"20140137773"|"20120174833"|"7789025"|"20160127809"|"5884882"|"7077068"|"20080255794"|"20140247155"|"9082239"|"20080255794"|"6595144"|"6831829"|"7780578"|"8947215"|"20130204438"|"6546880"|"7517029"|"20130116092"|"20140096706"|"8485945"|"20140247146"|"5323695"|"8587439"|"8690578"|"20140137773"|"20160128467"|"20130321346"|"20140096706"|"20140247154"|"20160260019").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4057	27	("10244861"|"20180213929"|"9326598"|"9681746"|"8931750"|"7246784"|"10114352"|"5957426"|"5722513"|"4640488"|"5251864"|"4448386"|"4702454"|"2843418"|"9668572"|"20070001077"|"4753419"|"11083282"	(US-PGPUB; USPAT; USOCR; JPO)	OR	ON	ON	2022/09/21 01:52 PM

		|"20170196351"|"D854775"|"20160249737"|"20120188302"|"10575630").PN.					
L4058	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4059	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4060	406	wilkens.xp. AND bracket AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4061	159	wilkens.xp. AND stack$4 AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4062	298	wilkens.xp. AND A47B88/$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

			SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4063	16	("1680081" | "1686783" | "1902795" | "1994424" | "3094363" | "3275396" | "3298768" | "4285560").pn. OR ("10888157").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4064	43	"3275396"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4065	60	("2001744" | "2070960" | "2610824" | "3032319" | "3110476" | "3174722" | "3282566" | "3379411" | "3982718" | "4221280" | "4403680" | "4526346" | "4682750" | "4688760" | "4690250" | "4754713" | "4764075" | "4858888" | "4890692" | "4899987" | "4921074" | "5192053" | "5299906" | "5322143" | "5460460" | "5829948" | "6182796" | "6464205" | "6601826" | "6672430" | "6814188" | "7213686" | "20060126966" | "20060279728" | "20070017748" | "20070235266").pn. OR ("8469152").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4066	37	("4061237" | "4249749" | "4288195" | "4504041" | "4613272" | "4979592" | "5018931" | "6394419" | "6431319" | "6679479" | "8015638" | "8469152" | "8888070" | "9422141" | "9463966" | "9540220" | "20030075657" | "20050042068" | "20110262261" | "20140014886" | "20140027693" | "20150028787" | "20150298949").pn. OR	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		("9815672").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4067	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4068	47	"5861051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4069	1	"58-61051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4070	38	"102013008020"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4071	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4072	17703	A47B21/0314,00,02,03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4073	1350	A47B21/0314,00,02,03.	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L4074	162	("3140894"|"4926760"|"5588377"|"7640869"|"9113703"|"9615655"|"20160120300"|"6974185"|"9161616"|"5649493"|"8544391"|"9055810"|"9480332"|"9554644"|"20160249737"|"2531856"|"3494662"|"8016305"|"9644378"|"9681746"|"2922685"|"9326598"|"9625929"|"3161161"|"8936306").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4075	88	("2156148"|"20040040480"|"20080203865"|"20130139736"|"20140041554"|"20150216296"|"20150289641"|"20160286951"|"20160338486"|"3245366"|"4691888"|"5588377"|"8544391"|"9326598"|"9480332"|"9504316").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4076	1313	312/208.1,223.3.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4077	0	248/421,562,588, "585,431,432,439".cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4078	0	248/421,562,588,585,431,432,439.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4079	3921	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2022/09/21 01:52 PM

			AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4080	2881	248/421,562,588,585.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4081	1060	248/431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4082	3035	108/147,144.11,145,93.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4083	1049	108/96,116.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4084	3238	108/118,120,43,138,50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4085	1877	108/118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4086	1396	108/50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT,	OR	ON	ON	2022/09/21 01:52 PM

			AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4087	550	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"20180103752"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"2014	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		0144352"|"2015021629 6"|"6076785"|"6098961" |"9815672"|"9955780"|" 20180177289"|"767751 8"|"8931750"|"1049973 0"|"20160051042"|"607 6785"|"4741512"|"2009 0145336"|"2016033848 6"|"7204193"|"7950338" |"8132518"|"200700010 77"|"5400720"|"D30289 3"|"10517390"|"105684 16"|"20120097822"|"20 130193392"|"20170196 351"|"3826457"|"45778 21"|"5588377"|"576579 7"|"6533479"|"6672430" |"8469152"|"10018298"| "9981571").PN.					
L4088	25	("3282566" | "4273306" | "5400720" | "5632209" | "5649493" | "9326598" | "20130340655" | "20140360414" | "20150289641" | "20180055214").pn. OR ("10517390").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4089	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4090	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4091	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4092	56	("D166377" | "D280478" | "D304112" | "D352845" | "D371687" | "D395969" | "D415910" | "D424828" | "D435368" | "D435986" | "D436268" | "D464212" | "D530939" | "D612643" | "D644046" | "D671338" | "D681979" | "D694044" | "D716074" | "D733476" | "D734413" | "D771981" | "D771982" | "9504316" | "D781617" | "D781618" | "D781619" | "D784050" | "20080178779" | "20130139736" | "20150096472" | "20160106205" | "20160278515" | "20170105518" | "20170196351" | "20170290413" | "20170354245").pn. OR ("D830739").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4093	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4094	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4095	2081	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4096	10819	(A47B3/00 OR A47B61/00).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4097	182	(A47B3/00 OR A47B61/00).cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4098	3649	A47B3/02,0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/09/21 01:52 PM

			IBM_TDB)				
L4099	1712	A47B3/0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4100	513	(A47B3/02 AND A47B2003/025).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4101	1267876	(desk$4 OR table$4) AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4102	5666298	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm)((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4103	3703	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4104	869	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4105	91	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L4106	305	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4107	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4108	202	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM

		876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.					
L4109	67	"5400720"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4110	84	"4577821"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4111	24	(Artificial Intelligence) More like doc: US-D854775-S Text: (WO-0068597-A1 OR DE-4336662-A1 OR US-5694864-A OR AT-149474-T OR US-D378155-S OR US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO,	OR	ON	ON	2022/09/21 01:52 PM

		D375602-S OR US-D346254-S OR US-D825131-S OR US-D814736-S OR US-D640440-S OR US-D837970-S OR TW-201522199-A OR TW-I531523-B OR US-20100012909-A1 OR US-D794629-S OR US-D834861-S OR US-D927102-S OR US-D706344-S OR US-D815832-S OR US-D775524-S).did.	MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4112	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4113	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" |				

		"20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4114	29	("20100198374"|"6062148"|"20140137773"|"20120174833"|"7789025"|"20160127809"|"5884882"|"7077068"|"20080255794"|"20140247155"|"9082239"|"20080255794"|"6595144"|"6831829"|"7780578"|"8947215"|"20130204438"|"6546880"|"7517029"|"20130116092"|"20140096706"|"8485945"|"20140247146"|"5323695"|"8587439"|"8690578"|"20140137773"|"20160128467"|"20130321346"|"20140096706"|"20140247154"|"20160260019").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4115	27	("10244861"|"20180213929"|"9326598"|"9681746"|"8931750"|"7246784"|"10114352"|"5957426"|"5722513"|"4640488"|"5251864"|"4448386"|"4702454"|"2843418"|"9668572"|"20070001077"|"4753419"|"11083282"|"20170196351"|"D854775"|"20160249737"|"20120188302"|"10575630").PN.	(US-PGPUB; USPAT; USOCR; JPO)	OR	ON	ON	2022/09/21 01:52 PM
L4116	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4117	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4118	406	wilkens.xp. AND bracket AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4119	159	wilkens.xp. AND stack$4 AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4120	298	wilkens.xp. AND A47B88/$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4121	16	("1680081" | "1686783" | "1902795" | "1994424" | "3094363" | "3275396" | "3298768" | "4285560").pn. OR ("10888157").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4122	43	"3275396"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4123	60	("2001744" | "2070960"	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		| "2610824" | "3032319" | "3110476" | "3174722" | "3282566" | "3379411" | "3982718" | "4221280" | "4403680" | "4526346" | "4682750" | "4688760" | "4690250" | "4754713" | "4764075" | "4858888" | "4890692" | "4899987" | "4921074" | "5192053" | "5299906" | "5322143" | "5460460" | "5829948" | "6182796" | "6464205" | "6601826" | "6672430" | "6814188" | "7213686" | "20060126966" | "20060279728" | "20070017748" | "20070235266").pn. OR ("8469152").urpn. AND (PGPB | USPT | USOC).dbnm.	USOCR)				01:52 PM
L4124	37	("4061237" | "4249749" | "4288195" | "4504041" | "4613272" | "4979592" | "5018931" | "6394419" | "6431319" | "6679479" | "8015638" | "8469152" | "8888070" | "9422141" | "9463966" | "9540220" | "20030075657" | "20050042068" | "20110262261" | "20140014886" | "20140027693" | "20150028787" | "20150298949").pn. OR ("9815672").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4125	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4126	47	"5861051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

			SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4127	1	"58-61051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4128	38	"102013008020"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4129	5	"20190116976"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4130	10	"20200003258"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4131	2	"20210214986"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4132	41	"4741512"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4133	139	"7677518"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

			SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4134	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4135	17703	A47B21/0314,00,02,03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4136	1350	A47B21/0314,00,02,03.cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4137	162	("3140894"|"4926760"|"5588377"|"7640869"|"9113703"|"9615655"|"20160120300"|"6974185"|"9161616"|"5649493"|"8544391"|"9055810"|"9480332"|"9554644"|"20160249737"|"2531856"|"3494662"|"8016305"|"9644378"|"9681746"|"2922685"|"9326598"|"9625929"|"3161161"|"8936306").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4138	88	("2156148"|"20040040480"|"20080203865"|"20130139736"|"20140041554"|"20150216296"|"20150289641"|"20160286951"|"20160338486"|"3245366"|"4691888"|"5588377"|"8544391"|"9326598"|"9480332"|"9504316").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4139	1313	312/208.1,223.3.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L4140	0	248/421,562,588, "585,431,432,439".cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4141	0	248/421,562,588,585,431,432,439.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4142	3921	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4143	2881	248/421,562,588,585.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4144	1060	248/431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4145	3035	108/147,144.11,145,93.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4146	1049	108/96,116.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L4147	3238	108/118,120,43,138,50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4148	1877	108/118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4149	1396	108/50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4150	550	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"20180103752"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.				
L4151	25	("3282566" | "4273306" | "5400720" | "5632209" | "5649493" | "9326598" | "20130340655" | "20140360414" | "20150289641" | "20180055214").pn. OR ("10517390").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4152	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4153	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4154	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4155	56	("D166377" | "D280478" | "D304112" | "D352845" | "D371687" | "D395969" | "D415910" | "D424828" | "D435368" | "D435986" | "D436268" | "D464212" | "D530939" | "D612643" | "D644046" | "D671338" | "D681979" | "D694044" | "D716074" | "D733476" | "D734413" | "D771981" | "D771982" | "9504316" | "D781617" | "D781618" | "D781619" | "D784050" | "20080178779" | "20130139736" | "20150096472" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20160106205" | "20160278515" | "20170105518" | "20170196351" | "20170290413" | "20170354245").pn. OR ("D830739").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4156	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4157	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4158	2081	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4159	10819	(A47B3/00 OR A47B61/00).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD,	OR	ON	ON	2022/09/21 01:52 PM

			DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4160	182	(A47B3/00 OR A47B61/00).cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4161	3649	A47B3/02,0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4162	1712	A47B3/0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4163	513	(A47B3/02 AND A47B2003/025).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4164	1267876	(desk$4 OR table$4) AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4165	5666298	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm)((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4166	3703	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD,	OR	ON	ON	2022/09/21 01:52 PM

		SAME ((pnuematic OR gas) ADJ spring OR actuator)	DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4167	869	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4168	91	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4169	305	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4170	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4171	202	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"80156	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM

		38"|"D302893"|"102448 61"|"7575205"|"105428 17"|"20160353880"|"52 11367"|"10893748"|"49 95130"|"9504316"|"D83 0739"|"10544019"|"105 75630"|"4221280"|"444 9262"|"4549720"|"5251 864"|"6269753"|"65164 78"|"6792876"|"720762 9"|"10524565"|"475341 9"|"4941641"|"8303062" |"8544391"|"9480332"|" 9554644"|"2016030988 9"|"5257767"|"2015028 9641"|"20180103752"|" 10023355"|"200700805 64"|"20150289641"|"29 37003"|"4995130"|"540 0720"|"5626323"|"5926 876"|"6533229"|"67023 72"|"6722618"|"674276 8"|"9055810"|"7845665" |"4967672"|"201002421 74"|"9049923"|"104130 55"|"20070266912"|"20 200029685"|"3295800"| "4741512"|"5294087"|"5 957426"|"7048236"|"84 90933"|"8950343"|"923 2855"|"9993068"|"9326 598"|"D854775"|"10123 613"|"10258149"|"2014 0144352"|"2015021629 6"|"6076785"|"6098961" |"9815672"|"9955780"|" 20180177289"|"767751 8"|"8931750"|"1049973 0"|"20160051042"|"607 6785"|"4741512"|"2009 0145336"|"2016033848 6"|"7204193"|"7950338" |"8132518"|"200700010 77"|"5400720"|"D30289 3"|"10517390"|"105684 16"|"20120097822"|"20 130193392"|"20170196 351"|"3826457"|"45778 21"|"5588377"|"576579 7"|"6533479"|"6672430" |"8469152"|"10018298"| "9981571").PN.				
L4172	67	"5400720"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L4173	84	"4577821"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4174	24	(Artificial Intelligence) More like doc: US-D854775-S Text: (WO-0068597-A1 OR DE-4336662-A1 OR US-5694864-A OR AT-149474-T OR US-D378155-S OR US-D375602-S OR US-D346254-S OR US-D825131-S OR US-D814736-S OR US-D640440-S OR US-D837970-S OR TW-201522199-A OR TW-I531523-B OR US-20100012909-A1 OR US-D794629-S OR US-D834861-S OR US-D927102-S OR US-D706344-S OR US-D815832-S OR US-D775524-S).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4175	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4176	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4177	29	("20100198374"|"6062148"|"20140137773"|"20120174833"|"7789025"|"20160127809"|"5884882"|"7077068"|"20080255794"|"20140247155"|"9082239"|"20080255794"|"6595144"|"6831829"|"7780578"|"8947215"|"20130204438"|"6546880"|"7517029"|"20130116092"|"20140096706"|"8485945"|"20140247146"|"5323695"|"8587439"|"8690578"|"20140137773"|"20160128467"|"20130321346"|"20140096706"|"20140247154"|"20160260019").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4178	27	("10244861"|"20180213929"|"9326598"|"9681746"|"8931750"|"7246784"|"10114352"|"5957426"|"5722513"|"4640488"|"5251864"|"4448386"|"4702454"|"2843418"|"9668572"|"20070001077"|"4753419"|"11083282"|"20170196351"|"D8547	(US-PGPUB; USPAT; USOCR; JPO)	OR	ON	ON	2022/09/21 01:52 PM

		75"|"20160249737"|"20120188302"|"10575630").PN.					
L4179	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4180	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4181	406	wilkens.xp. AND bracket AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4182	159	wilkens.xp. AND stack$4 AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4183	298	wilkens.xp. AND A47B88/$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L4184	16	("1680081" | "1686783" | "1902795" | "1994424" | "3094363" | "3275396" | "3298768" | "4285560").pn. OR ("10888157").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4185	43	"3275396"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4186	60	("2001744" | "2070960" | "2610824" | "3032319" | "3110476" | "3174722" | "3282566" | "3379411" | "3982718" | "4221280" | "4403680" | "4526346" | "4682750" | "4688760" | "4690250" | "4754713" | "4764075" | "4858888" | "4890692" | "4899987" | "4921074" | "5192053" | "5299906" | "5322143" | "5460460" | "5829948" | "6182796" | "6464205" | "6601826" | "6672430" | "6814188" | "7213686" | "20060126966" | "20060279728" | "20070017748" | "20070235266").pn. OR ("8469152").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4187	37	("4061237" | "4249749" | "4288195" | "4504041" | "4613272" | "4979592" | "5018931" | "6394419" | "6431319" | "6679479" | "8015638" | "8469152" | "8888070" | "9422141" | "9463966" | "9540220" | "20030075657" | "20050042068" | "20110262261" | "20140014886" | "20140027693" | "20150028787" | "20150298949").pn. OR ("9815672").urpn. AND	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		(PGPB | USPT | USOC).dbnm.					
L4188	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4189	47	"5861051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4190	1	"58-61051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4191	38	"102013008020"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4192	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4193	17703	A47B21/0314,00,02,03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4194	1350	A47B21/0314,00,02,03.cpc. AND ((pnuematic	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2022/09/21 01:52 PM

		OR gas) ADJ spring OR actuator)	AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4195	162	("3140894"|"4926760"|"5588377"|"7640869"|"9113703"|"9615655"|"20160120300"|"6974185"|"9161616"|"5649493"|"8544391"|"9055810"|"9480332"|"9554644"|"20160249737"|"2531856"|"3494662"|"8016305"|"9644378"|"9681746"|"2922685"|"9326598"|"9625929"|"3161161"|"8936306").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4196	88	("2156148"|"20040040480"|"20080203865"|"20130139736"|"20140041554"|"20150216296"|"20150289641"|"20160286951"|"20160338486"|"3245366"|"4691888"|"5588377"|"8544391"|"9326598"|"9480332"|"9504316").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4197	1313	312/208.1,223.3.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4198	0	248/421,562,588, "585,431,432,439".cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4199	0	248/421,562,588,585,431,432,439.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4200	3921	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD,	OR	ON	ON	2022/09/21 01:52 PM

			DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4201	2881	248/421,562,588,585.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4202	1060	248/431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4203	3035	108/147,144.11,145,93.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4204	1049	108/96,116.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4205	3238	108/118,120,43,138,50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4206	1877	108/118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4207	1396	108/50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT,	OR	ON	ON	2022/09/21 01:52 PM

			AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4208	550	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"20180103752"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"2014	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		0144352"|"2015021629 6"|"6076785"|"6098961" |"9815672"|"9955780"|" 20180177289"|"767751 8"|"8931750"|"1049973 0"|"20160051042"|"607 6785"|"4741512"|"2009 0145336"|"2016033848 6"|"7204193"|"7950338" |"8132518"|"200700010 77"|"5400720"|"D30289 3"|"10517390"|"105684 16"|"20120097822"|"20 130193392"|"20170196 351"|"3826457"|"45778 21"|"5588377"|"576579 7"|"6533479"|"6672430" |"8469152"|"10018298"| "9981571").PN.					
L4209	25	("3282566" | "4273306" | "5400720" | "5632209" | "5649493" | "9326598" | "20130340655" | "20140360414" | "20150289641" | "20180055214").pn. OR ("10517390").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4210	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4211	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4212	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4213	56	("D166377" | "D280478" | "D304112" | "D352845" | "D371687" | "D395969" | "D415910" | "D424828" | "D435368" | "D435986" | "D436268" | "D464212" | "D530939" | "D612643" | "D644046" | "D671338" | "D681979" | "D694044" | "D716074" | "D733476" | "D734413" | "D771981" | "D771982" | "9504316" | "D781617" | "D781618" | "D781619" | "D784050" | "20080178779" | "20130139736" | "20150096472" | "20160106205" | "20160278515" | "20170105518" | "20170196351" | "20170290413" | "20170354245").pn. OR ("D830739").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4214	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4215	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4216	2081	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4217	10819	(A47B3/00 OR A47B61/00).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4218	182	(A47B3/00 OR A47B61/00).cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4219	3649	A47B3/02,0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/09/21 01:52 PM

			IBM_TDB)				
L4220	1712	A47B3/0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4221	513	(A47B3/02 AND A47B2003/025).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4222	1267876	(desk$4 OR table$4) AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4223	5666298	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm)((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4224	3703	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4225	869	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4226	91	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/09/21 01:52 PM

			IBM_TDB)				
L4227	305	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4228	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4229	202	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"67023	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM

		72"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.					
L4230	67	"5400720"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4231	84	"4577821"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4232	24	(Artificial Intelligence) More like doc: US-D854775-S Text: (WO-0068597-A1 OR DE-4336662-A1 OR US-5694864-A OR AT-149474-T OR US-D378155-S OR US-D375602-S OR US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO,	OR	ON	ON	2022/09/21 01:52 PM

		D346254-S OR US-D825131-S OR US-D814736-S OR US-D640440-S OR US-D837970-S OR TW-201522199-A OR TW-I531523-B OR US-20100012909-A1 OR US-D794629-S OR US-D834861-S OR US-D927102-S OR US-D706344-S OR US-D815832-S OR US-D775524-S).did.	NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4233	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4234	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" |					

		"20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4235	29	("20100198374"|"6062148"|"20140137773"|"20120174833"|"7789025"|"20160127809"|"5884882"|"7077068"|"20080255794"|"20140247155"|"9082239"|"20080255794"|"6595144"|"6831829"|"7780578"|"8947215"|"20130204438"|"6546880"|"7517029"|"20130116092"|"20140096706"|"8485945"|"20140247146"|"5323695"|"8587439"|"8690578"|"20140137773"|"20160128467"|"20130321346"|"20140096706"|"20140247154"|"20160260019").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4236	27	("10244861"|"20180213929"|"9326598"|"9681746"|"8931750"|"7246784"|"10114352"|"5957426"|"5722513"|"4640488"|"5251864"|"4448386"|"4702454"|"2843418"|"9668572"|"20070001077"|"4753419"|"11083282"|"20170196351"|"D854775"|"20160249737"|"20120188302"|"10575630").PN.	(US-PGPUB; USPAT; USOCR; JPO)	OR	ON	ON	2022/09/21 01:52 PM
L4237	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4238	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4239	406	wilkens.xp. AND bracket AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4240	159	wilkens.xp. AND stack$4 AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4241	298	wilkens.xp. AND A47B88/$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4242	16	("1680081" | "1686783" | "1902795" | "1994424" | "3094363" | "3275396" | "3298768" | "4285560").pn. OR ("10888157").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4243	43	"3275396"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4244	60	("2001744" | "2070960" | "2610824" | "3032319"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "3110476" | "3174722" | "3282566" | "3379411" | "3982718" | "4221280" | "4403680" | "4526346" | "4682750" | "4688760" | "4690250" | "4754713" | "4764075" | "4858888" | "4890692" | "4899987" | "4921074" | "5192053" | "5299906" | "5322143" | "5460460" | "5829948" | "6182796" | "6464205" | "6601826" | "6672430" | "6814188" | "7213686" | "20060126966" | "20060279728" | "20070017748" | "20070235266").pn. OR ("8469152").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4245	37	("4061237" | "4249749" | "4288195" | "4504041" | "4613272" | "4979592" | "5018931" | "6394419" | "6431319" | "6679479" | "8015638" | "8469152" | "8888070" | "9422141" | "9463966" | "9540220" | "20030075657" | "20050042068" | "20110262261" | "20140014886" | "20140027693" | "20150028787" | "20150298949").pn. OR ("9815672").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4246	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4247	47	"5861051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L4248	1	"58-61051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4249	38	"102013008020"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4250	5	"20190116976"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4251	10	"20200003258"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4252	2	"20210214986"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4253	41	"4741512"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4254	139	"7677518"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L4255	24	("10114352"|"10244861"|"10575630"|"11083282"|"20070001077"|"20120188302"|"20160249737"|"20170196351"|"20180213929"|"2843418"|"4448386"|"4640488"|"4702454"|"4753419"|"5251864"|"5722513"|"5957426"|"7246784"|"8931750"|"9326598"|"9668572"|"9681746"|"D854775").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4256	70	("1318564" | "2937003" | "3295800" | "4221280" | "4558648" | "4577821" | "4843978" | "5588377" | "5626323" | "5829948" | "5957426" | "6098961" | "6269753" | "6516478" | "6533479" | "6722618" | "6742768" | "8132518" | "8671853" | "9049923" | "9055810" | "9326598" | "9480332" | "9504316" | "9554644" | "20030213415" | "20040035332" | "20040040480" | "20070080564" | "20080000393" | "20090090832" | "20090200437" | "20110001033" | "20110024958" | "20120097822" | "20130145972" | "20130193392" | "20140144352" | "20150232005" | "20150375896" | "20160338486" | "20170174486" | "20180008037").pn. OR ("10244861").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4257	27	("10114352"|"10244861"|"10575630"|"11083282"|"11134773"|"20030213415"|"20070001077"|"20120188302"|"20160249737"|"20170196351"|"20180213929"|"2843418"|"4448386"|"46404	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		88"|"4702454"|"4753419"|"5251864"|"5722513"|"5957426"|"7246784"|"8931750"|"9326598"|"9668572"|"9681746"|"9815672"|"D854775").PN.					
L4258	70	("1234569" | "1318564" | "2156148" | "2630359" | "4926760" | "5497706" | "5588377" | "5833200" | "6182935" | "6701853" | "7849789" | "8015638" | "8544391" | "8936306").pn. OR ("9326598").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4259	25	("383610" | "4640488" | "5211369" | "7246784" | "7637468" | "7677518" | "8439334" | "8844894" | "9326598" | "10092089" | "20070295882" | "20130145972" | "20140264215" | "20150014609" | "20160249737" | "20180008037" | "20180146775" | "20180177289" | "20180279770" | "20180332957" | "20180360208" | "20200298599").pn. OR ("11083282").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4260	18	("2016/0249737").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4261	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4262	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4263	37	("2766088" | "D716074" | "9326598" | "9504316" | "D781617" | "D781618" | "20030230222" | "20150289641" | "20170290413" | "20170354245" | "20180055214" | "20180125227").pn. OR ("D845037").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4264	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4265	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4266	17	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD,	OR	ON	ON	2022/09/21 01:52 PM

			DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))				
L4267	135828	hydraulic WITH gas WITH (spring OR cylinder)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4268	727	hydraulic WITH gas WITH (spring OR cylinder) AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4269	263	hydraulic WITH gas WITH (spring OR cylinder) AND A47B AND desk	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4270	139	"7677518"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4271	114	"7677518"	(US-PGPUB; USPAT; USOCR; EPO)	OR	ON	ON	2022/09/21 01:52 PM
L4272	114	"7677518"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4273	129	("4691886" | "4729533" | "5037054" | "5044284" | "5174223" | "5200859" | "5287815" | "5405204" | "5445353" | "5564668" | "5636711" | "D393382" | "5829948" | "5938622" | "5961231" | "6286812" | "6585214" | "6736469" | "6905102" | "7111825" | "7383786").pn. OR ("7677518").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4274	10	("6857493"|"5400720"). PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2022/09/21 01:52 PM

			AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4275	37	"1142343"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4276	2	("6857493"|"5400720").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4277	104	("10114352"|"10244861"|"10575630"|"11083282"|"20070001077"|"20120188302"|"20160249737"|"20170196351"|"20180213929"|"2843418"|"4448386"|"4640488"|"4702454"|"4753419"|"5251864"|"5722513"|"5957426"|"7246784"|"8931750"|"9326598"|"9668572"|"9681746"|"D854775").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4278	24	("10114352"|"10244861"|"10575630"|"11083282"|"20070001077"|"20120188302"|"20160249737"|"20170196351"|"20180213929"|"2843418"|"4448386"|"4640488"|"4702454"|"4753419"|"5251864"|"5722513"|"5957426"|"7246784"|"8931750"|"9326598"|"9668572"|"9681746"|"D854775").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4279	132	("10018298" OR "10023355" OR "10123613" OR "10258148" OR "10258149" OR "10264877" OR "10306977" OR "10413055" OR "10499730" OR "10517390" OR "10524565" OR "10542817" OR "10544019" OR "10568416" OR	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/21 01:52 PM

		"10869549" OR "10893748" OR "11134773" OR "11134774" OR "11140977" OR "11147366" OR "11160367" OR "1318564" OR "20030042380" OR "20030213415" OR "20050120922" OR "20070080564" OR "20070266912" OR "20080000393" OR "20090145336" OR "20100242174" OR "20120097822" OR "20130193392" OR "20140144352" OR "20150028787" OR "20150216296" OR "20150289641" OR "20160338486" OR "20160353880" OR "20170071332" OR "20170354245" OR "20180177289" OR "20180279770" OR "20190110588" OR "20190183239" OR "20190269237" OR "20200029685" OR "20200107633" OR "2937003" OR "3295800" OR "3823915" OR "3826457" OR "4221280" OR "4449262" OR "4549720" OR "4558648" OR "4577821" OR "4625657" OR "4659052" OR "4709972" OR "4717112" OR "4741512" OR "4826123" OR "4843978" OR "4941641" OR "4967672" OR "4995130" OR "5037163" OR "5048784" OR "5211367" OR "5257767" OR "5294087" OR "5400720" OR					

		"5588377" OR "5626323" OR "5765797" OR "5829948" OR "5836562" OR "5926876" OR "6076785" OR "6098961" OR "6148739" OR "6176456" OR "6179261" OR "6269753" OR "6273382" OR "6488248" OR "6516478" OR "6533229" OR "6533479" OR "6672430" OR "6701853" OR "6702372" OR "6722618" OR "6742768" OR "6792876" OR "6938866" OR "7048236" OR "7188813" OR "7204193" OR "7207629" OR "7575205" OR "7677518" OR "7841570" OR "7845665" OR "7946551" OR "7950338" OR "8015638" OR "8132518" OR "8303062" OR "8469152" OR "8490933" OR "8544391" OR "8671853" OR "8684339" OR "8950343" OR "9049923" OR "9055810" OR "9232855" OR "9480332" OR "9504316" OR "9554644" OR "9809136" OR "9815672" OR "9854904" OR "9955780" OR "9981571" OR "9993068" OR "D302893" OR "D830739" OR "D845037" OR					

		"D870490" OR "D901959").pn.					
L4280	27	("2531856" | "3727245" | "4611823" | "5447319" | "5722513" | "6974185" | "8016305" | "8544391" | "9326598" | "20040040480").pn. OR ("9480332").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4281	2481	A47B67/005.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4282	2113	(A47B3/00 OR A47B61/00).cpc. AND (gear OR shaft)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4283	48	wilkens.xp. AND lift SAME table	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4284	34	(Artificial Intelligence) More like doc: US-8950343-B2 Text: (US-20140041554-A1 OR TW-M445388-U OR US-10092089-B1 OR JP-2018520740-A OR GB-2341790-A OR DK-179639-B1 OR US-20180160799-A1 OR WO-2016200318-A1 OR EP-3307108-A1 OR CN-107708486-A OR WO-2016200318-A8 OR WO-2018137739-A1 OR US-9713375-B1 OR DK-201700050-A1 OR US-20180103752-A1 OR US-10258149-B2 OR US-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		20180255919-A1 OR JP-2017513663-A OR US-10542817-B2 OR US-20150272316-A1).did.					
L4285	132	("20180125227" OR "10018298" OR "10023355" OR "10114352" OR "10123613" OR "10244861" OR "10258149" OR "10264877" OR "10306977" OR "10413055" OR "10524565" OR "10542817" OR "10544019" OR "10568416" OR "10575630" OR "10869549" OR "11083282" OR "11140977" OR "11147366" OR "1318564" OR "20030042380" OR "20030213415" OR "20070001077" OR "20070080564" OR "20070266912" OR "20080000393" OR "20100242174" OR "20120097822" OR "20120188302" OR "20130193392" OR "20150216296" OR "20160338486" OR "20160353880" OR "20170071332" OR "20170196351" OR "20180177289" OR "20180213929" OR "20180279770" OR "20190110588" OR "20190183239" OR "20190269237" OR "20200029685" OR "20200107633" OR "2843418" OR "2937003" OR "3295800" OR "4221280" OR "4448386" OR "4449262" OR "4549720" OR "4558648" OR "4577821" OR "4625657" OR	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/21 01:52 PM

		"4640488" OR "4702454" OR "4709972" OR "4717112" OR "4753419" OR "4826123" OR "4843978" OR "4941641" OR "4967672" OR "4995130" OR "5037163" OR "5048784" OR "5211367" OR "5251864" OR "5257767" OR "5294087" OR "5400720" OR "5588377" OR "5626323" OR "5722513" OR "5765797" OR "5829948" OR "5836562" OR "5926876" OR "5957426" OR "6076785" OR "6098961" OR "6148739" OR "6176456" OR "6179261" OR "6269753" OR "6273382" OR "6488248" OR "6516478" OR "6533229" OR "6533479" OR "6672430" OR "6701853" OR "6702372" OR "6722618" OR "6742768" OR "6792876" OR "6938866" OR "7048236" OR "7188813" OR "7204193" OR "7207629" OR "7246784" OR "7575205" OR "7841570" OR "7845665" OR "7946551" OR "7950338" OR "8015638" OR "8132518" OR "8303062" OR "8469152" OR "8490933" OR					

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L4286	26	("4221280" | "4577821" | "4995130" | "5186038" | "5322143" | "5588377" | "9161616" | "D845037" | "10264877" | "10517390" | "20100012909" | "20140041554" | "20160338486" | "20170354245" | "20180055214" | "20180146775").pn. OR ("10869549").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4287	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT |					

		USOC).dbnm.					
L4288	87	("1318564" | "2937003" | "3295800" | "4221280" | "4558648" | "4577821" | "4843978" | "5037163" | "5211367" | "5257767" | "5588377" | "5626323" | "5829948" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533479" | "6701853" | "6722618" | "6742768" | "6792876" | "7677518" | "7841570" | "7950338" | "8132518" | "8544391" | "8671853" | "8684339" | "8931750" | "9049923" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "10159336" | "10244861" | "10258148" | "10258149" | "10499730" | "10542817" | "20030213415" | "20040040480" | "20070080564" | "20080000393" | "20120097822" | "20130193392" | "20130199420" | "20140144352" | "20140158026" | "20150232005" | "20150368082" | "20150375896" | "20160051042" | "20160106205" | "20160170402" | "20160260019" | "20160309889" | "20160338486" | "20160353880" | "20170174486" | "20170360192" | "20180008037" | "20180125227" | "20180177289" | "20180279770" | "20180360208" | "20190110588" | "20190269237" | "20200029685").pn. OR ("10893748").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

L4289	162	("1824822" | "2545515" | "2579577" | "2581023" | "2630359" | "2727799" | "2798641" | "3203373" | "3245366" | "3347184" | "3727245" | "3888451" | "4032103" | "4073240" | "4130069" | "4194452" | "4515086" | "4534544" | "4558847" | "4577821" | "4589621" | "4625657" | "4728118" | "4981052" | "4981085" | "5039054" | "5048784" | "5083512" | "5088676" | "5174223" | "5192053" | "5251864" | "5322025" | "5325794" | "5375514" | "5394809" | "5490466" | "5503086" | "5549052" | "5553550" | "5588377" | "5649493" | "5680820" | "5687655" | "5778799" | "5794911" | "5823120" | "5833198" | "5938340" | "5967059" | "6026755" | "6038986" | "6283047" | "6286441" | "6378446" | "6439657" | "6510803" | "6516478" | "6520091" | "6603157" | "6691626" | "6701853" | "6874431" | "6991199" | "7048236" | "7059254" | "7201108" | "7246784" | "7385376" | "7548051" | "7642759" | "7654208" | "7677518" | "7690317" | "7849789" | "7887014" | "7950338" | "8065966" | "8132518" | "8439319" | "8544391" | "8671853" | "8783639" | "8800454" | "8931750" | "8950343" | "9049923" | "9055810" | "9072645" | "9113703" | "9668572" | "20020189505" | "20030213415" | "20040187742" | "20040227443" | "20050041721" | "20050248239" | "20060037518" | "20060038383" | "20060157628" | "20070163475" | "20070259554" | "20070266912" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20070295882" | "20080308016" | "20090179121" | "20100242174" | "20100257671" | "20110120351" | "20110168062" | "20110247532" | "20130014674" | "20130139736" | "20130145972" | "20130199420" | "20130340655" | "20140020606" | "20140041554" | "20140144352" | "20140158026" | "20140165882" | "20140360411" | "20150164218" | "20150216296" | "20150231992" | "20150250303" | "20150289641" | "20160120300" | "20160198853" | "20160278515" | "20160338486" | "20170354245" | "20170360188" | "20180103752" | "20180146775" | "20180160799" | "20180213929" | "20180279772").pn. OR ("10542817").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4290	87	("1318564" | "2937003" | "3295800" | "4221280" | "4558648" | "4577821" | "4843978" | "5037163" | "5211367" | "5257767" | "5588377" | "5626323" | "5829948" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533479" | "6701853" | "6722618" | "6742768" | "6792876" | "7677518" | "7841570" | "7950338" | "8132518" | "8544391" | "8671853" | "8684339" | "8931750" | "9049923" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "10159336" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"10244861" | "10258148" | "10258149" | "10499730" | "10542817" | "20030213415" | "20040040480" | "20070080564" | "20080000393" | "20120097822" | "20130193392" | "20130199420" | "20140144352" | "20140158026" | "20150232005" | "20150368082" | "20150375896" | "20160051042" | "20160106205" | "20160170402" | "20160260019" | "20160309889" | "20160338486" | "20160353880" | "20170174486" | "20170360192" | "20180008037" | "20180125227" | "20180177289" | "20180279770" | "20180360208" | "20190110588" | "20190269237" | "20200029685").pn. OR ("10893748").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4291	33	("136357" | "2624535" | "2733109" | "3001559" | "4967672" | "5588377" | "5636711" | "5829948" | "7032872" | "7059616" | "7677518" | "20140144352").pn. OR ("8950343").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4292	8	("2012/0188302").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4293	22	("2005/0120922").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4294	132	("20180125227" OR "10018298" OR "10023355" OR "10114352" OR	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/21 01:52 PM

		"10123613" OR "10244861" OR "10258149" OR "10264877" OR "10306977" OR "10413055" OR "10524565" OR "10542817" OR "10544019" OR "10568416" OR "10575630" OR "10869549" OR "11083282" OR "11140977" OR "11147366" OR "1318564" OR "20030042380" OR "20030213415" OR "20070001077" OR "20070080564" OR "20070266912" OR "20080000393" OR "20100242174" OR "20120097822" OR "20120188302" OR "20130193392" OR "20150216296" OR "20160338486" OR "20160353880" OR "20170071332" OR "20170196351" OR "20180177289" OR "20180213929" OR "20180279770" OR "20190110588" OR "20190183239" OR "20190269237" OR "20200029685" OR "20200107633" OR "2843418" OR "2937003" OR "3295800" OR "4221280" OR "4448386" OR "4449262" OR "4549720" OR "4558648" OR "4577821" OR "4625657" OR "4640488" OR "4702454" OR "4709972" OR "4717112" OR "4753419" OR "4826123" OR "4843978" OR "4941641" OR "4967672" OR					

		"4995130" OR "5037163" OR "5048784" OR "5211367" OR "5251864" OR "5257767" OR "5294087" OR "5400720" OR "5588377" OR "5626323" OR "5722513" OR "5765797" OR "5829948" OR "5836562" OR "5926876" OR "5957426" OR "6076785" OR "6098961" OR "6148739" OR "6176456" OR "6179261" OR "6269753" OR "6273382" OR "6488248" OR "6516478" OR "6533229" OR "6533479" OR "6672430" OR "6701853" OR "6702372" OR "6722618" OR "6742768" OR "6792876" OR "6938866" OR "7048236" OR "7188813" OR "7204193" OR "7207629" OR "7246784" OR "7575205" OR "7841570" OR "7845665" OR "7946551" OR "7950338" OR "8015638" OR "8132518" OR "8303062" OR "8469152" OR "8490933" OR "8544391" OR "8671853" OR "8684339" OR "8950343" OR "9049923" OR "9055810" OR "9232855" OR "9326598" OR "9480332" OR					

		"9504316" OR "9554644" OR "9668572" OR "9681746" OR "9809136" OR "9854904" OR "9955780" OR "9981571" OR "9993068" OR "D830739" OR "D870490" OR "D901959").pn.					
L4295	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4296	6151	A47B21/02.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4297	1892	A47B21/02.cpc. AND (gas OR spring)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4298	390	A47B2200/005.cpc. AND (gas OR spring)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4299	49	(Artificial Intelligence) More like doc: CN-106473451-A Text: (CN-206565534-U OR CN-106473451-B OR CN-204580324-U OR CN-105342138-B OR CN-105342138-A OR CN-108024625-A OR CN-106165968-B OR US-20180255919-A1	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK,	OR	ON	ON	2022/09/21 01:52 PM

		OR CA-2999757-C OR US-10542817-B2 OR CN-108024625-B OR CN-106617668-A OR US-11395544-B1 OR WO-2018072235-A1 OR AT-413318-B OR CN-203353949-U OR CN-102949016-A OR EP-0142919-A1 OR CN-204541230-U OR CN-106165968-A).did.	TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4300	2404	A47B9/10.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4301	387	108/144.11,147.22.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4302	1960	A47B3/02.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4303	1955	(A47B3/00 OR A47B61/00).cpc. AND (gas OR pneumatic OR spring)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4304	591	A47B2003/025.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4305	2630	108/116-118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR,	OR	ON	ON	2022/09/21 01:52 PM

			GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4306	36	("4052944" | "4765583" | "5125606" | "5131614" | "5143341" | "5263423" | "5355811" | "5593128" | "5732928").pn. OR ("5893540").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4307	48	(Artificial Intelligence) More like doc: KR-20110006306-U Text: (KR-200416871-Y1 OR KR-20140006320-U OR CN-108813920-A OR TW-201033508-A OR KR-20160002687-U OR CN-110934419-A OR US-20100237666-A1 OR WO-2021226487-A1 OR US-20210345768-A1 OR CN-113812797-A OR CN-110623417-A OR CN-110786639-A OR CN-106165968-B OR AU-2014283918-A1 OR IE-S84540-Y1 OR CN-110115422-A OR GB-2439522-A OR WO-2008028306-A3 OR CN-2473993-Y OR CN-110973828-A).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4308	1700	248/421,562,588,585,431,432,439.ccls. AND (gas OR pneumatic OR spring)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4309	948	108/147,145,93,96.ccls. AND (gas OR pneumatic OR spring)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4310	39	(Artificial Intelligence) More like doc: US-10568416-B1	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2022/09/21 01:52 PM

		Text: (US-10244861-B1 OR US-11147366-B1 OR US-10575630-B1 OR US-11140977-B1 OR US-11134773-B1 OR US-11160367-B1 OR US-11388989-B1 OR US-11134774-B1 OR US-10893748-B1 OR US-11388991-B1 OR US-11395544-B1 OR US-9504316-B1 OR WO-2017184206-A1 OR US-20130014674-A1 OR US-20160037909-A1 OR US-20180103752-A1 OR US-10258149-B2 OR EP-3593671-B1 OR US-20140238279-A1 OR US-9681746-B1).did.	CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4311	14	"201230022"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4312	0	"JP201230022"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4313	0	"JP2012030022"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4314	76	fin ADJ reinforcement SAME (tube OR column OR cylinder)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4315	61	triangle ADJ	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		reinforcement SAME (tube OR column OR cylinder)	USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L4316	16	("20160338486"|"11134773"|"11109671"|"10542817"|"20140041554"). PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4317	2404	A47B9/10.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4318	49	"6857493"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4319	18	"2018125227"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4320	9	"20180125227"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4321	161	("10258148"|"20160249737"|"9815672"|"4448386"|"9681746"|"10869549"|"20170071332"|"4843978"|"5037163"|"6179261"|"7841570"|"8684339"|"9809136"|"D830739"|"D901959"|"10499730"|"20050120922"|"20	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		090145336"|"4659052"|"20030213415"|"4702454"|"10258149"|"1318564"|"20080000393"|"20100242174"|"20200029685"|"20200107633"|"4558648"|"5829948"|"6701853"|"7946551"|"8015638"|"8671853"|"9504316"|"11134773"|"10244861"|"10575630"|"11140977"|"11147366"|"5251864"|"10123613"|"10542817"|"10544019"|"20160353880"|"4221280"|"4449262"|"4549720"|"4717112"|"5211367"|"6076785"|"6176456"|"6269753"|"6516478"|"6792876"|"7207629"|"7575205"|"9854904"|"20140144352"|"20150289641"|"7677518"|"D845037"|"20070001077"|"20180213929"|"4640488"|"4753419"|"9668572"|"10023355"|"10264877"|"10524565"|"20070080564"|"2937003"|"4941641"|"4967672"|"4995130"|"5257767"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"7845665"|"8303062"|"8544391"|"9055810"|"9480332"|"9554644"|"9993068"|"11160367"|"20150028787"|"3823915"|"3826457"|"11083282"|"2843418"|"5957426"|"10413055"|"20070266912"|"20180279770"|"20190269237"|"3295800"|"5294087"|"6938866"|"7048236"|"8132518"|"8490933"|"8950343"|"9049923"|"9232855"|"11134774"|"D854775"|"9326598"|"20150216296"|"20190110588"|"20190183239"|"4709972"|"5048784"|"6098961"|"6148739"|"7188813"|"9955780"|"20180125227"|"10893748"|"4741512"|"8931750"|"6857493"|"10114352"|"5722513"|"20030042380					

		"|"20160338486"|"20180177289"|"4625657"|"4826123"|"6273382"|"7204193"|"D870490"|"10517390"|"20170354245"|"D302893"|"5400720"|"10568416"|"20120188302"|"20170196351"|"7246784"|"10018298"|"10306977"|"20120097822"|"20130193392"|"4577821"|"5588377"|"5765797"|"5836562"|"6488248"|"6533479"|"6672430"|"7950338"|"8469152"|"9981571").PN.				
L4322	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4323	17703	A47B21/0314,00,02,03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4324	1350	A47B21/0314,00,02,03.cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4325	162	("3140894"|"4926760"|"5588377"|"7640869"|"9113703"|"9615655"|"20160120300"|"6974185"|"9161616"|"5649493"|"8544391"|"9055810"|"9480332"|"9554644"|"201 60249737"|"2531856"|"3494662"|"8016305"|"9644378"|"9681746"|"2922685"|"9326598"|"9625929"|"3161161"|"8936306").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4326	88	("2156148"|"20040040480"|"20080203865"|"20130139736"|"20140041	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD,	OR	ON	ON	2022/09/21 01:52 PM

		554"|"20150216296"|"20150289641"|"20160286951"|"20160338486"|"3245366"|"4691888"|"5588377"|"8544391"|"9326598"|"9480332"|"9504316").PN.	DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4327	1313	312/208.1,223.3.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4328	0	248/421,562,588, "585,431,432,439".cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4329	0	248/421,562,588,585,431,432,439.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4330	3921	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4331	2881	248/421,562,588,585.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4332	1060	248/431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4333	3035	108/147,144.11,145,93.	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		ccls.	USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L4334	1049	108/96,116.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4335	3238	108/118,120,43,138,50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4336	1877	108/118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4337	1396	108/50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4338	550	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"455	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		8648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.					
L4339	25	("3282566" | "4273306" | "5400720" | "5632209" | "5649493" | "9326598" | "20130340655" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20140360414" | "20150289641" | "20180055214").pn. OR ("10517390").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4340	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4341	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4342	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4343	56	("D166377" | "D280478" | "D304112" | "D352845" | "D371687" | "D395969" | "D415910" | "D424828" | "D435368" | "D435986" | "D436268" | "D464212" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"D530939" | "D612643" | "D644046" | "D671338" | "D681979" | "D694044" | "D716074" | "D733476" | "D734413" | "D771981" | "D771982" | "9504316" | "D781617" | "D781618" | "D781619" | "D784050" | "20080178779" | "20130139736" | "20150096472" | "20160106205" | "20160278515" | "20170105518" | "20170196351" | "20170290413" | "20170354245").pn. OR ("D830739").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4344	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4345	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L4346	2081	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4347	10819	(A47B3/00 OR A47B61/00).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4348	182	(A47B3/00 OR A47B61/00).cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4349	3649	A47B3/02,0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4350	1712	A47B3/0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4351	513	(A47B3/02 AND A47B2003/025).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4352	1267876	(desk$4 OR table$4) AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L4353	5666298	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm)((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4354	3703	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4355	869	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4356	91	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4357	305	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4358	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4359	202	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM

		|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"20180103752"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"105684				

		16"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.					
L4360	67	"5400720"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4361	84	"4577821"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4362	24	(Artificial Intelligence) More like doc: US-D854775-S Text: (WO-0068597-A1 OR DE-4336662-A1 OR US-5694864-A OR AT-149474-T OR US-D378155-S OR US-D375602-S OR US-D346254-S OR US-D825131-S OR US-D814736-S OR US-D640440-S OR US-D837970-S OR TW-201522199-A OR TW-I531523-B OR US-20100012909-A1 OR US-D794629-S OR US-D834861-S OR US-D927102-S OR US-D706344-S OR US-D815832-S OR US-D775524-S).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4363	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4364	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4365	29	("20100198374"|"6062148"|"20140137773"|"20120174833"|"7789025"|"20160127809"|"5884882"|"7077068"|"20080255794"|"20140247155"|"9082239"|"20080255794"|"6595144"|"6831829"|"7780578"|"8947215"|"20130204438"|"6546880"|"7517029"|"20130116092"|"20140096706"|"8485945"|"20140247146"|"5323695"|"8587439"|"8690578"|"20140137773"|"20160128467"|	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		20130321346"|"20140096706"|"20140247154"|"20160260019").PN.					
L4366	27	("10244861"|"20180213929"|"9326598"|"9681746"|"8931750"|"7246784"|"10114352"|"5957426"|"5722513"|"4640488"|"5251864"|"4448386"|"4702454"|"2843418"|"9668572"|"20070001077"|"4753419"|"11083282"|"20170196351"|"D854775"|"20160249737"|"20120188302"|"10575630").PN.	(US-PGPUB; USPAT; USOCR; JPO)	OR	ON	ON	2022/09/21 01:52 PM
L4367	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4368	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4369	406	wilkens.xp. AND bracket AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4370	159	wilkens.xp. AND	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		stack$4 AND A47B	USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L4371	298	wilkens.xp. AND A47B88/$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4372	16	("1680081" | "1686783" | "1902795" | "1994424" | "3094363" | "3275396" | "3298768" | "4285560").pn. OR ("10888157").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4373	43	"3275396"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4374	60	("2001744" | "2070960" | "2610824" | "3032319" | "3110476" | "3174722" | "3282566" | "3379411" | "3982718" | "4221280" | "4403680" | "4526346" | "4682750" | "4688760" | "4690250" | "4754713" | "4764075" | "4858888" | "4890692" | "4899987" | "4921074" | "5192053" | "5299906" | "5322143" | "5460460" | "5829948" | "6182796" | "6464205" | "6601826" | "6672430" | "6814188" | "7213686" | "20060126966" | "20060279728" | "20070017748" | "20070235266").pn. OR ("8469152").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4375	37	("4061237" | "4249749" | "4288195" | "4504041"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "4613272" | "4979592" | "5018931" | "6394419" | "6431319" | "6679479" | "8015638" | "8469152" | "8888070" | "9422141" | "9463966" | "9540220" | "20030075657" | "20050042068" | "20110262261" | "20140014886" | "20140027693" | "20150028787" | "20150298949").pn. OR ("9815672").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4376	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4377	47	"5861051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4378	1	"58-61051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4379	38	"102013008020"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4380	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR,	OR	ON	ON	2022/09/21 01:52 PM

			GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4381	17703	A47B21/0314,00,02,03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4382	1350	A47B21/0314,00,02,03.cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4383	162	("3140894"|"4926760"|"5588377"|"7640869"|"9113703"|"9615655"|"20160120300"|"6974185"|"9161616"|"5649493"|"8544391"|"9055810"|"9480332"|"9554644"|"20160249737"|"2531856"|"3494662"|"8016305"|"9644378"|"9681746"|"2922685"|"9326598"|"9625929"|"3161161"|"8936306").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4384	88	("2156148"|"20040040480"|"20080203865"|"20130139736"|"20140041554"|"20150216296"|"20150289641"|"20160286951"|"20160338486"|"3245366"|"4691888"|"5588377"|"8544391"|"9326598"|"9480332"|"9504316").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4385	1313	312/208.1,223.3.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4386	0	248/421,562,588,"585,431,432,439".cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

			SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4387	0	248/421,562,588,585,431,432,439.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4388	3921	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4389	2881	248/421,562,588,585.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4390	1060	248/431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4391	3035	108/147,144.11,145,93.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4392	1049	108/96,116.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4393	3238	108/118,120,43,138,50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

			SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4394	1877	108/118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4395	1396	108/50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4396	550	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"540	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		0720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.					
L4397	25	("3282566" | "4273306" | "5400720" | "5632209" | "5649493" | "9326598" | "20130340655" | "20140360414" | "20150289641" | "20180055214").pn. OR ("10517390").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4398	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4399	25	("3219338" | "4558648" | "4741512" | "5400720"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4400	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4401	56	("D166377" | "D280478" | "D304112" | "D352845" | "D371687" | "D395969" | "D415910" | "D424828" | "D435368" | "D435986" | "D436268" | "D464212" | "D530939" | "D612643" | "D644046" | "D671338" | "D681979" | "D694044" | "D716074" | "D733476" | "D734413" | "D771981" | "D771982" | "9504316" | "D781617" | "D781618" | "D781619" | "D784050" | "20080178779" | "20130139736" | "20150096472" | "20160106205" | "20160278515" | "20170105518" | "20170196351" | "20170290413" | "20170354245").pn. OR ("D830739").urpn. AND	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		(PGPB | USPT | USOC).dbnm.					
L4402	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4403	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4404	2081	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4405	10819	(A47B3/00 OR A47B61/00).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4406	182	(A47B3/00 OR	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		A47B61/00).cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L4407	3649	A47B3/02,0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4408	1712	A47B3/0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4409	513	(A47B3/02 AND A47B2003/025).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4410	1267876	(desk$4 OR table$4) AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4411	5666298	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm)((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4412	3703	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4413	869	(desk$4 OR table$4)	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L4414	91	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4415	305	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4416	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4417	202	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"444	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM

		9262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.					
L4418	67	"5400720"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4419	84	"4577821"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR,	OR	ON	ON	2022/09/21 01:52 PM

			GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4420	24	(Artificial Intelligence) More like doc: US-D854775-S Text: (WO-0068597-A1 OR DE-4336662-A1 OR US-5694864-A OR AT-149474-T OR US-D378155-S OR US-D375602-S OR US-D346254-S OR US-D825131-S OR US-D814736-S OR US-D640440-S OR US-D837970-S OR TW-201522199-A OR TW-I531523-B OR US-20100012909-A1 OR US-D794629-S OR US-D834861-S OR US-D927102-S OR US-D706344-S OR US-D815832-S OR US-D775524-S).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4421	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

L4422	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4423	29	("20100198374"|"6062148"|"20140137773"|"20120174833"|"7789025"|"20160127809"|"5884882"|"7077068"|"20080255794"|"20140247155"|"9082239"|"20080255794"|"6595144"|"6831829"|"7780578"|"8947215"|"20130204438"|"6546880"|"7517029"|"20130116092"|"20140096706"|"8485945"|"20140247146"|"5323695"|"8587439"|"8690578"|"20140137773"|"20160128467"|"20130321346"|"20140096706"|"20140247154"|"20160260019").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4424	27	("10244861"|"20180213929"|"9326598"|"9681746"|"8931750"|"7246784"|"10114352"|"5957426"|"5722513"|"4640488"|"5251864"|"4448386"|"4702454"|"2843418"|"9668572"|"20070001077"|"4753419"|"11083282"|"20170196351"|"D854775"|"20160249737"|"20120188302"|"10575630").PN.	(US-PGPUB; USPAT; USOCR; JPO)	OR	ON	ON	2022/09/21 01:52 PM
L4425	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4426	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4427	406	wilkens.xp. AND bracket AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4428	159	wilkens.xp. AND stack$4 AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4429	298	wilkens.xp. AND A47B88/$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4430	16	("1680081" | "1686783" | "1902795" | "1994424" | "3094363" | "3275396" | "3298768" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"4285560").pn. OR ("10888157").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4431	43	"3275396"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4432	60	("2001744" | "2070960" | "2610824" | "3032319" | "3110476" | "3174722" | "3282566" | "3379411" | "3982718" | "4221280" | "4403680" | "4526346" | "4682750" | "4688760" | "4690250" | "4754713" | "4764075" | "4858888" | "4890692" | "4899987" | "4921074" | "5192053" | "5299906" | "5322143" | "5460460" | "5829948" | "6182796" | "6464205" | "6601826" | "6672430" | "6814188" | "7213686" | "20060126966" | "20060279728" | "20070017748" | "20070235266").pn. OR ("8469152").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4433	37	("4061237" | "4249749" | "4288195" | "4504041" | "4613272" | "4979592" | "5018931" | "6394419" | "6431319" | "6679479" | "8015638" | "8469152" | "8888070" | "9422141" | "9463966" | "9540220" | "20030075657" | "20050042068" | "20110262261" | "20140014886" | "20140027693" | "20150028787" | "20150298949").pn. OR ("9815672").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4434	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4435	47	"5861051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4436	1	"58-61051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4437	38	"102013008020"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4438	5	"20190116976"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4439	10	"20200003258"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4440	2	"20210214986"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

L4441	41	"4741512"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4442	139	"7677518"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4443	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4444	17703	A47B21/0314,00,02,03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4445	1350	A47B21/0314,00,02,03.cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4446	162	("3140894"|"4926760"|"5588377"|"7640869"|"9113703"|"9615655"|"20160120300"|"6974185"|"9161616"|"5649493"|"8544391"|"9055810"|"9480332"|"9554644"|"20160249737"|"2531856"|"3494662"|"8016305"|"9644378"|"9681746"|"2922685"|"9326598"|"9625929"|"3161161"|"8936306").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4447	88	("2156148"|"20040040480"|"20080203865"|"20130139736"|"20140041	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD,	OR	ON	ON	2022/09/21 01:52 PM

		554"|"20150216296"|"20150289641"|"20160286951"|"20160338486"|"3245366"|"4691888"|"5588377"|"8544391"|"9326598"|"9480332"|"9504316").PN.	DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4448	1313	312/208.1,223.3.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4449	0	248/421,562,588, "585,431,432,439".cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4450	0	248/421,562,588,585,431,432,439.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4451	3921	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4452	2881	248/421,562,588,585.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4453	1060	248/431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4454	3035	108/147,144.11,145,93.	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		ccls.	USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L4455	1049	108/96,116.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4456	3238	108/118,120,43,138,50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4457	1877	108/118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4458	1396	108/50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4459	550	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"455	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		8648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.					
L4460	25	("3282566" | "4273306" | "5400720" | "5632209" | "5649493" | "9326598" | "20130340655" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20140360414" | "20150289641" | "20180055214").pn. OR ("10517390").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4461	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4462	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4463	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4464	56	("D166377" | "D280478" | "D304112" | "D352845" | "D371687" | "D395969" | "D415910" | "D424828" | "D435368" | "D435986" | "D436268" | "D464212" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"D530939" | "D612643" | "D644046" | "D671338" | "D681979" | "D694044" | "D716074" | "D733476" | "D734413" | "D771981" | "D771982" | "9504316" | "D781617" | "D781618" | "D781619" | "D784050" | "20080178779" | "20130139736" | "20150096472" | "20160106205" | "20160278515" | "20170105518" | "20170196351" | "20170290413" | "20170354245").pn. OR ("D830739").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4465	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4466	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L4467	2081	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4468	10819	(A47B3/00 OR A47B61/00).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4469	182	(A47B3/00 OR A47B61/00).cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4470	3649	A47B3/02,0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4471	1712	A47B3/0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4472	513	(A47B3/02 AND A47B2003/025).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4473	1267876	(desk$4 OR table$4) AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L4474	5666298	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm)((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4475	3703	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4476	869	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4477	91	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4478	305	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4479	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4480	202	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM

		|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"20180103752"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"105684					

		16"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.					
L4481	67	"5400720"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4482	84	"4577821"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4483	24	(Artificial Intelligence) More like doc: US-D854775-S Text: (WO-0068597-A1 OR DE-4336662-A1 OR US-5694864-A OR AT-149474-T OR US-D378155-S OR US-D375602-S OR US-D346254-S OR US-D825131-S OR US-D814736-S OR US-D640440-S OR US-D837970-S OR TW-201522199-A OR TW-I531523-B OR US-20100012909-A1 OR US-D794629-S OR US-D834861-S OR US-D927102-S OR US-D706344-S OR US-D815832-S OR US-D775524-S).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4484	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4485	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4486	29	("20100198374"|"6062148"|"20140137773"|"20120174833"|"7789025"|"20160127809"|"5884882"|"7077068"|"20080255794"|"20140247155"|"9082239"|"20080255794"|"6595144"|"6831829"|"7780578"|"8947215"|"20130204438"|"6546880"|"7517029"|"20130116092"|"20140096706"|"8485945"|"20140247146"|"5323695"|"8587439"|"8690578"|"20140137773"|"20160128467"|	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		20130321346"|"20140096706"|"20140247154"|"20160260019").PN.					
L4487	27	("10244861"|"20180213929"|"9326598"|"9681746"|"8931750"|"7246784"|"10114352"|"5957426"|"5722513"|"4640488"|"5251864"|"4448386"|"4702454"|"2843418"|"9668572"|"20070001077"|"4753419"|"11083282"|"20170196351"|"D854775"|"20160249737"|"20120188302"|"10575630").PN.	(US-PGPUB; USPAT; USOCR; JPO)	OR	ON	ON	2022/09/21 01:52 PM
L4488	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4489	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4490	406	wilkens.xp. AND bracket AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4491	159	wilkens.xp. AND	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		stack$4 AND A47B	USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L4492	298	wilkens.xp. AND A47B88/$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4493	16	("1680081" | "1686783" | "1902795" | "1994424" | "3094363" | "3275396" | "3298768" | "4285560").pn. OR ("10888157").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4494	43	"3275396"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4495	60	("2001744" | "2070960" | "2610824" | "3032319" | "3110476" | "3174722" | "3282566" | "3379411" | "3982718" | "4221280" | "4403680" | "4526346" | "4682750" | "4688760" | "4690250" | "4754713" | "4764075" | "4858888" | "4890692" | "4899987" | "4921074" | "5192053" | "5299906" | "5322143" | "5460460" | "5829948" | "6182796" | "6464205" | "6601826" | "6672430" | "6814188" | "7213686" | "20060126966" | "20060279728" | "20070017748" | "20070235266").pn. OR ("8469152").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4496	37	("4061237" | "4249749" | "4288195" | "4504041"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "4613272" | "4979592" | "5018931" | "6394419" | "6431319" | "6679479" | "8015638" | "8469152" | "8888070" | "9422141" | "9463966" | "9540220" | "20030075657" | "20050042068" | "20110262261" | "20140014886" | "20140027693" | "20150028787" | "20150298949").pn. OR ("9815672").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4497	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4498	47	"5861051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4499	1	"58-61051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4500	38	"102013008020"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4501	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR,	OR	ON	ON	2022/09/21 01:52 PM

			GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4502	17703	A47B21/0314,00,02,03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4503	1350	A47B21/0314,00,02,03.cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4504	162	("3140894"|"4926760"|"5588377"|"7640869"|"9113703"|"9615655"|"20160120300"|"6974185"|"9161616"|"5649493"|"8544391"|"9055810"|"9480332"|"9554644"|"20160249737"|"2531856"|"3494662"|"8016305"|"9644378"|"9681746"|"2922685"|"9326598"|"9625929"|"3161161"|"8936306").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4505	88	("2156148"|"20040040480"|"20080203865"|"20130139736"|"20140041554"|"20150216296"|"20150289641"|"20160286951"|"20160338486"|"3245366"|"4691888"|"5588377"|"8544391"|"9326598"|"9480332"|"9504316").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4506	1313	312/208.1,223.3.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4507	0	248/421,562,588, "585,431,432,439".cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

			SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4508	0	248/421,562,588,585,431,432,439.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4509	3921	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4510	2881	248/421,562,588,585.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4511	1060	248/431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4512	3035	108/147,144.11,145,93.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4513	1049	108/96,116.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4514	3238	108/118,120,43,138,50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

			SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4515	1877	108/118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4516	1396	108/50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4517	550	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"20180103752"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"540	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		0720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.					
L4518	25	("3282566" | "4273306" | "5400720" | "5632209" | "5649493" | "9326598" | "20130340655" | "20140360414" | "20150289641" | "20180055214").pn. OR ("10517390").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4519	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4520	25	("3219338" | "4558648" | "4741512" | "5400720"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4521	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4522	56	("D166377" | "D280478" | "D304112" | "D352845" | "D371687" | "D395969" | "D415910" | "D424828" | "D435368" | "D435986" | "D436268" | "D464212" | "D530939" | "D612643" | "D644046" | "D671338" | "D681979" | "D694044" | "D716074" | "D733476" | "D734413" | "D771981" | "D771982" | "9504316" | "D781617" | "D781618" | "D781619" | "D784050" | "20080178779" | "20130139736" | "20150096472" | "20160106205" | "20160278515" | "20170105518" | "20170196351" | "20170290413" | "20170354245").pn. OR ("D830739").urpn. AND	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		(PGPB | USPT | USOC).dbnm.					
L4523	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4524	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4525	2081	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4526	10819	(A47B3/00 OR A47B61/00).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4527	182	(A47B3/00 OR	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		A47B61/00).cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L4528	3649	A47B3/02,0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4529	1712	A47B3/0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4530	513	(A47B3/02 AND A47B2003/025).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4531	1267876	(desk$4 OR table$4) AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4532	5666298	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm)((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4533	3703	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4534	869	(desk$4 OR table$4)	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L4535	91	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4536	305	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4537	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4538	202	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"444	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM

		9262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.					
L4539	67	"5400720"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4540	84	"4577821"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR,	OR	ON	ON	2022/09/21 01:52 PM

			GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4541	24	(Artificial Intelligence) More like doc: US-D854775-S Text: (WO-0068597-A1 OR DE-4336662-A1 OR US-5694864-A OR AT-149474-T OR US-D378155-S OR US-D375602-S OR US-D346254-S OR US-D825131-S OR US-D814736-S OR US-D640440-S OR US-D837970-S OR TW-201522199-A OR TW-I531523-B OR US-20100012909-A1 OR US-D794629-S OR US-D834861-S OR US-D927102-S OR US-D706344-S OR US-D815832-S OR US-D775524-S).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4542	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

L4543	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4544	29	("20100198374"|"6062148"|"20140137773"|"20120174833"|"7789025"|"20160127809"|"5884882"|"7077068"|"20080255794"|"20140247155"|"9082239"|"20080255794"|"6595144"|"6831829"|"7780578"|"8947215"|"20130204438"|"6546880"|"7517029"|"20130116092"|"20140096706"|"8485945"|"20140247146"|"5323695"|"8587439"|"8690578"|"20140137773"|"20160128467"|"20130321346"|"20140096706"|"20140247154"|"20160260019").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4545	27	("10244861"|"20180213929"|"9326598"|"9681746"|"8931750"|"7246784"|"10114352"|"5957426"|"5722513"|"4640488"|"5251864"|"4448386"|"4702454"|"2843418"|"9668572"|"20070001077"|"4753419"|"11083282"|"20170196351"|"D854775"|"20160249737"|"20120188302"|"10575630").PN.	(US-PGPUB; USPAT; USOCR; JPO)	OR	ON	ON	2022/09/21 01:52 PM
L4546	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4547	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4548	406	wilkens.xp. AND bracket AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4549	159	wilkens.xp. AND stack$4 AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4550	298	wilkens.xp. AND A47B88/$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4551	16	("1680081" | "1686783" | "1902795" | "1994424" | "3094363" | "3275396" | "3298768" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"4285560").pn. OR ("10888157").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4552	43	"3275396"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4553	60	("2001744" | "2070960" | "2610824" | "3032319" | "3110476" | "3174722" | "3282566" | "3379411" | "3982718" | "4221280" | "4403680" | "4526346" | "4682750" | "4688760" | "4690250" | "4754713" | "4764075" | "4858888" | "4890692" | "4899987" | "4921074" | "5192053" | "5299906" | "5322143" | "5460460" | "5829948" | "6182796" | "6464205" | "6601826" | "6672430" | "6814188" | "7213686" | "20060126966" | "20060279728" | "20070017748" | "20070235266").pn. OR ("8469152").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4554	37	("4061237" | "4249749" | "4288195" | "4504041" | "4613272" | "4979592" | "5018931" | "6394419" | "6431319" | "6679479" | "8015638" | "8469152" | "8888070" | "9422141" | "9463966" | "9540220" | "20030075657" | "20050042068" | "20110262261" | "20140014886" | "20140027693" | "20150028787" | "20150298949").pn. OR ("9815672").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4555	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4556	47	"5861051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4557	1	"58-61051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4558	38	"102013008020"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4559	5	"20190116976"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4560	10	"20200003258"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4561	2	"20210214986"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

L4562	41	"4741512"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4563	139	"7677518"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4564	24	("10114352"|"10244861"|"10575630"|"11083282"|"20070001077"|"20120188302"|"20160249737"|"20170196351"|"20180213929"|"2843418"|"4448386"|"4640488"|"4702454"|"4753419"|"5251864"|"5722513"|"5957426"|"7246784"|"8931750"|"9326598"|"9668572"|"9681746"|"D854775").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4565	70	("1318564" | "2937003" | "3295800" | "4221280" | "4558648" | "4577821" | "4843978" | "5588377" | "5626323" | "5829948" | "5957426" | "6098961" | "6269753" | "6516478" | "6533479" | "6722618" | "6742768" | "8132518" | "8671853" | "9049923" | "9055810" | "9326598" | "9480332" | "9504316" | "9554644" | "20030213415" | "20040035332" | "20040040480" | "20070080564" | "20080000393" | "20090090832" | "20090200437" | "20110001033" | "20110024958" | "20120097822" | "20130145972" | "20130193392" | "20140144352" | "20150232005" | "20150375896" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20160338486" | "20170174486" | "20180008037").pn. OR ("10244861").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4566	27	("10114352"|"10244861"|"10575630"|"11083282"|"11134773"|"20030213415"|"20070001077"|"20120188302"|"20160249737"|"20170196351"|"20180213929"|"2843418"|"4448386"|"4640488"|"4702454"|"4753419"|"5251864"|"5722513"|"5957426"|"7246784"|"8931750"|"9326598"|"9668572"|"9681746"|"9815672"|"D854775").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4567	70	("1234569" | "1318564" | "2156148" | "2630359" | "4926760" | "5497706" | "5588377" | "5833200" | "6182935" | "6701853" | "7849789" | "8015638" | "8544391" | "8936306").pn. OR ("9326598").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4568	25	("383610" | "4640488" | "5211369" | "7246784" | "7637468" | "7677518" | "8439334" | "8844894" | "9326598" | "10092089" | "20070295882" | "20130145972" | "20140264215" | "20150014609" | "20160249737" | "20180008037" | "20180146775" | "20180177289" | "20180279770" | "20180332957" | "20180360208" | "20200298599").pn. OR ("11083282").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4569	18	("2016/0249737").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4570	25	("3219338" | "4558648" | "4741512" | "5400720"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4571	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4572	37	("2766088" | "D716074" | "9326598" | "9504316" | "D781617" | "D781618" | "20030230222" | "20150289641" | "20170290413" | "20170354245" | "20180055214" | "20180125227").pn. OR ("D845037").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4573	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4574	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4575	17	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM
L4576	135828	hydraulic WITH gas WITH (spring OR cylinder)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4577	727	hydraulic WITH gas WITH (spring OR cylinder) AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4578	263	hydraulic WITH gas WITH (spring OR cylinder) AND A47B AND desk	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4579	139	"7677518"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4580	114	"7677518"	(US-PGPUB; USPAT; USOCR; EPO)	OR	ON	ON	2022/09/21 01:52 PM
L4581	114	"7677518"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4582	129	("4691886" | "4729533" | "5037054" | "5044284"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "5174223" | "5200859" | "5287815" | "5405204" | "5445353" | "5564668" | "5636711" | "D393382" | "5829948" | "5938622" | "5961231" | "6286812" | "6585214" | "6736469" | "6905102" | "7111825" | "7383786").pn. OR ("7677518").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4583	10	("6857493"|"5400720").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4584	37	"1142343"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4585	2	("6857493"|"5400720").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4586	104	("10114352"|"10244861"|"10575630"|"11083282"|"20070001077"|"20120188302"|"20160249737"|"20170196351"|"20180213929"|"2843418"|"4448386"|"4640488"|"4702454"|"4753419"|"5251864"|"5722513"|"5957426"|"7246784"|"8931750"|"9326598"|"9668572"|"9681746"|"D854775").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4587	24	("10114352"|"10244861"|"10575630"|"11083282"|"20070001077"|"20120188302"|"20160249737"|"20170196351"|"20180213929"|"2843418"|"4448386"|"4640488"|"4702454"|"4753419"|"5251864"|"5722513"|"5957426"|"7246784"|"8931750"|"9326598"|"9668572"|"9681746"|"D854775").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

L4588	132	("10018298" OR "10023355" OR "10123613" OR "10258148" OR "10258149" OR "10264877" OR "10306977" OR "10413055" OR "10499730" OR "10517390" OR "10524565" OR "10542817" OR "10544019" OR "10568416" OR "10869549" OR "10893748" OR "11134773" OR "11134774" OR "11140977" OR "11147366" OR "11160367" OR "1318564" OR "20030042380" OR "20030213415" OR "20050120922" OR "20070080564" OR "20070266912" OR "20080000393" OR "20090145336" OR "20100242174" OR "20120097822" OR "20130193392" OR "20140144352" OR "20150028787" OR "20150216296" OR "20150289641" OR "20160338486" OR "20160353880" OR "20170071332" OR "20170354245" OR "20180177289" OR "20180279770" OR "20190110588" OR "20190183239" OR "20190269237" OR "20200029685" OR "20200107633" OR "2937003" OR "3295800" OR "3823915" OR "3826457" OR "4221280" OR "4449262" OR "4549720" OR "4558648" OR "4577821" OR "4625657" OR "4659052" OR	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/21 01:52 PM

		"4709972" OR "4717112" OR "4741512" OR "4826123" OR "4843978" OR "4941641" OR "4967672" OR "4995130" OR "5037163" OR "5048784" OR "5211367" OR "5257767" OR "5294087" OR "5400720" OR "5588377" OR "5626323" OR "5765797" OR "5829948" OR "5836562" OR "5926876" OR "6076785" OR "6098961" OR "6148739" OR "6176456" OR "6179261" OR "6269753" OR "6273382" OR "6488248" OR "6516478" OR "6533229" OR "6533479" OR "6672430" OR "6701853" OR "6702372" OR "6722618" OR "6742768" OR "6792876" OR "6938866" OR "7048236" OR "7188813" OR "7204193" OR "7207629" OR "7575205" OR "7677518" OR "7841570" OR "7845665" OR "7946551" OR "7950338" OR "8015638" OR "8132518" OR "8303062" OR "8469152" OR "8490933" OR "8544391" OR "8671853" OR "8684339" OR "8950343" OR "9049923" OR					

		"9055810" OR "9232855" OR "9480332" OR "9504316" OR "9554644" OR "9809136" OR "9815672" OR "9854904" OR "9955780" OR "9981571" OR "9993068" OR "D302893" OR "D830739" OR "D845037" OR "D870490" OR "D901959").pn.					
L4589	27	("2531856" | "3727245" | "4611823" | "5447319" | "5722513" | "6974185" | "8016305" | "8544391" | "9326598" | "20040040480").pn. OR ("9480332").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4590	2481	A47B67/005.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4591	2113	(A47B3/00 OR A47B61/00).cpc. AND (gear OR shaft)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4592	48	wilkens.xp. AND lift SAME table	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4593	34	(Artificial Intelligence) More like doc: US-8950343-B2 Text: (US-20140041554-A1 OR TW-M445388-U OR US-10092089-B1 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2022/09/21 01:52 PM

		JP-2018520740-A OR GB-2341790-A OR DK-179639-B1 OR US-20180160799-A1 OR WO-2016200318-A1 OR EP-3307108-A1 OR CN-107708486-A OR WO-2016200318-A8 OR WO-2018137739-A1 OR US-9713375-B1 OR DK-201700050-A1 OR US-20180103752-A1 OR US-10258149-B2 OR US-20180255919-A1 OR JP-2017513663-A OR US-10542817-B2 OR US-20150272316-A1).did.	IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4594	132	("20180125227" OR "10018298" OR "10023355" OR "10114352" OR "10123613" OR "10244861" OR "10258149" OR "10264877" OR "10306977" OR "10413055" OR "10524565" OR "10542817" OR "10544019" OR "10568416" OR "10575630" OR "10869549" OR "11083282" OR "11140977" OR "11147366" OR "1318564" OR "20030042380" OR "20030213415" OR "20070001077" OR "20070080564" OR "20070266912" OR "20080000393" OR "20100242174" OR "20120097822" OR "20120188302" OR "20130193392" OR "20150216296" OR "20160338486" OR "20160353880" OR "20170071332" OR "20170196351" OR "20180177289" OR "20180213929" OR "20180279770" OR "20190110588" OR	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/21 01:52 PM

		"20190183239" OR "20190269237" OR "20200029685" OR "20200107633" OR "2843418" OR "2937003" OR "3295800" OR "4221280" OR "4448386" OR "4449262" OR "4549720" OR "4558648" OR "4577821" OR "4625657" OR "4640488" OR "4702454" OR "4709972" OR "4717112" OR "4753419" OR "4826123" OR "4843978" OR "4941641" OR "4967672" OR "4995130" OR "5037163" OR "5048784" OR "5211367" OR "5251864" OR "5257767" OR "5294087" OR "5400720" OR "5588377" OR "5626323" OR "5722513" OR "5765797" OR "5829948" OR "5836562" OR "5926876" OR "5957426" OR "6076785" OR "6098961" OR "6148739" OR "6176456" OR "6179261" OR "6269753" OR "6273382" OR "6488248" OR "6516478" OR "6533229" OR "6533479" OR "6672430" OR "6701853" OR "6702372" OR "6722618" OR "6742768" OR "6792876" OR "6938866" OR "7048236" OR				

		"7188813" OR "7204193" OR "7207629" OR "7246784" OR "7575205" OR "7841570" OR "7845665" OR "7946551" OR "7950338" OR "8015638" OR "8132518" OR "8303062" OR "8469152" OR "8490933" OR "8544391" OR "8671853" OR "8684339" OR "8950343" OR "9049923" OR "9055810" OR "9232855" OR "9326598" OR "9480332" OR "9504316" OR "9554644" OR "9668572" OR "9681746" OR "9809136" OR "9854904" OR "9955780" OR "9981571" OR "9993068" OR "D830739" OR "D870490" OR "D901959").pn.					
L4595	26	("4221280" | "4577821" | "4995130" | "5186038" | "5322143" | "5588377" | "9161616" | "D845037" | "10264877" | "10517390" | "20100012909" | "20140041554" | "20160338486" | "20170354245" | "20180055214" | "20180146775").pn. OR ("10869549").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4596	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" |					

		"20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4597	87	("1318564" | "2937003" | "3295800" | "4221280" | "4558648" | "4577821" | "4843978" | "5037163" | "5211367" | "5257767" | "5588377" | "5626323" | "5829948" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533479" | "6701853" | "6722618" | "6742768" | "6792876" | "7677518" | "7841570" | "7950338" | "8132518" | "8544391" | "8671853" | "8684339" | "8931750" | "9049923" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "10159336" | "10244861" | "10258148" | "10258149" | "10499730" | "10542817" | "20030213415" | "20040040480" | "20070080564" | "20080000393" | "20120097822" | "20130193392" | "20130199420" | "20140144352" | "20140158026" | "20150232005" | "20150368082" | "20150375896" | "20160051042" | "20160106205" | "20160170402" | "20160260019" | "20160309889" | "20160338486" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20160353880" | "20170174486" | "20170360192" | "20180008037" | "20180125227" | "20180177289" | "20180279770" | "20180360208" | "20190110588" | "20190269237" | "20200029685").pn. OR ("10893748").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4598	162	("1824822" | "2545515" | "2579577" | "2581023" | "2630359" | "2727799" | "2798641" | "3203373" | "3245366" | "3347184" | "3727245" | "3888451" | "4032103" | "4073240" | "4130069" | "4194452" | "4515086" | "4534544" | "4558847" | "4577821" | "4589621" | "4625657" | "4728118" | "4981052" | "4981085" | "5039054" | "5048784" | "5083512" | "5088676" | "5174223" | "5192053" | "5251864" | "5322025" | "5325794" | "5375514" | "5394809" | "5490466" | "5503086" | "5549052" | "5553550" | "5588377" | "5649493" | "5680820" | "5687655" | "5778799" | "5794911" | "5823120" | "5833198" | "5938340" | "5967059" | "6026755" | "6038986" | "6283047" | "6286441" | "6378446" | "6439657" | "6510803" | "6516478" | "6520091" | "6603157" | "6691626" | "6701853" | "6874431" | "6991199" | "7048236" | "7059254" | "7201108" | "7246784" | "7385376" | "7548051" | "7642759" | "7654208" | "7677518" | "7690317" | "7849789" | "7887014" | "7950338" | "8065966" | "8132518" | "8439319" | "8544391" | "8671853" | "8783639" | "8800454" | "8931750" | "8950343" | "9049923" | "9055810"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "9072645" | "9113703" | "9668572" | "20020189505" | "20030213415" | "20040187742" | "20040227443" | "20050041721" | "20050248239" | "20060037518" | "20060038383" | "20060157628" | "20070163475" | "20070259554" | "20070266912" | "20070295882" | "20080308016" | "20090179121" | "20100242174" | "20100257671" | "20110120351" | "20110168062" | "20110247532" | "20130014674" | "20130139736" | "20130145972" | "20130199420" | "20130340655" | "20140020606" | "20140041554" | "20140144352" | "20140158026" | "20140165882" | "20140360411" | "20150164218" | "20150216296" | "20150231992" | "20150250303" | "20150289641" | "20160120300" | "20160198853" | "20160278515" | "20160338486" | "20170354245" | "20170360188" | "20180103752" | "20180146775" | "20180160799" | "20180213929" | "20180279772").pn. OR ("10542817").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4599	87	("1318564" | "2937003" | "3295800" | "4221280" | "4558648" | "4577821" | "4843978" | "5037163" | "5211367" | "5257767" | "5588377" | "5626323"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "5829948" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533479" | "6701853" | "6722618" | "6742768" | "6792876" | "7677518" | "7841570" | "7950338" | "8132518" | "8544391" | "8671853" | "8684339" | "8931750" | "9049923" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "10159336" | "10244861" | "10258148" | "10258149" | "10499730" | "10542817" | "20030213415" | "20040040480" | "20070080564" | "20080000393" | "20120097822" | "20130193392" | "20130199420" | "20140144352" | "20140158026" | "20150232005" | "20150368082" | "20150375896" | "20160051042" | "20160106205" | "20160170402" | "20160260019" | "20160309889" | "20160338486" | "20160353880" | "20170174486" | "20170360192" | "20180008037" | "20180125227" | "20180177289" | "20180279770" | "20180360208" | "20190110588" | "20190269237" | "20200029685").pn. OR ("10893748").urpn. AND (PGPB | USPT | USOC).dbnm.				
L4600	33	("136357" | "2624535" | "2733109" | "3001559" | "4967672" | "5588377" | "5636711" | "5829948" | "7032872" | "7059616" | "7677518" | "20140144352").pn. OR	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		("8950343").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4601	8	("2012/0188302").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4602	22	("2005/0120922").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4603	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4604	17703	A47B21/0314,00,02,03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4605	1350	A47B21/0314,00,02,03.cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4606	162	("3140894"|"4926760"|"5588377"|"7640869"|"9113703"|"9615655"|"20160120300"|"6974185"|"9161616"|"5649493"|"8544391"|"9055810"|"9480332"|"9554644"|"20160249737"|"2531856"|"3494662"|"8016305"|"9644378"|"9681746"|"2922685"|"9326598"|"9625929"|"3161161"|"8936306").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4607	88	("2156148"|"20040040480"|"20080203865"|"20130139736"|"20140041554"|"20150216296"|"20150289641"|"20160286951"|"20160338486"|"3245366"|"4691888"|"5588377"|"8544391"|"9326598"|"9480332"|"950	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		4316").PN.					
L4608	1313	312/208.1,223.3.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4609	0	248/421,562,588, "585,431,432,439".cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4610	0	248/421,562,588,585,431,432,439.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4611	3921	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4612	2881	248/421,562,588,585.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4613	1060	248/431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4614	3035	108/147,144.11,145,93.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/09/21 01:52 PM

			IBM_TDB)				
L4615	1049	108/96,116.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4616	3238	108/118,120,43,138,50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4617	1877	108/118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4618	1396	108/50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4619	550	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"49	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		95130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"20180103752"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.				
L4620	25	("3282566" | "4273306" | "5400720" | "5632209" | "5649493" | "9326598" | "20130340655" | "20140360414" | "20150289641" | "20180055214").pn. OR ("10517390").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

L4621	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4622	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4623	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4624	56	("D166377" | "D280478" | "D304112" | "D352845" | "D371687" | "D395969" | "D415910" | "D424828" | "D435368" | "D435986" | "D436268" | "D464212" | "D530939" | "D612643" | "D644046" | "D671338" | "D681979" | "D694044" | "D716074" | "D733476" | "D734413" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"D771981" | "D771982" | "9504316" | "D781617" | "D781618" | "D781619" | "D784050" | "20080178779" | "20130139736" | "20150096472" | "20160106205" | "20160278515" | "20170105518" | "20170196351" | "20170290413" | "20170354245").pn. OR ("D830739").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4625	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4626	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4627	2081	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR,	OR	ON	ON	2022/09/21 01:52 PM

			GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4628	10819	(A47B3/00 OR A47B61/00).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4629	182	(A47B3/00 OR A47B61/00).cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4630	3649	A47B3/02,0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4631	1712	A47B3/0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4632	513	(A47B3/02 AND A47B2003/025).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4633	1267876	(desk$4 OR table$4) AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4634	5666298	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm)((pnuematic OR	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR,	OR	ON	ON	2022/09/21 01:52 PM

		gas) ADJ spring OR actuator)	GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4635	3703	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4636	869	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4637	91	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4638	305	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4639	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4640	202	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM

		258148"|"10306977"|"1 318564"|"20030213415 "|"20050120922"|"2008 0000393"|"2017035424 5"|"20200107633"|"455 8648"|"4702454"|"5829 948"|"6701853"|"80156 38"|"D302893"|"102448 61"|"7575205"|"105428 17"|"20160353880"|"52 11367"|"10893748"|"49 95130"|"9504316"|"D83 0739"|"10544019"|"105 75630"|"4221280"|"444 9262"|"4549720"|"5251 864"|"6269753"|"65164 78"|"6792876"|"720762 9"|"10524565"|"475341 9"|"4941641"|"8303062" |"8544391"|"9480332"|" 9554644"|"2016030988 9"|"5257767"|"2015028 9641"|"20180103752"|" 10023355"|"200700805 64"|"20150289641"|"29 37003"|"4995130"|"540 0720"|"5626323"|"5926 876"|"6533229"|"67023 72"|"6722618"|"674276 8"|"9055810"|"7845665" |"4967672"|"201002421 74"|"9049923"|"104130 55"|"20070266912"|"20 200029685"|"3295800"| "4741512"|"5294087"|"5 957426"|"7048236"|"84 90933"|"8950343"|"923 2855"|"9993068"|"9326 598"|"D854775"|"10123 613"|"10258149"|"2014 0144352"|"2015021629 6"|"6076785"|"6098961" |"9815672"|"9955780"|" 20180177289"|"767751 8"|"8931750"|"1049973 0"|"20160051042"|"607 6785"|"4741512"|"2009 0145336"|"2016033848 6"|"7204193"|"7950338" |"8132518"|"200700010 77"|"5400720"|"D30289 3"|"10517390"|"105684 16"|"20120097822"|"20 130193392"|"20170196 351"|"3826457"|"45778 21"|"5588377"|"576579 7"|"6533479"|"6672430" |"8469152"|"10018298"|				

		"9981571").PN.					
L4641	67	"5400720"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4642	84	"4577821"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4643	24	(Artificial Intelligence) More like doc: US-D854775-S Text: (WO-0068597-A1 OR DE-4336662-A1 OR US-5694864-A OR AT-149474-T OR US-D378155-S OR US-D375602-S OR US-D346254-S OR US-D825131-S OR US-D814736-S OR US-D640440-S OR US-D837970-S OR TW-201522199-A OR TW-I531523-B OR US-20100012909-A1 OR US-D794629-S OR US-D834861-S OR US-D927102-S OR US-D706344-S OR US-D815832-S OR US-D775524-S).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4644	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4645	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4646	29	("20100198374"|"6062148"|"20140137773"|"20120174833"|"7789025"|"20160127809"|"5884882"|"7077068"|"20080255794"|"20140247155"|"9082239"|"20080255794"|"6595144"|"6831829"|"7780578"|"8947215"|"20130204438"|"6546880"|"7517029"|"20130116092"|"20140096706"|"8485945"|"20140247146"|"5323695"|"8587439"|"8690578"|"20140137773"|"20160128467"|"20130321346"|"20140096706"|"20140247154"|"20160260019").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4647	27	("10244861"|"20180213929"|"9326598"|"96817	(US-PGPUB; USPAT; USOCR; JPO)	OR	ON	ON	2022/09/21 01:52 PM

		46"|"8931750"|"7246784"|"10114352"|"5957426"|"5722513"|"4640488"|"5251864"|"4448386"|"4702454"|"2843418"|"9668572"|"20070001077"|"4753419"|"11083282"|"20170196351"|"D854775"|"20160249737"|"20120188302"|"10575630").PN.					
L4648	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4649	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4650	406	wilkens.xp. AND bracket AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4651	159	wilkens.xp. AND stack$4 AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/09/21 01:52 PM

			IBM_TDB)				
L4652	298	wilkens.xp. AND A47B88/$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4653	16	("1680081" | "1686783" | "1902795" | "1994424" | "3094363" | "3275396" | "3298768" | "4285560").pn. OR ("10888157").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4654	43	"3275396"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4655	60	("2001744" | "2070960" | "2610824" | "3032319" | "3110476" | "3174722" | "3282566" | "3379411" | "3982718" | "4221280" | "4403680" | "4526346" | "4682750" | "4688760" | "4690250" | "4754713" | "4764075" | "4858888" | "4890692" | "4899987" | "4921074" | "5192053" | "5299906" | "5322143" | "5460460" | "5829948" | "6182796" | "6464205" | "6601826" | "6672430" | "6814188" | "7213686" | "20060126966" | "20060279728" | "20070017748" | "20070235266").pn. OR ("8469152").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4656	37	("4061237" | "4249749" | "4288195" | "4504041" | "4613272" | "4979592" | "5018931" | "6394419" | "6431319" | "6679479" | "8015638" | "8469152" | "8888070" | "9422141" | "9463966" | "9540220"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "20030075657" | "20050042068" | "20110262261" | "20140014886" | "20140027693" | "20150028787" | "20150298949").pn. OR ("9815672").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4657	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4658	47	"5861051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4659	1	"58-61051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4660	38	"102013008020"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4661	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4662	17703	A47B21/0314,00,02,03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2022/09/21 01:52 PM

			AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4663	1350	A47B21/0314,00,02,03.cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4664	162	("3140894"|"4926760"|"5588377"|"7640869"|"9113703"|"9615655"|"20160120300"|"6974185"|"9161616"|"5649493"|"8544391"|"9055810"|"9480332"|"9554644"|"20160249737"|"2531856"|"3494662"|"8016305"|"9644378"|"9681746"|"2922685"|"9326598"|"9625929"|"3161161"|"8936306").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4665	88	("2156148"|"20040040480"|"20080203865"|"20130139736"|"20140041554"|"20150216296"|"20150289641"|"20160286951"|"20160338486"|"3245366"|"4691888"|"5588377"|"8544391"|"9326598"|"9480332"|"9504316").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4666	1313	312/208.1,223.3.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4667	0	248/421,562,588,"585,431,432,439".cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4668	0	248/421,562,588,585,431,432,439.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD,	OR	ON	ON	2022/09/21 01:52 PM

			DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4669	3921	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4670	2881	248/421,562,588,585.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4671	1060	248/431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4672	3035	108/147,144.11,145,93.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4673	1049	108/96,116.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4674	3238	108/118,120,43,138,50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4675	1877	108/118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD,	OR	ON	ON	2022/09/21 01:52 PM

			DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4676	1396	108/50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4677	550	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"20180103752"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"104130	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		55"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.				
L4678	25	("3282566" | "4273306" | "5400720" | "5632209" | "5649493" | "9326598" | "20130340655" | "20140360414" | "20150289641" | "20180055214").pn. OR ("10517390").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4679	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4680	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4681	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4682	56	("D166377" | "D280478" | "D304112" | "D352845" | "D371687" | "D395969" | "D415910" | "D424828" | "D435368" | "D435986" | "D436268" | "D464212" | "D530939" | "D612643" | "D644046" | "D671338" | "D681979" | "D694044" | "D716074" | "D733476" | "D734413" | "D771981" | "D771982" | "9504316" | "D781617" | "D781618" | "D781619" | "D784050" | "20080178779" | "20130139736" | "20150096472" | "20160106205" | "20160278515" | "20170105518" | "20170196351" | "20170290413" | "20170354245").pn. OR ("D830739").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4683	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4684	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4685	2081	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4686	10819	(A47B3/00 OR A47B61/00).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4687	182	(A47B3/00 OR A47B61/00).cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

L4688	3649	A47B3/02,0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4689	1712	A47B3/0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4690	513	(A47B3/02 AND A47B2003/025).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4691	1267876	(desk$4 OR table$4) AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4692	5666298	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm)((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4693	3703	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4694	869	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

L4695	91	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4696	305	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4697	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4698	202	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"2016030988	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM

		9"|"5257767"|"2015028 9641"|"20180103752"|" 10023355"|"200700805 64"|"20150289641"|"29 37003"|"4995130"|"540 0720"|"5626323"|"5926 876"|"6533229"|"67023 72"|"6722618"|"674276 8"|"9055810"|"7845665" |"4967672"|"201002421 74"|"9049923"|"104130 55"|"20070266912"|"20 200029685"|"3295800"| "4741512"|"5294087"|"5 957426"|"7048236"|"84 90933"|"8950343"|"923 2855"|"9993068"|"9326 598"|"D854775"|"10123 613"|"10258149"|"2014 0144352"|"2015021629 6"|"6076785"|"6098961" |"9815672"|"9955780"|" 20180177289"|"767751 8"|"8931750"|"1049973 0"|"20160051042"|"607 6785"|"4741512"|"2009 0145336"|"2016033848 6"|"7204193"|"7950338" |"8132518"|"200700010 77"|"5400720"|"D30289 3"|"10517390"|"105684 16"|"20120097822"|"20 130193392"|"20170196 351"|"3826457"|"45778 21"|"5588377"|"576579 7"|"6533479"|"6672430" |"8469152"|"10018298"| "9981571").PN.					
L4699	67	"5400720"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4700	84	"4577821"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4701	24	(Artificial Intelligence) More like doc: US-D854775-S	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2022/09/21 01:52 PM

		Text: (WO-0068597-A1 OR DE-4336662-A1 OR US-5694864-A OR AT-149474-T OR US-D378155-S OR US-D375602-S OR US-D346254-S OR US-D825131-S OR US-D814736-S OR US-D640440-S OR US-D837970-S OR TW-201522199-A OR TW-I531523-B OR US-20100012909-A1 OR US-D794629-S OR US-D834861-S OR US-D927102-S OR US-D706344-S OR US-D815832-S OR US-D775524-S).did.	CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4702	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4703	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" |				

		"20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4704	29	("20100198374"|"6062148"|"20140137773"|"20120174833"|"7789025"|"20160127809"|"5884882"|"7077068"|"20080255794"|"20140247155"|"9082239"|"20080255794"|"6595144"|"6831829"|"7780578"|"8947215"|"20130204438"|"6546880"|"7517029"|"20130116092"|"20140096706"|"8485945"|"20140247146"|"5323695"|"8587439"|"8690578"|"20140137773"|"20160128467"|"20130321346"|"20140096706"|"20140247154"|"20160260019").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4705	27	("10244861"|"20180213929"|"9326598"|"9681746"|"8931750"|"7246784"|"10114352"|"5957426"|"5722513"|"4640488"|"5251864"|"4448386"|"4702454"|"2843418"|"9668572"|"20070001077"|"4753419"|"11083282"|"20170196351"|"D854775"|"20160249737"|"20120188302"|"10575630").PN.	(US-PGPUB; USPAT; USOCR; JPO)	OR	ON	ON	2022/09/21 01:52 PM
L4706	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4707	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4708	406	wilkens.xp. AND bracket AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4709	159	wilkens.xp. AND stack$4 AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4710	298	wilkens.xp. AND A47B88/$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4711	16	("1680081" | "1686783" | "1902795" | "1994424" | "3094363" | "3275396" | "3298768" | "4285560").pn. OR ("10888157").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4712	43	"3275396"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD,	OR	ON	ON	2022/09/21 01:52 PM

			DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4713	60	("2001744" | "2070960" | "2610824" | "3032319" | "3110476" | "3174722" | "3282566" | "3379411" | "3982718" | "4221280" | "4403680" | "4526346" | "4682750" | "4688760" | "4690250" | "4754713" | "4764075" | "4858888" | "4890692" | "4899987" | "4921074" | "5192053" | "5299906" | "5322143" | "5460460" | "5829948" | "6182796" | "6464205" | "6601826" | "6672430" | "6814188" | "7213686" | "20060126966" | "20060279728" | "20070017748" | "20070235266").pn. OR ("8469152").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4714	37	("4061237" | "4249749" | "4288195" | "4504041" | "4613272" | "4979592" | "5018931" | "6394419" | "6431319" | "6679479" | "8015638" | "8469152" | "8888070" | "9422141" | "9463966" | "9540220" | "20030075657" | "20050042068" | "20110262261" | "20140014886" | "20140027693" | "20150028787" | "20150298949").pn. OR ("9815672").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4715	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		USOC).dbnm.					
L4716	47	"5861051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4717	1	"58-61051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4718	38	"102013008020"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4719	5	"20190116976"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4720	10	"20200003258"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4721	2	"20210214986"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4722	41	"4741512"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/09/21 01:52 PM

			IBM_TDB)				
L4723	139	"7677518"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4724	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4725	17703	A47B21/0314,00,02,03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4726	1350	A47B21/0314,00,02,03.cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4727	162	("3140894"|"4926760"|"5588377"|"7640869"|"9113703"|"9615655"|"20160120300"|"6974185"|"9161616"|"5649493"|"8544391"|"9055810"|"9480332"|"9554644"|"20160249737"|"2531856"|"3494662"|"8016305"|"9644378"|"9681746"|"2922685"|"9326598"|"9625929"|"3161161"|"8936306").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4728	88	("2156148"|"20040040480"|"20080203865"|"20130139736"|"20140041554"|"20150216296"|"20150289641"|"20160286951"|"20160338486"|"3245366"|"4691888"|"5588377"|"8544391"|"9326598"|"9480332"|"9504316").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

L4729	1313	312/208.1,223.3.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4730	0	248/421,562,588, "585,431,432,439".cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4731	0	248/421,562,588,585,431,432,439.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4732	3921	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4733	2881	248/421,562,588,585.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4734	1060	248/431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4735	3035	108/147,144.11,145,93.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

L4736	1049	108/96,116.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4737	3238	108/118,120,43,138,50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4738	1877	108/118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4739	1396	108/50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4740	550	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"105	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		75630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.					
L4741	25	("3282566" | "4273306" | "5400720" | "5632209" | "5649493" | "9326598" | "20130340655" | "20140360414" | "20150289641" | "20180055214").pn. OR ("10517390").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4742	56	("1453406" | "1581874"	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		| "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	USOCR)				01:52 PM
L4743	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4744	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4745	56	("D166377" | "D280478" | "D304112" | "D352845" | "D371687" | "D395969" | "D415910" | "D424828" | "D435368" | "D435986" | "D436268" | "D464212" | "D530939" | "D612643" | "D644046" | "D671338" | "D681979" | "D694044" | "D716074" | "D733476" | "D734413" | "D771981" | "D771982"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "9504316" | "D781617" | "D781618" | "D781619" | "D784050" | "20080178779" | "20130139736" | "20150096472" | "20160106205" | "20160278515" | "20170105518" | "20170196351" | "20170290413" | "20170354245").pn. OR ("D830739").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4746	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4747	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4748	2081	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

			SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4749	10819	(A47B3/00 OR A47B61/00).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4750	182	(A47B3/00 OR A47B61/00).cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4751	3649	A47B3/02,0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4752	1712	A47B3/0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4753	513	(A47B3/02 AND A47B2003/025).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4754	1267876	(desk$4 OR table$4) AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4755	5666298	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm)((pnuematic OR gas) ADJ spring OR	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

		actuator)	SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4756	3703	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4757	869	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4758	91	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4759	305	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4760	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4761	202	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM

		318564"|"20030213415 "|"20050120922"|"2008 0000393"|"2017035424 5"|"20200107633"|"455 8648"|"4702454"|"5829 948"|"6701853"|"80156 38"|"D302893"|"102448 61"|"7575205"|"105428 17"|"20160353880"|"52 11367"|"10893748"|"49 95130"|"9504316"|"D83 0739"|"10544019"|"105 75630"|"4221280"|"444 9262"|"4549720"|"5251 864"|"6269753"|"65164 78"|"6792876"|"720762 9"|"10524565"|"475341 9"|"4941641"|"8303062" |"8544391"|"9480332"|" 9554644"|"2016030988 9"|"5257767"|"2015028 9641"|"20180103752"|" 10023355"|"200700805 64"|"20150289641"|"29 37003"|"4995130"|"540 0720"|"5626323"|"5926 876"|"6533229"|"67023 72"|"6722618"|"674276 8"|"9055810"|"7845665" |"4967672"|"201002421 74"|"9049923"|"104130 55"|"20070266912"|"20 200029685"|"3295800"| "4741512"|"5294087"|"5 957426"|"7048236"|"84 90933"|"8950343"|"923 2855"|"9993068"|"9326 598"|"D854775"|"10123 613"|"10258149"|"2014 0144352"|"2015021629 6"|"6076785"|"6098961" |"9815672"|"9955780"|" 20180177289"|"767751 8"|"8931750"|"1049973 0"|"20160051042"|"607 6785"|"4741512"|"2009 0145336"|"2016033848 6"|"7204193"|"7950338" |"8132518"|"200700010 77"|"5400720"|"D30289 3"|"10517390"|"105684 16"|"20120097822"|"20 130193392"|"20170196 351"|"3826457"|"45778 21"|"5588377"|"576579 7"|"6533479"|"6672430" |"8469152"|"10018298"| "9981571").PN.					

L4762	67	"5400720"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4763	84	"4577821"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4764	24	(Artificial Intelligence) More like doc: US-D854775-S Text: (WO-0068597-A1 OR DE-4336662-A1 OR US-5694864-A OR AT-149474-T OR US-D378155-S OR US-D375602-S OR US-D346254-S OR US-D825131-S OR US-D814736-S OR US-D640440-S OR US-D837970-S OR TW-201522199-A OR TW-I531523-B OR US-20100012909-A1 OR US-D794629-S OR US-D834861-S OR US-D927102-S OR US-D706344-S OR US-D815832-S OR US-D775524-S).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4765	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4766	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4767	29	("20100198374"|"6062148"|"20140137773"|"20120174833"|"7789025"|"20160127809"|"5884882"|"7077068"|"20080255794"|"20140247155"|"9082239"|"20080255794"|"6595144"|"6831829"|"7780578"|"8947215"|"20130204438"|"6546880"|"7517029"|"20130116092"|"20140096706"|"8485945"|"20140247146"|"5323695"|"8587439"|"8690578"|"20140137773"|"20160128467"|"20130321346"|"20140096706"|"20140247154"|"20160260019").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4768	27	("10244861"|"20180213929"|"9326598"|"9681746"|"8931750"|"7246784"|"10114352"|"595742	(US-PGPUB; USPAT; USOCR; JPO)	OR	ON	ON	2022/09/21 01:52 PM

		6"|"5722513"|"4640488"|"5251864"|"4448386"|"4702454"|"2843418"|"9668572"|"20070001077"|"4753419"|"11083282"|"20170196351"|"D854775"|"20160249737"|"20120188302"|"10575630").PN.					
L4769	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4770	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4771	406	wilkens.xp. AND bracket AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4772	159	wilkens.xp. AND stack$4 AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

L4773	298	wilkens.xp. AND A47B88/$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4774	16	("1680081" | "1686783" | "1902795" | "1994424" | "3094363" | "3275396" | "3298768" | "4285560").pn. OR ("10888157").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4775	43	"3275396"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4776	60	("2001744" | "2070960" | "2610824" | "3032319" | "3110476" | "3174722" | "3282566" | "3379411" | "3982718" | "4221280" | "4403680" | "4526346" | "4682750" | "4688760" | "4690250" | "4754713" | "4764075" | "4858888" | "4890692" | "4899987" | "4921074" | "5192053" | "5299906" | "5322143" | "5460460" | "5829948" | "6182796" | "6464205" | "6601826" | "6672430" | "6814188" | "7213686" | "20060126966" | "20060279728" | "20070017748" | "20070235266").pn. OR ("8469152").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4777	37	("4061237" | "4249749" | "4288195" | "4504041" | "4613272" | "4979592" | "5018931" | "6394419" | "6431319" | "6679479" | "8015638" | "8469152" | "8888070" | "9422141" | "9463966" | "9540220" | "20030075657" | "20050042068" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"20110262261" | "20140014886" | "20140027693" | "20150028787" | "20150298949").pn. OR ("9815672").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4778	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4779	47	"5861051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4780	1	"58-61051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4781	38	"102013008020"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4782	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4783	17703	A47B21/0314,00,02,03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR,	OR	ON	ON	2022/09/21 01:52 PM

			GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4784	1350	A47B21/0314,00,02,03.cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4785	162	("3140894"|"4926760"|"5588377"|"7640869"|"9113703"|"9615655"|"20160120300"|"6974185"|"9161616"|"5649493"|"8544391"|"9055810"|"9480332"|"9554644"|"20160249737"|"2531856"|"3494662"|"8016305"|"9644378"|"9681746"|"2922685"|"9326598"|"9625929"|"3161161"|"8936306").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4786	88	("2156148"|"20040040480"|"20080203865"|"20130139736"|"20140041554"|"20150216296"|"20150289641"|"20160286951"|"20160338486"|"3245366"|"4691888"|"5588377"|"8544391"|"9326598"|"9480332"|"9504316").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4787	1313	312/208.1,223.3.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4788	0	248/421,562,588, "585,431,432,439".cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4789	0	248/421,562,588,585,431,432,439.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

			SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4790	3921	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4791	2881	248/421,562,588,585.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4792	1060	248/431,432,439.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4793	3035	108/147,144.11,145,93.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4794	1049	108/96,116.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4795	3238	108/118,120,43,138,50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4796	1877	108/118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

			SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4797	1396	108/50.01,50.02.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4798	550	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"20150289641"|"20180103752"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.				
L4799	25	("3282566" | "4273306" | "5400720" | "5632209" | "5649493" | "9326598" | "20130340655" | "20140360414" | "20150289641" | "20180055214").pn. OR ("10517390").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4800	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4801	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		("10258149").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4802	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4803	56	("D166377" | "D280478" | "D304112" | "D352845" | "D371687" | "D395969" | "D415910" | "D424828" | "D435368" | "D435986" | "D436268" | "D464212" | "D530939" | "D612643" | "D644046" | "D671338" | "D681979" | "D694044" | "D716074" | "D733476" | "D734413" | "D771981" | "D771982" | "9504316" | "D781617" | "D781618" | "D781619" | "D784050" | "20080178779" | "20130139736" | "20150096472" | "20160106205" | "20160278515" | "20170105518" | "20170196351" | "20170290413" | "20170354245").pn. OR ("D830739").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4804	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4805	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4806	2081	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4807	10819	(A47B3/00 OR A47B61/00).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4808	182	(A47B3/00 OR A47B61/00).cpc. AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4809	3649	A47B3/02,0809,0815.cp	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		c.	USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L4810	1712	A47B3/0809,0815.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4811	513	(A47B3/02 AND A47B2003/025).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4812	1267876	(desk$4 OR table$4) AND ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4813	5666298	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm)((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4814	3703	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4815	869	(desk$4 OR table$4) SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ spring OR actuator)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4816	91	(desk$4 OR table$4)	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		SAME (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L4817	305	(desk$4 OR table$4) AND (X OR cross) ADJ (member OR arm) SAME ((pnuematic OR gas) ADJ (spring OR actuator))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4818	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4819	202	("7841570"|"8684339"|"5037163"|"10258148"|"8469152"|"9815672"|"10869549"|"10893748"|"20170071332"|"4843978"|"9681746"|"9809136"|"D830739"|"D854775"|"D901959"|"8671853"|"9504316"|"20040040480"|"20050120922"|"20180055214"|"6672430"|"8015638"|"9681746"|"10258148"|"10306977"|"1318564"|"20030213415"|"20050120922"|"20080000393"|"20170354245"|"20200107633"|"4558648"|"4702454"|"5829948"|"6701853"|"8015638"|"D302893"|"10244861"|"7575205"|"10542817"|"20160353880"|"5211367"|"10893748"|"4995130"|"9504316"|"D830739"|"10544019"|"10575630"|"4221280"|"4449262"|"4549720"|"5251864"|"6269753"|"6516478"|"6792876"|"7207629"|"10524565"|"4753419"|"4941641"|"8303062"|"8544391"|"9480332"|"9554644"|"20160309889"|"5257767"|"2015028	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM

		9641"|"20180103752"|"10023355"|"20070080564"|"20150289641"|"2937003"|"4995130"|"5400720"|"5626323"|"5926876"|"6533229"|"6702372"|"6722618"|"6742768"|"9055810"|"7845665"|"4967672"|"20100242174"|"9049923"|"10413055"|"20070266912"|"20200029685"|"3295800"|"4741512"|"5294087"|"5957426"|"7048236"|"8490933"|"8950343"|"9232855"|"9993068"|"9326598"|"D854775"|"10123613"|"10258149"|"20140144352"|"20150216296"|"6076785"|"6098961"|"9815672"|"9955780"|"20180177289"|"7677518"|"8931750"|"10499730"|"20160051042"|"6076785"|"4741512"|"20090145336"|"20160338486"|"7204193"|"7950338"|"8132518"|"20070001077"|"5400720"|"D302893"|"10517390"|"10568416"|"20120097822"|"20130193392"|"20170196351"|"3826457"|"4577821"|"5588377"|"5765797"|"6533479"|"6672430"|"8469152"|"10018298"|"9981571").PN.				
L4820	67	"5400720"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4821	84	"4577821"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4822	24	(Artificial Intelligence) More like doc: US-D854775-S Text:	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2022/09/21 01:52 PM

		(WO-0068597-A1 OR DE-4336662-A1 OR US-5694864-A OR AT-149474-T OR US-D378155-S OR US-D375602-S OR US-D346254-S OR US-D825131-S OR US-D814736-S OR US-D640440-S OR US-D837970-S OR TW-201522199-A OR TW-I531523-B OR US-20100012909-A1 OR US-D794629-S OR US-D834861-S OR US-D927102-S OR US-D706344-S OR US-D815832-S OR US-D775524-S).did.	CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4823	50	("3472183" | "3820631" | "4488326" | "4741512" | "4995130" | "5113972" | "D346254" | "D375602" | "5588377" | "D378155" | "5833198" | "6651775" | "6814188" | "D640030" | "D640440" | "8015638" | "D771982" | "9615655" | "D814736" | "9961991" | "D825131" | "D827241" | "D830739" | "D832623" | "20120034055" | "20130139736" | "20140014886" | "20140027693" | "20150159803" | "20150289641" | "20170049224" | "20170240396" | "20180103752" | "20180177289" | "20180184797" | "20180206630" | "20180255919").pn. OR ("D854775").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4824	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" |				

		"20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4825	29	("20100198374"|"6062148"|"20140137773"|"20120174833"|"7789025"|"20160127809"|"5884882"|"7077068"|"20080255794"|"20140247155"|"9082239"|"20080255794"|"6595144"|"6831829"|"7780578"|"8947215"|"20130204438"|"6546880"|"7517029"|"20130116092"|"20140096706"|"8485945"|"20140247146"|"5323695"|"8587439"|"8690578"|"20140137773"|"20160128467"|"20130321346"|"20140096706"|"20140247154"|"20160260019").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4826	27	("10244861"|"20180213929"|"9326598"|"9681746"|"8931750"|"7246784"|"10114352"|"5957426"|"5722513"|"4640488"|"5251864"|"4448386"|"4702454"|"2843418"|"9668572"|"20070001077"|"4753419"|"11083282"|"20170196351"|"D854775"|"20160249737"|"20120188302"|"10575630").PN.	(US-PGPUB; USPAT; USOCR; JPO)	OR	ON	ON	2022/09/21 01:52 PM
L4827	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		AND (PGPB | USPT | USOC).dbnm.					
L4828	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4829	406	wilkens.xp. AND bracket AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4830	159	wilkens.xp. AND stack$4 AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4831	298	wilkens.xp. AND A47B88/$	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4832	16	("1680081" | "1686783" | "1902795" | "1994424" | "3094363" | "3275396" | "3298768" | "4285560").pn. OR ("10888157").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4833	43	"3275396"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR,	OR	ON	ON	2022/09/21 01:52 PM

			GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4834	60	("2001744" | "2070960" | "2610824" | "3032319" | "3110476" | "3174722" | "3282566" | "3379411" | "3982718" | "4221280" | "4403680" | "4526346" | "4682750" | "4688760" | "4690250" | "4754713" | "4764075" | "4858888" | "4890692" | "4899987" | "4921074" | "5192053" | "5299906" | "5322143" | "5460460" | "5829948" | "6182796" | "6464205" | "6601826" | "6672430" | "6814188" | "7213686" | "20060126966" | "20060279728" | "20070017748" | "20070235266").pn. OR ("8469152").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4835	37	("4061237" | "4249749" | "4288195" | "4504041" | "4613272" | "4979592" | "5018931" | "6394419" | "6431319" | "6679479" | "8015638" | "8469152" | "8888070" | "9422141" | "9463966" | "9540220" | "20030075657" | "20050042068" | "20110262261" | "20140014886" | "20140027693" | "20150028787" | "20150298949").pn. OR ("9815672").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4836	56	("1453406" | "1581874" | "2013542" | "2563060" | "2928558" | "3094948" | "3203670" | "3282566" | "4531720" | "4577821" | "4685731" | "4705438" | "4723769" | "4760997" | "4767109" | "4796029").pn. OR ("5400720").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

L4837	47	"5861051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4838	1	"58-61051"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4839	38	"102013008020"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4840	5	"20190116976"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4841	10	"20200003258"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4842	2	"20210214986"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4843	41	"4741512"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

L4844	139	"7677518"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4845	24	("10114352"|"10244861"|"10575630"|"11083282"|"20070001077"|"20120188302"|"20160249737"|"20170196351"|"20180213929"|"2843418"|"4448386"|"4640488"|"4702454"|"4753419"|"5251864"|"5722513"|"5957426"|"7246784"|"8931750"|"9326598"|"9668572"|"9681746"|"D854775").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4846	70	("1318564" | "2937003" | "3295800" | "4221280" | "4558648" | "4577821" | "4843978" | "5588377" | "5626323" | "5829948" | "5957426" | "6098961" | "6269753" | "6516478" | "6533479" | "6722618" | "6742768" | "8132518" | "8671853" | "9049923" | "9055810" | "9326598" | "9480332" | "9504316" | "9554644" | "20030213415" | "20040035332" | "20040040480" | "20070080564" | "20080000393" | "20090090832" | "20090200437" | "20110001033" | "20110024958" | "20120097822" | "20130145972" | "20130193392" | "20140144352" | "20150232005" | "20150375896" | "20160338486" | "20170174486" | "20180008037").pn. OR ("10244861").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4847	27	("10114352"|"10244861"|"10575630"|"1108328	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		2"|"11134773"|"20030213415"|"20070001077"|"20120188302"|"20160249737"|"20170196351"|"20180213929"|"2843418"|"4448386"|"4640488"|"4702454"|"4753419"|"5251864"|"5722513"|"5957426"|"7246784"|"8931750"|"9326598"|"9668572"|"9681746"|"9815672"|"D854775").PN.					
L4848	70	("1234569" | "1318564" | "2156148" | "2630359" | "4926760" | "5497706" | "5588377" | "5833200" | "6182935" | "6701853" | "7849789" | "8015638" | "8544391" | "8936306").pn. OR ("9326598").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4849	25	("383610" | "4640488" | "5211369" | "7246784" | "7637468" | "7677518" | "8439334" | "8844894" | "9326598" | "10092089" | "20070295882" | "20130145972" | "20140264215" | "20150014609" | "20160249737" | "20180008037" | "20180146775" | "20180177289" | "20180279770" | "20180332957" | "20180360208" | "20200298599").pn. OR ("11083282").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4850	18	("2016/0249737").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4851	25	("3219338" | "4558648" | "4741512" | "5400720" | "5695173" | "5823120" | "6672430" | "9326598" | "9504316" | "9815672" | "20030154890" | "20050120922" | "20130341984" | "20170174486" | "20170340104").pn. OR ("10258149").urpn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		AND (PGPB | USPT | USOC).dbnm.					
L4852	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4853	37	("2766088" | "D716074" | "9326598" | "9504316" | "D781617" | "D781618" | "20030230222" | "20150289641" | "20170290413" | "20170354245" | "20180055214" | "20180125227").pn. OR ("D845037").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4854	76	("226053" | "4403680" | "4515086" | "4926760" | "5632209" | "5829948" | "6038986" | "6112858" | "6286812" | "6397763" | "6585214" | "6679479" | "6705238" | "6857493" | "7677518" | "7950338" | "8015638" | "8424883" | "8469152" | "9055810" | "9133976" | "20040040480" | "20070034125" | "20130145972" | "20150289641").pn. OR ("9504316").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4855	56	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L4856	17	"9815672"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/21 01:52 PM
L4857	135828	hydraulic WITH gas WITH (spring OR cylinder)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4858	727	hydraulic WITH gas WITH (spring OR cylinder) AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4859	263	hydraulic WITH gas WITH (spring OR cylinder) AND A47B AND desk	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4860	139	"7677518"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4861	114	"7677518"	(US-PGPUB; USPAT; USOCR; EPO)	OR	ON	ON	2022/09/21 01:52 PM
L4862	114	"7677518"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4863	129	("4691886" | "4729533" | "5037054" | "5044284" | "5174223" | "5200859" | "5287815" | "5405204" | "5445353" | "5564668" | "5636711" | "D393382" | "5829948" | "5938622" | "5961231" | "6286812" | "6585214" | "6736469" | "6905102" | "7111825" | "7383786").pn. OR	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		("7677518").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4864	10	("6857493"|"5400720").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4865	37	"1142343"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4866	2	("6857493"|"5400720").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4867	104	("10114352"|"10244861"|"10575630"|"11083282"|"20070001077"|"20120188302"|"20160249737"|"20170196351"|"20180213929"|"2843418"|"4448386"|"4640488"|"4702454"|"4753419"|"5251864"|"5722513"|"5957426"|"7246784"|"8931750"|"9326598"|"9668572"|"9681746"|"D854775").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4868	24	("10114352"|"10244861"|"10575630"|"11083282"|"20070001077"|"20120188302"|"20160249737"|"20170196351"|"20180213929"|"2843418"|"4448386"|"4640488"|"4702454"|"4753419"|"5251864"|"5722513"|"5957426"|"7246784"|"8931750"|"9326598"|"9668572"|"9681746"|"D854775").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4869	132	("10018298" OR "10023355" OR "10123613" OR "10258148" OR "10258149" OR "10264877" OR "10306977" OR "10413055" OR "10499730" OR	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/21 01:52 PM

		"10517390" OR "10524565" OR "10542817" OR "10544019" OR "10568416" OR "10869549" OR "10893748" OR "11134773" OR "11134774" OR "11140977" OR "11147366" OR "11160367" OR "1318564" OR "20030042380" OR "20030213415" OR "20050120922" OR "20070080564" OR "20070266912" OR "20080000393" OR "20090145336" OR "20100242174" OR "20120097822" OR "20130193392" OR "20140144352" OR "20150028787" OR "20150216296" OR "20150289641" OR "20160338486" OR "20160353880" OR "20170071332" OR "20170354245" OR "20180177289" OR "20180279770" OR "20190110588" OR "20190183239" OR "20190269237" OR "20200029685" OR "20200107633" OR "2937003" OR "3295800" OR "3823915" OR "3826457" OR "4221280" OR "4449262" OR "4549720" OR "4558648" OR "4577821" OR "4625657" OR "4659052" OR "4709972" OR "4717112" OR "4741512" OR "4826123" OR "4843978" OR "4941641" OR "4967672" OR "4995130" OR "5037163" OR					

		"5048784" OR "5211367" OR "5257767" OR "5294087" OR "5400720" OR "5588377" OR "5626323" OR "5765797" OR "5829948" OR "5836562" OR "5926876" OR "6076785" OR "6098961" OR "6148739" OR "6176456" OR "6179261" OR "6269753" OR "6273382" OR "6488248" OR "6516478" OR "6533229" OR "6533479" OR "6672430" OR "6701853" OR "6702372" OR "6722618" OR "6742768" OR "6792876" OR "6938866" OR "7048236" OR "7188813" OR "7204193" OR "7207629" OR "7575205" OR "7677518" OR "7841570" OR "7845665" OR "7946551" OR "7950338" OR "8015638" OR "8132518" OR "8303062" OR "8469152" OR "8490933" OR "8544391" OR "8671853" OR "8684339" OR "8950343" OR "9049923" OR "9055810" OR "9232855" OR "9480332" OR "9504316" OR "9554644" OR "9809136" OR "9815672" OR "9854904" OR "9955780" OR					

		"9981571" OR "9993068" OR "D302893" OR "D830739" OR "D845037" OR "D870490" OR "D901959").pn.					
L4870	27	("2531856" | "3727245" | "4611823" | "5447319" | "5722513" | "6974185" | "8016305" | "8544391" | "9326598" | "20040040480").pn. OR ("9480332").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4871	2481	A47B67/005.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4872	2113	(A47B3/00 OR A47B61/00).cpc. AND (gear OR shaft)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4873	48	wilkens.xp. AND lift SAME table	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4874	34	(Artificial Intelligence) More like doc: US-8950343-B2 Text: (US-20140041554-A1 OR TW-M445388-U OR US-10092089-B1 OR JP-2018520740-A OR GB-2341790-A OR DK-179639-B1 OR US-20180160799-A1 OR WO-2016200318-A1 OR EP-3307108-A1 OR CN-107708486-A OR WO-2016200318-A8 OR WO-2018137739-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		A1 OR US-9713375-B1 OR DK-201700050-A1 OR US-20180103752-A1 OR US-10258149-B2 OR US-20180255919-A1 OR JP-2017513663-A OR US-10542817-B2 OR US-20150272316-A1).did.					
L4875	132	("20180125227" OR "10018298" OR "10023355" OR "10114352" OR "10123613" OR "10244861" OR "10258149" OR "10264877" OR "10306977" OR "10413055" OR "10524565" OR "10542817" OR "10544019" OR "10568416" OR "10575630" OR "10869549" OR "11083282" OR "11140977" OR "11147366" OR "1318564" OR "20030042380" OR "20030213415" OR "20070001077" OR "20070080564" OR "20070266912" OR "20080000393" OR "20100242174" OR "20120097822" OR "20120188302" OR "20130193392" OR "20150216296" OR "20160338486" OR "20160353880" OR "20170071332" OR "20170196351" OR "20180177289" OR "20180213929" OR "20180279770" OR "20190110588" OR "20190183239" OR "20190269237" OR "20200029685" OR "20200107633" OR "2843418" OR "2937003" OR "3295800" OR "4221280" OR "4448386" OR	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/21 01:52 PM

		"4449262" OR "4549720" OR "4558648" OR "4577821" OR "4625657" OR "4640488" OR "4702454" OR "4709972" OR "4717112" OR "4753419" OR "4826123" OR "4843978" OR "4941641" OR "4967672" OR "4995130" OR "5037163" OR "5048784" OR "5211367" OR "5251864" OR "5257767" OR "5294087" OR "5400720" OR "5588377" OR "5626323" OR "5722513" OR "5765797" OR "5829948" OR "5836562" OR "5926876" OR "5957426" OR "6076785" OR "6098961" OR "6148739" OR "6176456" OR "6179261" OR "6269753" OR "6273382" OR "6488248" OR "6516478" OR "6533229" OR "6533479" OR "6672430" OR "6701853" OR "6702372" OR "6722618" OR "6742768" OR "6792876" OR "6938866" OR "7048236" OR "7188813" OR "7204193" OR "7207629" OR "7246784" OR "7575205" OR "7841570" OR "7845665" OR "7946551" OR "7950338" OR					

		"8015638" OR "8132518" OR "8303062" OR "8469152" OR "8490933" OR "8544391" OR "8671853" OR "8684339" OR "8950343" OR "9049923" OR "9055810" OR "9232855" OR "9326598" OR "9480332" OR "9504316" OR "9554644" OR "9668572" OR "9681746" OR "9809136" OR "9854904" OR "9955780" OR "9981571" OR "9993068" OR "D830739" OR "D870490" OR "D901959").pn.					
L4876	26	("4221280" | "4577821" | "4995130" | "5186038" | "5322143" | "5588377" | "9161616" | "D845037" | "10264877" | "10517390" | "20100012909" | "20140041554" | "20160338486" | "20170354245" | "20180055214" | "20180146775").pn. OR ("10869549").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4877	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419" | "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" | "20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" |					

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		"20060038383" | "20060157628" | "20070163475" | "20070259554" | "20070266912" | "20070295882" | "20080308016" | "20090179121" | "20100242174" | "20100257671" | "20110120351" | "20110168062" | "20110247532" | "20130014674" | "20130139736" | "20130145972" | "20130199420" | "20130340655" | "20140020606" | "20140041554" | "20140144352" | "20140158026" | "20140165882" | "20140360411" | "20150164218" | "20150216296" | "20150231992" | "20150250303" | "20150289641" | "20160120300" | "20160198853" | "20160278515" | "20160338486" | "20170354245" | "20170360188" | "20180103752" | "20180146775" | "20180160799" | "20180213929" | "20180279772").pn. OR ("10542817").urpn. AND (PGPB | USPT | USOC).dbnm.					
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		| "8931750" | "9049923" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "10159336" | "10244861" | "10258148" | "10258149" | "10499730" | "10542817" | "20030213415" | "20040040480" | "20070080564" | "20080000393" | "20120097822" | "20130193392" | "20130199420" | "20140144352" | "20140158026" | "20150232005" | "20150368082" | "20150375896" | "20160051042" | "20160106205" | "20160170402" | "20160260019" | "20160309889" | "20160338486" | "20160353880" | "20170174486" | "20170360192" | "20180008037" | "20180125227" | "20180177289" | "20180279770" | "20180360208" | "20190110588" | "20190269237" | "20200029685").pn. OR ("10893748").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4881	33	("136357" | "2624535" | "2733109" | "3001559" | "4967672" | "5588377" | "5636711" | "5829948" | "7032872" | "7059616" | "7677518" | "20140144352").pn. OR ("8950343").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4882	8	("2012/0188302").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4883	22	("2005/0120922").urpn. AND (PGPB | USPT |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		USOC).dbnm.					
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		"4753419" OR "4826123" OR "4843978" OR "4941641" OR "4967672" OR "4995130" OR "5037163" OR "5048784" OR "5211367" OR "5251864" OR "5257767" OR "5294087" OR "5400720" OR "5588377" OR "5626323" OR "5722513" OR "5765797" OR "5829948" OR "5836562" OR "5926876" OR "5957426" OR "6076785" OR "6098961" OR "6148739" OR "6176456" OR "6179261" OR "6269753" OR "6273382" OR "6488248" OR "6516478" OR "6533229" OR "6533479" OR "6672430" OR "6701853" OR "6702372" OR "6722618" OR "6742768" OR "6792876" OR "6938866" OR "7048236" OR "7188813" OR "7204193" OR "7207629" OR "7246784" OR "7575205" OR "7841570" OR "7845665" OR "7946551" OR "7950338" OR "8015638" OR "8132518" OR "8303062" OR "8469152" OR "8490933" OR "8544391" OR "8671853" OR "8684339" OR "8950343" OR					

		"9049923" OR "9055810" OR "9232855" OR "9326598" OR "9480332" OR "9504316" OR "9554644" OR "9668572" OR "9681746" OR "9809136" OR "9854904" OR "9955780" OR "9981571" OR "9993068" OR "D830739" OR "D870490" OR "D901959").pn.					
L4885	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4886	6151	A47B21/02.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4887	1892	A47B21/02.cpc. AND (gas OR spring)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4888	390	A47B2200/005.cpc. AND (gas OR spring)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4889	49	(Artificial Intelligence) More like doc: CN-106473451-A Text: (CN-206565534-U OR CN-106473451-B OR CN-204580324-U OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2022/09/21 01:52 PM

		CN-105342138-B OR CN-105342138-A OR CN-108024625-A OR CN-106165968-B OR US-20180255919-A1 OR CA-2999757-C OR US-10542817-B2 OR CN-108024625-B OR CN-106617668-A OR US-11395544-B1 OR WO-2018072235-A1 OR AT-413318-B OR CN-203353949-U OR CN-102949016-A OR EP-0142919-A1 OR CN-204541230-U OR CN-106165968-A).did.	IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4890	2404	A47B9/10.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4891	387	108/144.11,147.22.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4892	1960	A47B3/02.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4893	1955	(A47B3/00 OR A47B61/00).cpc. AND (gas OR pneumatic OR spring)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4894	591	A47B2003/025.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/09/21 01:52 PM

			IBM_TDB)				
L4895	2630	108/116-118,120,43,138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4896	36	("4052944" | "4765583" | "5125606" | "5131614" | "5143341" | "5263423" | "5355811" | "5593128" | "5732928").pn. OR ("5893540").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4897	48	(Artificial Intelligence) More like doc: KR-20110006306-U Text: (KR-200416871-Y1 OR KR-20140006320-U OR CN-108813920-A OR TW-201033508-A OR KR-20160002687-U OR CN-110934419-A OR US-20100237666-A1 OR WO-2021226487-A1 OR US-20210345768-A1 OR CN-113812797-A OR CN-110623417-A OR CN-110786639-A OR CN-106165968-B OR AU-2014283918-A1 OR IE-S84540-Y1 OR CN-110115422-A OR GB-2439522-A OR WO-2008028306-A3 OR CN-2473993-Y OR CN-110973828-A).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4898	1700	248/421,562,588,585,431,432,439.ccls. AND (gas OR pneumatic OR spring)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4899	948	108/147,145,93,96.ccls. AND (gas OR pneumatic OR spring)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

			JPO; DERWENT; IBM_TDB)				
L4900	39	(Artificial Intelligence) More like doc: US-10568416-B1 Text: (US-10244861-B1 OR US-11147366-B1 OR US-10575630-B1 OR US-11140977-B1 OR US-11134773-B1 OR US-11160367-B1 OR US-11388989-B1 OR US-11134774-B1 OR US-10893748-B1 OR US-11388991-B1 OR US-11395544-B1 OR US-9504316-B1 OR WO-2017184206-A1 OR US-20130014674-A1 OR US-20160037909-A1 OR US-20180103752-A1 OR US-10258149-B2 OR EP-3593671-B1 OR US-20140238279-A1 OR US-9681746-B1).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4901	14	"201230022"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4902	0	"JP201230022"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4903	0	"JP2012030022"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4904	76	fin ADJ reinforcement SAME (tube OR column OR cylinder)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR,	OR	ON	ON	2022/09/21 01:52 PM

			GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4905	61	triangle ADJ reinforcement SAME (tube OR column OR cylinder)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4906	16	("20160338486"|"11134773"|"11109671"|"10542817"|"20140041554"). PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4907	2404	A47B9/10.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4908	49	"6857493"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4909	18	"2018125227"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4910	9	"20180125227"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4911	161	("10258148"|"20160249737"|"9815672"|"4448386"|"9681746"|"108695	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		49"|"20170071332"|"48 43978"|"5037163"|"617 9261"|"7841570"|"8684 339"|"9809136"|"D8307 39"|"D901959"|"104997 30"|"20050120922"|"20 090145336"|"4659052"| "20030213415"|"47024 54"|"10258149"|"13185 64"|"20080000393"|"20 100242174"|"20200029 685"|"20200107633"|"4 558648"|"5829948"|"67 01853"|"7946551"|"801 5638"|"8671853"|"9504 316"|"11134773"|"1024 4861"|"10575630"|"111 40977"|"11147366"|"52 51864"|"10123613"|"10 542817"|"10544019"|"2 0160353880"|"4221280 "|"4449262"|"4549720"|" 4717112"|"5211367"|"6 076785"|"6176456"|"62 69753"|"6516478"|"679 2876"|"7207629"|"7575 205"|"9854904"|"20140 144352"|"20150289641 "|"7677518"|"D845037"| "20070001077"|"20180 213929"|"4640488"|"47 53419"|"9668572"|"100 23355"|"10264877"|"10 524565"|"20070080564 "|"2937003"|"4941641"|" 4967672"|"4995130"|"5 257767"|"5400720"|"56 26323"|"5926876"|"653 3229"|"6702372"|"6722 618"|"6742768"|"78456 65"|"8303062"|"854439 1"|"9055810"|"9480332" |"9554644"|"9993068"|" 11160367"|"201500287 87"|"3823915"|"382645 7"|"11083282"|"284341 8"|"5957426"|"1041305 5"|"20070266912"|"201 80279770"|"201902692 37"|"3295800"|"529408 7"|"6938866"|"7048236" |"8132518"|"8490933"|" 8950343"|"9049923"|"9 232855"|"11134774"|"D 854775"|"9326598"|"20 150216296"|"20190110 588"|"20190183239"|"4 709972"|"5048784"|"60					

		98961"|"6148739"|"7188813"|"9955780"|"20180125227"|"10893748"|"4741512"|"8931750"|"6857493"|"10114352"|"5722513"|"20030042380"|"20160338486"|"20180177289"|"4625657"|"4826123"|"6273382"|"7204193"|"D870490"|"10517390"|"20170354245"|"D302893"|"5400720"|"10568416"|"20120188302"|"20170196351"|"7246784"|"10018298"|"10306977"|"20120097822"|"20130193392"|"4577821"|"5588377"|"5765797"|"5836562"|"6488248"|"6533479"|"6672430"|"7950338"|"8469152"|"9981571").PN.					
L4912	70	("1318564" | "2937003" | "3295800" | "4221280" | "4558648" | "4577821" | "4843978" | "5588377" | "5626323" | "5829948" | "5957426" | "6098961" | "6269753" | "6516478" | "6533479" | "6722618" | "6742768" | "8132518" | "8671853" | "9049923" | "9055810" | "9326598" | "9480332" | "9504316" | "9554644" | "20030213415" | "20040035332" | "20040040480" | "20070080564" | "20080000393" | "20090090832" | "20090200437" | "20110001033" | "20110024958" | "20120097822" | "20130145972" | "20130193392" | "20140144352" | "20150232005" | "20150375896" | "20160338486" | "20170174486" | "20180008037").pn. OR ("10244861").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4913	39	(Artificial Intelligence)	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/21

		More like doc: US-10244861-B1 Text: (US-10568416-B1 OR US-11147366-B1 OR US-10575630-B1 OR US-11388989-B1 OR US-11140977-B1 OR US-11134773-B1 OR US-11160367-B1 OR US-11134774-B1 OR US-10893748-B1 OR US-11388991-B1 OR US-11395544-B1 OR US-9504316-B1 OR WO-2017184206-A1 OR US-20130014674-A1 OR US-20140245932-A1 OR US-20160037909-A1 OR US-20180103752-A1 OR US-10258149-B2 OR US-20140238279-A1 OR US-9681746-B1).did.	USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				01:52 PM
L4914	26	("4221280" | "4577821" | "4995130" | "5186038" | "5322143" | "5588377" | "9161616" | "D845037" | "10264877" | "10517390" | "20100012909" | "20140041554" | "20160338486" | "20170354245" | "20180055214" | "20180146775").pn. OR ("10869549").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4915	36	(Artificial Intelligence) More like doc: US-10869549-B2 Text: (US-11382419-B2 OR US-20210052067-A1 OR US-20220257006-A1 OR US-20180192769-A1 OR CN-206338567-U OR US-11324310-B2 OR US-20220218100-A1 OR US-20210015248-A1 OR US-10820688-B2 OR WO-2019119920-A1 OR CN-214855133-U OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		CN-210383111-U OR AU-2018388926-A1 OR US-10856651-B2 OR US-10986918-B2 OR CN-110325077-B OR CA-3110698-A1 OR KR-20110018576-A OR CN-110325077-A OR US-11134774-B1).did.					
L4916	498714	Zheng.in. AND (desk OR table)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4917	96476	Zheng.in. AND (desk OR table) AND gas	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4918	367	Zheng.in. AND (desk OR table) AND gas ADJ spring	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4919	1286	(desk OR table) SAME (cross OR X) SAME gas ADJ spring	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4920	53	(Artificial Intelligence) More like doc: CN-204561316-U Text: (CN-204561320-U OR CN-204561505-U OR CN-206380909-U OR CN-206525754-U OR CN-106377063-A OR CN-206565530-U OR CN-206659424-U OR CN-203407686-U OR CN-205106786-U OR CN-105534016-A OR CN-109953482-A OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/09/21 01:52 PM

		CN-208573198-U OR CN-107280230-A OR US-10448731-B2 OR US-10188204-B2 OR US-20180199704-A1 OR WO-2018170012-A1 OR CN-108497692-A OR CN-204580308-U OR US-20180199705-A1).did.	IBM_TDB)				
L4921	36	ironing ADJ board SAME (gas OR pneumatic) ADJ spring	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4922	483	D06F AND (gas OR pneumatic) ADJ spring	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4923	2200	D06F AND three SAME legs	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4924	774	D06F AND three SAME legs AND pivot$4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4925	40	(Artificial Intelligence) More like doc: CN-103422335-A Text: (CN-103541202-A OR CN-103422335-B OR CN-103541202-B OR CN-102628210-A OR FR-2990960-A1 OR EP-2666906-A2 OR US-8776410-B2 OR US-20130340301-A1 OR EP-2666906-B1 OR CA-2815319-C OR CA-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

		2815319-A1 OR FR-2990961-A1 OR RU-2619020-C2 OR RU-2013122960-A OR US-20130312297-A1 OR EP-2666905-A2 OR US-8776411-B2 OR ES-2524240-T3 OR CN-104894826-A OR RU-2619021-C2).did.	JPO; DERWENT; IBM_TDB)				
L4926	4567	A47B AND (gas OR pneumatic) ADJ spring	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4927	252	A47B AND (gas OR pneumatic) ADJ spring AND three SAME legs	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4928	679	108/118,120,43,138,50.01,50.02.ccls. AND spring	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4929	94159	pivot$4 WITH rod WITH sleeve	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4930	4856	pivot$4 WITH rod WITH sleeve SAME legs	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4931	124	("1318564" | "2937003" | "3295800" | "3826457" | "4221280" | "4449262" | "4549720" | "4558648" | "4577821" | "4702454" | "4741512" | "4753419"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "4843978" | "D302893" | "4941641" | "4967672" | "4995130" | "5037163" | "5211367" | "5251864" | "5257767" | "5294087" | "5400720" | "5588377" | "5626323" | "5765797" | "5829948" | "5926876" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533229" | "6533479" | "6672430" | "6701853" | "6702372" | "6722618" | "6742768" | "6792876" | "7048236" | "7204193" | "7207629" | "7575205" | "7677518" | "7841570" | "7845665" | "7950338" | "8015638" | "8132518" | "8303062" | "8469152" | "8490933" | "8544391" | "8671853" | "8684339" | "8931750" | "8950343" | "9049923" | "9055810" | "9232855" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "9809136" | "9815672" | "9955780" | "9981571" | "9993068" | "10018298" | "10023355" | "D830739" | "10123613" | "D845037" | "10244861" | "10258148" | "10258149" | "10306977" | "D854775" | "10413055" | "10499730" | "10517390" | "10524565" | "10542817" | "10544019" | "10568416" | "10575630" | "D901959" | "10869549" | "10893748" | "20030213415" | "20050120922" | "20070080564" | "20070266912" | "20080000393" | "20090145336" | "20100242174" | "20110001033" | "20120097822" | "20120188302" | "20130193392" |				

		"20140144352" | "20150216296" | "20150289641" | "20160338486" | "20160353880" | "20170071332" | "20170174486" | "20170196351" | "20170354245" | "20180055214" | "20180177289" | "20200029685" | "20200107633").pn. OR ("11134774").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4932	70	("1318564" | "2937003" | "3295800" | "4221280" | "4558648" | "4577821" | "4843978" | "5588377" | "5626323" | "5829948" | "5957426" | "6098961" | "6269753" | "6516478" | "6533479" | "6722618" | "6742768" | "8132518" | "8671853" | "9049923" | "9055810" | "9326598" | "9480332" | "9504316" | "9554644" | "20030213415" | "20040035332" | "20040040480" | "20070080564" | "20080000393" | "20090090832" | "20090200437" | "20110001033" | "20110024958" | "20120097822" | "20130145972" | "20130193392" | "20140144352" | "20150232005" | "20150375896" | "20160338486" | "20170174486" | "20180008037").pn. OR ("10244861").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4933	35	("2003/0213415").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4934	38	("2994093" | "3365072" | "3491705" | "3495873" | "3897102" | "4264102" | "4470630" | "4686910"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "5246265" | "5926871" | "5950259").pn. OR ("6213555").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4935	8	("3365072").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4936	96	("1495991" | "3023063" | "3391960" | "3592144" | "4619386" | "4672898" | "4852499" | "4909159" | "5177665" | "5359349" | "5438936").pn. OR ("5673628").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4937	36	("5673628" | "5687945" | "6378829" | "D473562" | "6632170" | "D494183" | "6863252" | "6896231" | "7124755" | "7207537" | "7540457" | "7922137" | "8083196" | "8272604" | "8413943" | "8636257" | "8727290" | "20050006542" | "20050121578" | "20060261227" | "20070040089" | "20100108828" | "20100198052" | "20120175474" | "20120205503" | "20120273630" | "20140091193" | "20140226281").pn. OR ("9133982").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4938	51	("1382783" | "1460697" | "2508974" | "2839260" | "3170665" | "3734439" | "3840204" | "3910538" | "4131259" | "4143652" | "4402481" | "4458870" | "4491435" | "4535923" | "4721276" | "4997156" | "5370570" | "5484129" | "5609565" | "5723808" | "5964439" | "6170598" | "6325350" | "6431505" | "6457616" | "6575417").pn. OR ("6896231").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

L4939	1	("1794838").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4940	1325	108/64,65.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4941	58	(Artificial Intelligence) More like doc: CN-110507076-A Text: (CN-210169314-U OR CN-109998274-A OR CN-108371397-A OR CN-208875528-U OR CN-109953482-A OR CN-108497694-A OR CN-209216436-U OR CN-209202315-U OR CN-208573198-U OR CN-110250740-A OR CN-107692513-A OR CN-107397342-A OR CN-110074553-A OR CN-209547376-U OR CN-108741628-A OR CN-113951630-A OR CN-108784029-A OR CN-207613446-U OR CN-106473444-A OR US-20150216296-A1).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4942	60	(Artificial Intelligence) More like doc: CN-111227513-A Text: (CN-110693195-A OR CN-104687774-A OR CN-108634582-A OR CN-105559349-A OR CN-105534042-A OR CN-110326893-A OR CN-110432658-A OR CN-107752392-A OR CN-108720296-A OR CN-108634586-A OR CN-108523441-A OR CN-108851567-A OR CN-105686343-A OR CN-104257107-A OR CN-108685331-A OR CN-110811153-A OR CN-108741800-A OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		CN-104382358-A OR CN-106108385-A OR CN-106490844-A).did.					
L4943	59	(Artificial Intelligence) More like doc: CN-110495716-A Text: (CN-110495715-A OR CN-108497721-A OR CN-107048775-A OR CN-108323926-A OR AT-12332-U1 OR CN-110934420-A OR CN-208278855-U OR CN-113367476-A OR CN-107997385-A OR AT-391249-B OR CN-110179244-A OR CN-106377063-A OR CN-203416937-U OR CN-101273819-A OR CN-109043811-A OR CA-2792935-A1 OR CN-108784034-A OR CN-110495710-A OR CN-107981536-A OR CN-110063581-A).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4944	7474	L-shaped SAME (desk OR table) AND A47B	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4945	740	L-shaped SAME (desk OR table) AND A47B AND 108/$.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4946	270	L-shaped SAME (desk OR table) AND A47B AND 312/$.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4947	43	("0349875" | "0654922" | "1280619" | "2141954" | "2590959" | "2722287" | "2854309" | "2981580" | "2988413" | "3066994"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "3856371" | "3992067" | "5451101" | "5496609").pn. OR ("5666887").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4948	25	("0308156" | "0917429" | "2755155" | "2815252" | "3079207" | "3125387" | "3164419").pn. OR ("3920298").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4949	21	("0822182" | "1513907" | "1652100" | "3379144" | "3549200").pn. OR ("3963272").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4950	36	(Artificial Intelligence) More like doc: US-3963272-A Text: (CA-1055382-A OR CA-1055381-A OR US-3977723-A OR US-8113128-B2 OR US-20110017103-A1 OR EP-0602450-A1 OR EP-0602450-B1 OR US-4019443-A OR US-3596985-A OR US-3411823-A OR US-9936800-B2 OR US-10390610-B2 OR US-20180184798-A1 OR US-1970874-A OR US-20170027318-A1 OR US-4194452-A OR US-20140020605-A1 OR US-3951449-A OR US-2024045-A OR US-1652100-A).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4951	35	(Artificial Intelligence) More like doc: US-20040040480-A1 Text: (US-6701853-B1 OR DE-202016102015-U1 OR US-6691626-B2 OR US-9326598-B1 OR US-20130145972-A1 OR US-20200015584-A1 OR TW-M516896-U OR US-8544391-B2 OR EP-3593671-A1 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA,	OR	ON	ON	2022/09/21 01:52 PM

		GB-2575456-A OR US-10842257-B2 OR EP-3593671-B1 OR TW-M536893-U OR US-9615655-B1 OR US-20170105518-A1 OR US-20030154890-A1 OR WO-2008074143-A1 OR CN-105901924-B OR CN-105901925-B OR US-5588377-A).did.	VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4952	38	(Artificial Intelligence) More like doc: US-5588377-A Text: (US-6003450-A OR US-5375514-A OR US-5649493-A OR EP-0706769-A2 OR EP-0706769-A3 OR US-2846282-A OR US-20040040480-A1 OR US-6701853-B1 OR TW-M445388-U OR US-20150216296-A1 OR US-2579076-A OR DK-179639-B1 OR US-5697470-A OR US-5927212-A OR US-9326598-B1 OR US-8950343-B2 OR US-20140041554-A1 OR WO-2005032303-A1 OR WO-2016187212-A1 OR WO-2018137739-A1).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4953	70	("2447480" | "3110476" | "3245366" | "4221280" | "5002293" | "5131501").pn. OR ("5588377").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4954	38	(Artificial Intelligence) More like doc: US-6427607-B1 Text: (US-20020078866-A1 OR US-20110062172-A1 OR US-9084500-B2 OR CA-2629354-C OR US-20110126739-A1 OR WO-2010138632-A2 OR US-8424464-B2 OR FR-3028735-A1 OR US-7246784-B1 OR US-10107447-B2 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

		US-4784120-A OR US-20180106417-A1 OR US-4364699-A OR CN-110778881-A OR US-5009379-A OR WO-2010138632-A3 OR US-6684431-B2 OR US-20030084513-A1 OR US-5833200-A OR US-5598786-A).did.	JPO; DERWENT; IBM_TDB)				
L4955	28	("0126213" | "0186875" | "3410328" | "5339749" | "5429057" | "5460102" | "5476050" | "6170408" | "RE37239").pn. OR ("6427607").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4956	47	(Artificial Intelligence) More like doc: ES-1078409-U Text: (EP-2745733-A1 OR ES-1078409-Y OR US-11388991-B1 OR US-10893748-B1 OR WO-2008152161-A1 OR US-10244861-B1 OR US-11395544-B1 OR ES-1076663-U OR US-7950338-B2 OR DE-202016102015-U1 OR US-20090200437-A1 OR AU-2015247798-A1 OR CN-105686346-A OR FR-2901981-A1 OR CN-105686346-B OR US-20200000219-A1 OR US-10485336-B1 OR US-20190335898-A1 OR ES-2331985-A1 OR US-20180008037-A1).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4957	35	(Artificial Intelligence) More like doc: US-4032103-A Text: (US-2974431-A OR US-4159821-A OR US-20180160799-A1 OR EP-3307108-A1 OR WO-2016200318-A1 OR US-20160286951-A1 OR CA-2925376-A1 OR US-4046221-A OR CN-107708486-A OR US-9808080-B2 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO;	OR	ON	ON	2022/09/21 01:52 PM

		TW-M445388-U OR US-5960904-A OR JP-2018520740-A OR US-20220178153-A1 OR AU-2020200957-A1 OR CA-2998072-A1 OR US-10815680-B2 OR US-9644378-B2 OR AU-2018201577-A1 OR WO-2016200318-A8).did.	JPO; DERWENT; IBM_TDB)				
L4958	49	(Artificial Intelligence) Similar to: 17/493,812 with 0 CPC Selections and 0 Text Selections Text: (US-11160367-B1 OR US-11134773-B1 OR US-11140977-B1 OR US-10575630-B1 OR US-11147366-B1 OR US-10244861-B1 OR US-10568416-B1 OR US-11388989-B1 OR US-11134774-B1 OR KR-20140098842-A OR CA-2814945-A1 OR WO-2013176690-A1 OR EP-2685867-A1 OR AU-2012381034-A1 OR US-8671853-B2 OR US-10893748-B1 OR CA-2814945-C OR US-20130139736-A1 OR US-20180177289-A1 OR US-9055810-B2 OR US-20150250303-A1 OR US-20130340655-A1 OR US-9554644-B2 OR US-9961991-B1 OR US-10092089-B1 OR US-20140158026-A1 OR US-20180132607-A1 OR US-20170095072-A1 OR US-20160150876-A1 OR ES-2698967-T3 OR US-9277809-B2 OR US-10413053-B2 OR AU-2012381034-B2 OR AU-2012381034-C1 OR US-9924793-B2 OR JP-3198070-U OR US-11395544-B1 OR US-20180360208-A1 OR US-10159336-B2 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN))	OR	ON	ON	2022/09/21 01:52 PM

		CN-107136750-A OR US-20180084903-A1 OR US-11019920-B2 OR CN-214855133-U OR US-11337516-B1 OR US-20170196351-A1 OR WO-2018057751-A1 OR US-20190110588-A1 OR US-10306977-B2 OR CN-101431916-A OR CN-101431916-B).did.					
L4959	28	(Artificial Intelligence) More like doc: GB-307701-A Text: (GB-305060-A OR GB-163584-A OR AT-12332-U1 OR GB-136099-A OR US-2829936-A OR GB-321479-A OR GB-191160-A OR US-1881047-A OR GB-364874-A OR DE-3102182-A1 OR US-1994364-A OR GB-270985-A OR GB-305220-A OR US-1289245-A OR GB-617256-A OR GB-322625-A OR DE-3102182-C2 OR GB-177699-A OR GB-273611-A OR US-2557594-A).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4960	822	108/116,117.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4961	8	("3329104").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4962	1392	(A47B61/00).cpc. AND (gas OR pneumatic OR spring)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

L4963	1963	312/194-196.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4964	76	("1192207" | "2366677" | "2825101" | "3069216" | "3298329" | "3713717" | "3730601" | "3790241").pn. OR ("4153311").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4965	870	A47B1/03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4966	37	(Artificial Intelligence) More like doc: US-20060219149-A1 Text: (US-7383786-B2 OR US-7367279-B2 OR US-20080190350-A1 OR US-20060219150-A1 OR WO-2006105280-A1 OR US-20090249992-A1 OR US-7040248-B1 OR AU-2007231686-B2 OR US-3736897-A OR CA-2607629-C OR US-20080098947-A1 OR US-7654216-B2 OR US-7707955-B1 OR AU-2007231686-A1 OR US-2277171-A OR US-20110278524-A1 OR US-20100107952-A1 OR CN-108657376-B OR CN-108657376-A OR EP-2106362-A2).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4967	59	("2230444" | "4709972" | "4735467" | "4742429" | "4766422" | "4931978" | "5359349" | "5377951" | "5424912" | "5452950" | "5555491" | "5564668"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "5651594" | "5655743" | "5717567" | "5733025" | "5771814" | "5808373" | "5850539" | "5859762" | "6020654" | "D425877" | "6113050" | "6152411" | "6163079" | "6169655" | "6185096" | "6202568").pn. OR ("6626686").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4968	17703	A47B21/0314,00,02,03.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4969	4042	A47B21/0314,00,02,03.cpc. AND (spring OR pneumatic OR gas)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4970	2791	A47B21/0314,00,02,03.cpc. AND (spring OR pneumatic OR gas) SAME (slid$4 OR pivot$4 OR rotat$4)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4971	47	(Artificial Intelligence) More like doc: US-11311100-B1 Text: (CN-215649727-U OR CN-110916344-B OR CN-112998452-A OR WO-2018072365-A1 OR US-20200029685-A1 OR WO-2022116627-A1 OR US-20210345768-A1 OR WO-2021226487-A1 OR US-20170105518-A1 OR US-9615655-B1 OR CN-111938297-A OR US-20170354245-A1 OR AU-2015247798-A1 OR CN-113367506-A	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		OR WO-2019041579-A1 OR CN-2891792-Y OR WO-2022166615-A1 OR CA-2814945-C OR CN-113940498-A OR US-10856651-B2).did.					
L4972	430	A47B2021/0321,0364.cpc. AND (spring OR pneumatic OR gas) SAME (slid$4 OR pivot$4 OR rotat$4)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4973	12	((("PONIATOWSKI") near3 ("Nathan"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2022/09/21 01:52 PM
L4974	49	("10111518"|"20150321891"|"20170340104"|"20170354245"|"20170360192"|"20180192769"|"2850203"|"9815672").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4975	8	((("HO") near3 ("Chih-Feng"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2022/09/21 01:52 PM
L4976	6151	A47B21/02.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4977	1228	A47B21/02.cpc. AND (arms OR links OR beams) SAME (pivot$4 OR rotat$4)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4978	37	(Artificial Intelligence) More like doc: KR-20210028764-A Text: (KR-102297093-B1 OR KR-102076298-B1 OR KR-20160100205-A OR KR-20190082702-A OR KR-20170124492-A OR JP-3207307-U OR KR-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO,	OR	ON	ON	2022/09/21 01:52 PM

		20160115234-A OR KR-101969136-B1 OR KR-20160100206-A OR KR-20170127389-A OR KR-101703230-B1 OR KR-20160100208-A OR KR-101969137-B1 OR KR-101969135-B1 OR KR-20170127387-A OR KR-20170127388-A OR KR-20170128765-A OR CN-107257640-B OR EP-3257400-A1 OR KR-20170127386-A).did.	RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4979	44	(Artificial Intelligence) More like doc: JP-3207307-U Text: (CN-205696492-U OR TW-M535020-U OR US-9861192-B2 OR US-20170273453-A1 OR KR-20210028764-A OR CN-106942901-A OR CN-109106059-A OR CN-106473451-B OR CN-110652108-A OR US-6546880-B2 OR TW-M549567-U OR US-8661989-B2 OR US-9635929-B1 OR US-20180177289-A1 OR CN-110025135-A OR US-9961991-B1 OR CN-112107160-A OR CN-108932021-A OR CN-107637964-A OR US-20010037751-A1).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4980	41	("20030047488"|"20040040480"|"20040094077"|"20060087166"|"20070034125"|"20140158024"|"5588377"|"5996961"|"7677518"|"9635929"|"D588832").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4981	33	("2004/0040480").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4982	87	("1318564" | "2937003" | "3295800" | "4221280" | "4558648" | "4577821" | "4843978" | "5037163" | "5211367" | "5257767"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "5588377" | "5626323" | "5829948" | "5957426" | "6076785" | "6098961" | "6269753" | "6516478" | "6533479" | "6701853" | "6722618" | "6742768" | "6792876" | "7677518" | "7841570" | "7950338" | "8132518" | "8544391" | "8671853" | "8684339" | "8931750" | "9049923" | "9326598" | "9480332" | "9504316" | "9554644" | "9681746" | "10159336" | "10244861" | "10258148" | "10258149" | "10499730" | "10542817" | "20030213415" | "20040040480" | "20070080564" | "20080000393" | "20120097822" | "20130193392" | "20130199420" | "20140144352" | "20140158026" | "20150232005" | "20150368082" | "20150375896" | "20160051042" | "20160106205" | "20160170402" | "20160260019" | "20160309889" | "20160338486" | "20160353880" | "20170174486" | "20170360192" | "20180008037" | "20180125227" | "20180177289" | "20180279770" | "20180360208" | "20190110588" | "20190269237" | "20200029685").pn. OR ("10893748").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4983	42	("0078250" | "0148329" | "0316363" | "0349974" | "1318564" | "4032103" | "4296694" | "4384533" | "4993706" | "6306066" | "7048236").pn. OR	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		("7950338").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4984	48	("0848465" | "1214086" | "2170098" | "2805905" | "2829928" | "2843391" | "3022037" | "3094948" | "3741512").pn. OR ("4032103").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4985	2012	A47B13/088.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4986	1694	108/147.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4987	26	("3080835" | "3825244" | "4894600" | "4979718" | "5174223" | "5437236" | "5526898" | "5531413" | "5553550" | "5562052" | "5598788" | "5620067" | "5636394").pn. OR ("6021722").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4988	40	("0885748" | "1165144" | "1417096" | "2260694" | "3339599" | "3778125" | "4130070" | "4381714" | "4440096").pn. OR ("4805538").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4989	20	52/36.1.ccls. AND L-shape	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4990	152	52/36.1.ccls. AND (pnuematic OR spring)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD,	OR	ON	ON	2022/09/21 01:52 PM

			DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4991	35	(Artificial Intelligence) More like doc: US-20040040480-A1 Text: (US-6701853-B1 OR DE-202016102015-U1 OR US-6691626-B2 OR US-9326598-B1 OR US-20130145972-A1 OR US-20200015584-A1 OR TW-M516896-U OR US-8544391-B2 OR EP-3593671-A1 OR GB-2575456-A OR US-10842257-B2 OR EP-3593671-B1 OR TW-M536893-U OR US-9615655-B1 OR US-20170105518-A1 OR US-20030154890-A1 OR WO-2008074143-A1 OR CN-105901924-B OR CN-105901925-B OR US-5588377-A).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4992	38	(Artificial Intelligence) More like doc: US-5588377-A Text: (US-6003450-A OR US-5375514-A OR US-5649493-A OR EP-0706769-A2 OR EP-0706769-A3 OR US-2846282-A OR US-20040040480-A1 OR US-6701853-B1 OR TW-M445388-U OR US-20150216296-A1 OR US-2579076-A OR DK-179639-B1 OR US-5697470-A OR US-5927212-A OR US-9326598-B1 OR US-8950343-B2 OR US-20140041554-A1 OR WO-2005032303-A1 OR WO-2016187212-A1 OR WO-2018137739-A1).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4993	70	("D296761" | "D301433" | "D317559" | "D355110" | "0945753" |	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		"1786823" | "3783175" | "3873758" | "3883202" | "4053701" | "4094256" | "4163867" | "4296981" | "4323291" | "4372629" | "4422385" | "4654756" | "4721476" | "4730363" | "4734826" | "4792881" | "4840514" | "4864078" | "4884513" | "4948205" | "4984982" | "5008975" | "5050267" | "5083512" | "5103741" | "5121698" | "5130494" | "5154126" | "5167047" | "5230552" | "5231562" | "5237935" | "5272988" | "5427265" | "5429431").pn. OR ("5860713").urpn. AND (PGPB | USPT | USOC).dbnm.					
L4994	40	("0885748" | "1165144" | "1417096" | "2260694" | "3339599" | "3778125" | "4130070" | "4381714" | "4440096").pn. OR ("4805538").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L4995	39	(Artificial Intelligence) More like doc: US-3920298-A Text: (CA-1033799-A OR GB-2232585-A OR US-2362047-A OR US-3079207-A OR US-3709577-A OR US-3346311-A OR GB-2025211-A OR US-2795471-A OR US-4176889-A OR US-1281923-A OR US-3371973-A OR DE-1952062-A1 OR DE-6940177-U OR EP-1088497-A2 OR DE-60024745-T2 OR GB-1244170-A OR DE-1802293-A1 OR SE-535103-C2 OR EP-1088497-A3 OR US-2594571-A).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4996	81	("20170273453"|"9289066"|"20150068423"|"20040040480"|"5588377"|"5860713"|"4805538"|"4	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR,	OR	ON	ON	2022/09/21 01:52 PM

		032103"|"3920298"|"3329104"|"2836475").PN.	GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L4997	0	A47B3/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4998	2518	A47B9/16.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L4999	6713	A47B13/081.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5000	6299	A47B9/00.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5001	23	A47B9/00.cpc. AND (cross ADJ (arms OR links))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5002	600	A47B9/00.cpc. AND (lift$4 AND (arms OR links))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5003	482	108/145.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR,	OR	ON	ON	2022/09/21 01:52 PM

			GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L5004	15	("2008/0010935").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L5005	41	(Artificial Intelligence) More like doc: US-20080010935-A1 Text: (US-8037642-B2 OR US-20070204771-A1 OR US-7866268-B2 OR US-20070215765-A1 OR US-20180055229-A1 OR US-8066240-B2 OR EP-3287041-A2 OR US-20210169220-A1 OR US-10264879-B2 OR CA-2800009-A1 OR CA-2799938-A1 OR US-20200352325-A1 OR US-20090282663-A1 OR US-20210085079-A1 OR CA-2741884-A1 OR CA-2799938-C OR US-8667908-B2 OR US-9611641-B2 OR EP-3323313-A1 OR CA-2799962-A1).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5006	41	(Artificial Intelligence) More like doc: DE-202021105539-U1 Text: (DE-102019112984-A1 OR DE-202019102871-U1 OR EP-2260229-A1 OR DE-202017104130-U1 OR DE-8319405-U1 OR DE-102020006084-A1 OR DE-7329444-U OR DE-202022102372-U1 OR DE-202008004809-U1 OR ES-2808980-T3 OR DE-1885621-U OR DE-1902551-A1 OR DE-4112180-A1 OR DE-202020107445-U1 OR DE-7442087-U OR DE-1987299-U OR DE-1956024-U OR DE-102013208559-B4 OR DE-202019101873-U1 OR DE-3214443-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		C1).did.					
L5007	8	((("HO") near3 ("Chih-Feng"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2022/09/21 01:52 PM
L5008	28	((("HO") near3 ("Chih-Feng"))).INV.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5009	17	("10244861"|"20040187742"|"20160345723"|"20170273453"|"20170340104"|"20170354244"|"20180064244"|"20180255919"|"20180279770"|"20190045923"|"20190365089"|"20200281349"|"5323695"|"5339750"|"5483898"|"5752449"|"6701853").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L5010	19	("20030047488"|"20040040480"|"20040094077"|"20060087166"|"20070034125"|"20140158024"|"5588377"|"5996961"|"7677518"|"9635929"|"D588832").PN.	(US-PGPUB; USPAT; USOCR; FPRS)	OR	ON	ON	2022/09/21 01:52 PM
L5011	45	(Artificial Intelligence) More like doc: DE-202021101245-U1 Text: (WO-2022061390-A1 OR AT-524026-A4 OR DE-2018722-C OR DE-202020105403-U1 OR DE-202016106868-U1 OR DE-7140668-U OR DE-102015221114-A1 OR DE-202020107522-U1 OR DE-202019101371-U1 OR DE-3535303-A1 OR DE-8319405-U1 OR WO-2009124523-A1 OR DE-202005006439-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

		U1 OR KR-20210000012-U OR DE-19700582-A1 OR CN-214072272-U OR TW-M613202-U OR CN-214258361-U OR CN-112425891-A OR US-20220007830-A1).did.					
L5012	59	(Artificial Intelligence) More like doc: CN-109953483-A Text: (CN-210539655-U OR CN-208403742-U OR CN-110025127-A OR CN-209185855-U OR CN-109090829-A OR CN-109549347-A OR CN-109645665-A OR CN-208096475-U OR CN-112401465-A OR CN-108294476-A OR CN-108260926-A OR CN-109008234-A OR CN-205267437-U OR CN-109077456-A OR CN-107095445-A OR CN-202714432-U OR CN-108451170-A OR CN-108095337-A OR CN-209235181-U OR CN-215423333-U).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5013	380	"307701"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5014	0	"GB307701"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5015	3	"GB 307701"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/09/21 01:52 PM

			IBM_TDB)				
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L5017	199	("0919257" | "0981532" | "1061297" | "1419647" | "1747900" | "1903631" | "1940117" | "2240256" | "2279864" | "2334912" | "2369930" | "D144730" | "2418731" | "2479086" | "2481671" | "2486987" | "2518955" | "2534413" | "2551071" | "D164552" | "2595002" | "2602012" | "2615771" | "2632498" | "2672181" | "2677491" | "2720253" | "2745591" | "2786789" | "2792877" | "2825101" | "3053598" | "3149880" | "3186027" | "3262405" | "3300245" | "D212601" | "3527497" | "3547491" | "3578385" | "3603656" | "3697363" | "3788700" | "3812977" | "3847435" | "4055924" | "D247596" | "4082356" | "4103818" | "4140065" | "4153311" | "4158277" | "4188067" | "4191113" | "4202581" | "4225180" | "4258464" | "4348052" | "4390204" | "4419028"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "4433753" | "4433843" | "4492332" | "4509794" | "4533174" | "4544092" | "4548350" | "4574917" | "4591090" | "4593950" | "4595105" | "D289234" | "4685609" | "4712837" | "4759449" | "D299087" | "4841878" | "D302216" | "4846530" | "4867327" | "4878439" | "4926759" | "5011228" | "5069144" | "5082329" | "5253595" | "5263766" | "5275467" | "5354589" | "5367964" | "5387027" | "5454331" | "5605378" | "5644995" | "5655812" | "5765922" | "5803548" | "5921631" | "5927816" | "5941377" | "5992938" | "6036270" | "6041920" | "D422799" | "6053585" | "6109695" | "6126022" | "6155641" | "6174116" | "6189974" | "6247754" | "6283564" | "6347772" | "6378707" | "6443076" | "6532878" | "6595378" | "6615746" | "6615999" | "6619749" | "6675979" | "6769369" | "6807912" | "D499577" | "6845871" | "6848747" | "6955401" | "7066548" | "7114300" | "7168766" | "7219962" | "D547076" | "7255403" | "7300110" | "7533940" | "7631605" | "7856772" | "8167377" | "8220399" | "8332917" | "8590976" | "9534623" | "9615663" | "20030107255" | "20040056526" | "20080074013" | "20090066140" | "20100003077" | "20120080910" | "20130062294" | "20130080286" | "20130170904" | "20140263130" | "20170023043" | "20170079426" | "20180112696" | "20190059594").pn. OR ("10415612").urpn. AND (PGPB | USPT |					

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L5019	280	("0456353" | "0919257" | "0981532" | "1061297" | "1419647" | "1431823" | "1747900" | "1903631" | "1940117" | "1981646" | "2240256" | "2279864" | "2334912" | "2369930" | "D144730" | "2418731" | "2479086" | "2481671" | "2486987" | "2518955" | "2534413" | "2551071" | "D164552" | "2595002" | "2602012" | "2615771" | "2632498" | "2672181" | "2677491" | "2703724" | "2720253" | "2745591" | "2786789" | "2792877" | "2801895" | "2825101" | "3053598" | "3089675" | "3149880" | "3186027" | "3262405" | "3300170" | "3300245" | "D212601" | "3527497" | "3547491" | "3578385" | "3603274" | "3603656" | "3636893" | "3674328" | "3684285" | "3697363" | "3783801" | "3788700" | "3812977" | "3831533" | "3847435" | "4021128" | "4055924" | "D247596" | "4082356" | "4099472" | "4103818" | "4140065" | "4153311" | "4158277" | "4188067" | "4191113" | "4202581" | "4225180" | "4258464" | "4348052" | "4358047" | "4390204" | "4419028" | "4433753" | "4433843" | "4492332" | "4501512" | "4509794" | "4533174" | "4544092" | "4548350" | "4574917" | "4591090" | "4593950" | "4595105" | "D289234" | "4685609" | "4706573" | "4712837" | "4759449" | "D299087" | "4841878" | "D302216" | "4846530" | "4867327" | "4878439" | "4884420" | "4926759" | "4934765" | "5011228" | "5069144" | "5082329" | "5253594"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM

		| "5253595" | "5263766" | "5275467" | "5343816" | "5354589" | "5367964" | "5387027" | "5454331" | "5478145" | "5605378" | "5613449" | "5644995" | "5655812" | "5706741" | "5720537" | "5752611" | "5765922" | "5803548" | "5803561" | "5881653" | "5901521" | "5921631" | "5927816" | "5941377" | "5992938" | "6029584" | "6036270" | "6041920" | "D422799" | "6053585" | "6109695" | "6126022" | "6155641" | "6174116" | "6189974" | "6247754" | "6283564" | "6347772" | "6378707" | "6443076" | "6532878" | "6595378" | "6615746" | "6615999" | "6619749" | "6675979" | "6769369" | "6807912" | "D499577" | "6845871" | "6848747" | "6895870" | "6955401" | "6994222" | "7066548" | "7114300" | "7168766" | "7219962" | "D547076" | "7255403" | "7300110" | "7386960" | "7533940" | "7631605" | "7765942" | "7856772" | "8123311" | "8167377" | "8215245" | "8220399" | "8332917" | "8459476" | "8590976" | "8651298" | "8667911" | "8863470" | "9220994" | "9277814" | "9282819" | "9447804" | "9534623" | "9615663" | "9668573" | "9706836" | "9719542" | "10138917" | "10227162" | "10660433" | "20030107255" | "20040056526" | "20040227041" | "20070169429" | "20070187348" | "20080074013" | "20080302748" | "20090066140" | "20090084740" | "20100003077" | "20120080910" | "20130062294" |				

		"20130080286" | "20130170904" | "20140048176" | "20140048177" | "20140059829" | "20140186104" | "20140263130" | "20150230600" | "20150335155" | "20170023043" | "20170079426" | "20170086578" | "20170099961" | "20170265650" | "20170321734" | "20170340107" | "20180112696" | "20190038023" | "20190040890" | "20190059593" | "20190059594" | "20190085886" | "20190107131" | "20190254424" | "20200370585").pn. OR ("11346382").urpn. AND (PGPB | USPT | USOC).dbnm.					
L5020	35	(Artificial Intelligence) More like doc: US-20190059594-A1 Text: (US-11154137-B2 OR US-20190059593-A1 OR US-11346382-B2 OR US-20120080910-A1 OR US-11085474-B2 OR US-20190085886-A1 OR US-10415612-B2 OR US-20190040890-A1 OR US-9615663-B2 OR US-20030107255-A1 OR US-6619749-B2 OR US-20180112696-A1 OR US-20140263130-A1 OR US-20200000222-A1 OR US-10687617-B2 OR US-20190107131-A1 OR US-8667911-B2 OR US-6769369-B1 OR US-5803548-A OR GB-2558515-A).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5021	39	(Artificial Intelligence) More like doc: US-9072645-B2	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2022/09/21 01:52 PM

		Text: (WO-2012033857-A1 OR US-20120060291-A1 OR US-10531997-B2 OR US-20170266073-A1 OR WO-2006127536-A2 OR US-20060260516-A1 OR CN-106793868-B OR US-4451945-A OR US-4449262-A OR CN-111642896-A OR WO-2018014213-A1 OR DE-202006014884-U1 OR US-4817220-A OR CA-1275433-C OR EP-0074053-A3 OR US-20080047068-A1 OR US-5697471-A OR EP-0221037-A2 OR EP-0221037-A3 OR US-20020178501-A1).did.	CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L5022	57	("2501001" | "2829863" | "2833587" | "3110476" | "3237921" | "3282566" | "3611453" | "3686696" | "4097941" | "4556198" | "4558648" | "4577821" | "4613122" | "4771785" | "4860394" | "4984774" | "5022105" | "5074000" | "5490703" | "5588377" | "5779296" | "6199508" | "6230662" | "6516478" | "6729263" | "7140055" | "7694367" | "8015638" | "8888070" | "20010003969" | "20020178501" | "20030079288" | "20050125900" | "20080047068" | "20100257671" | "20120060291" | "20130341984" | "20140184225" | "20140325759" | "20150000034").pn. OR ("9072645").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L5023	4	wilkens.xp. AND ironing ADJ board	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/21 01:52 PM

			SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L5024	268	wilkens.xp. AND (X OR cross) WITH (legs OR supports)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5025	5	("10542817"|"11109671"|"11134773"|"20140041554"|"20160338486").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L5026	49	("10111518"|"20150321891"|"20170340104"|"20170354245"|"20170360192"|"20180192769"|"2850203"|"9815672").PN.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5027	9	("10111518"|"20150321891"|"20170340104"|"20170354245"|"20170360192"|"20180192769"|"2850203"|"9815672").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
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L5029	107	38/138.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5030	482	108/145.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5031	848	108/20.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2022/09/21 01:52 PM

			AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L5032	21	("2912775" | "3268636" | "3702100" | "4579872" | "4740032" | "5161316" | "RE34450" | "5433034" | "5572811" | "5706593" | "6010185" | "6349490").pn. OR ("6834450").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L5033	40	(Artificial Intelligence) More like doc: US-6182935-B1 Text: (TW-460372-B OR US-4969496-A OR US-20030205178-A1 OR US-6763770-B2 OR US-5320150-A OR US-5018785-A OR US-5778953-A OR EP-2103397-B1 OR EP-1721546-B1 OR US-4191111-A OR DE-602004005124-T2 OR AU-2004224920-A1 OR US-20080210143-A1 OR US-7546810-B2 OR AU-2018280028-A1 OR CA-2326203-C OR US-4102555-A OR US-6240987-B1 OR US-20090241805-A1 OR CA-2558993-A1).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5034	40	("1234569" | "1895290" | "1982205" | "2557594" | "2624469" | "2908984" | "2968059" | "3152833" | "5199930" | "5542639").pn. OR ("6182935").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/21 01:52 PM
L5035	12865	(A47B3/02 OR A47B9/16 OR A47B21/02 OR A47B2003/025 OR A47B2200/0058 OR A47B2200/0063 OR A47B2200/0088 OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/09/21 01:52 PM

		A47B21/04).cpc.	IBM_TDB)				
L5036	4842	(A47B3/02 OR A47B9/16 OR A47B21/02 OR A47B2003/025 OR A47B2200/0058 OR A47B2200/0063 OR A47B2200/0088 OR A47B21/04).cpc. AND (motor OR actuator OR spring)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5037	991	(A47B3/02 OR A47B9/16 OR A47B21/02 OR A47B2003/025 OR A47B2200/0058 OR A47B2200/0063 OR A47B2200/0088 OR A47B21/04).cpc. AND (motor OR actuator OR spring) SAME (scissor OR cross OR X)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5038	50	(Artificial Intelligence) More like doc: WO-2021226487-A1 Text: (US-20210345768-A1 OR CN-107708486-A OR CN-114376342-A OR CN-108201228-A OR TW-I734827-B OR CN-209403998-U OR AU-2020200160-B2 OR US-10813448-B2 OR CN-108968347-B OR KR-101674369-B1 OR CN-111132578-B OR JP-2021515653-A OR DE-102020125883-A1 OR WO-2022069741-A1 OR KR-20110006306-U OR US-20150216296-A1 OR CN-110664113-A OR WO-2006111742-A1 OR EP-1874155-A1 OR CN-112165886-A).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5039	58	(Artificial Intelligence) More like doc: CN-209403998-U Text: (CN-207606798-U OR CN-207744840-U OR CN-208259359-U OR CN-209403938-U OR	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV,	OR	ON	ON	2022/09/21 01:52 PM

		CN-207236414-U OR CN-209017975-U OR CN-206453483-U OR CN-212345742-U OR CN-208957139-U OR CN-208480780-U OR CN-202043837-U OR CN-209185891-U OR CN-204273640-U OR CN-207653811-U OR CN-201888446-U OR CN-104586075-A OR WO-2021226487-A1 OR US-20210345768-A1 OR CN-203244090-U OR CN-210901953-U).did.	MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L5040	85	((("DOWDLE") near3 ("Colin")) OR (("DOWDLE") near3 ("James")) OR (("CRUVER") near3 ("Curtis")) OR (("DERFINY") near3 ("Stephen"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2022/09/21 01:52 PM
L5041	49	(Artificial Intelligence) More like doc: CN-110367687-A Text: (CN-204245481-U OR CN-203986713-U OR CN-110495708-A OR CN-201938719-U OR CN-209090377-U OR CN-204670620-U OR CN-109189192-B OR CN-201295016-Y OR US-10085550-B1 OR GB-739932-A OR KR-200366069-Y1 OR CN-206079773-U OR CN-217309511-U OR CN-110403354-A OR WO-2022129043-A1 OR CN-106690930-A OR CN-109793376-A OR DE-102020133410-A1 OR FR-2236342-A6 OR CN-110495716-A).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5042	7847	A61G13/009,06.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM

L5043	1107	A61G13/009,06.cpc. AND (motor OR actuator OR spring) SAME (scissor OR cross OR X)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 01:52 PM
L5044	38	(Artificial Intelligence) More like doc: GB-2301282-A Text: (US-5535466-A OR GB-2273868-A OR EP-0601695-A2 OR FR-2816490-A1 OR US-9072645-B2 OR US-20120060291-A1 OR WO-2012033857-A1 OR US-6684419-B1 OR GB-8621775-D0 OR GB-289766-A OR US-3116492-A OR US-7886380-B2 OR US-20100064438-A1 OR WO-2008052564-A1 OR WO-02094166-A2 OR US-6654973-B2 OR US-20020174486-A1 OR GB-2195886-A OR US-4873732-A OR GB-9616293-D0).did.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 02:04 PM
L5045	1119	ironing ADJ board AND (motor OR actuator OR spring) SAME (scissor OR cross OR X)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 02:08 PM
L5046	19140	A47B AND (motor OR actuator OR spring) SAME (scissor OR cross OR X)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 02:33 PM
L5047	6221	A47B AND (motor OR actuator OR spring) SAME (scissor OR cross OR X) SAME (table OR board OR desk)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 02:35 PM

L5048	914	A47B AND (motor OR actuator OR spring) SAME (scissor OR cross OR X) SAME (table OR board OR desk) SAME (wheels OR castors)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 02:36 PM
L5049	162	D06F AND (motor OR actuator OR spring) SAME (scissor OR cross OR X) SAME (table OR board OR desk) SAME (wheels OR castors)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 04:13 PM
L5050	12	("9072645"|"6182935"|"6834450").PN.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 04:24 PM
L5051	486	248/432,436.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 04:25 PM
L5052	1131	D06F81/10.cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/21 04:26 PM
L5053	2	"202011006306"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/22 07:26 AM
L5054	1330	handle SAME frame AND 108/$.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/22 08:07 AM

L5055	49	(Artificial Intelligence) Similar to: 17/493,812 with 0 CPC Selections and 0 Text Selections Text: (US-11160367-B1 OR US-11134773-B1 OR US-11140977-B1 OR US-10575630-B1 OR US-11147366-B1 OR US-10244861-B1 OR US-10568416-B1 OR US-11388989-B1 OR US-11134774-B1 OR KR-20140098842-A OR CA-2814945-A1 OR EP-2685867-A1 OR WO-2013176690-A1 OR AU-2012381034-A1 OR US-8671853-B2 OR US-10893748-B1 OR CA-2814945-C OR US-20130139736-A1 OR US-20180177289-A1 OR US-9055810-B2 OR US-20150250303-A1 OR US-20130340655-A1 OR US-9554644-B2 OR US-9961991-B1 OR US-10092089-B1 OR US-20140158026-A1 OR US-20180132607-A1 OR US-20170095072-A1 OR US-20160150876-A1 OR ES-2698967-T3 OR US-9277809-B2 OR US-10413053-B2 OR AU-2012381034-B2 OR AU-2012381034-C1 OR US-9924793-B2 OR JP-3198070-U OR US-11395544-B1 OR US-20180360208-A1 OR US-10159336-B2 OR CN-107136750-A OR US-20180084903-A1 OR US-11019920-B2 OR CN-214855133-U OR US-11337516-B1 OR US-20170196351-A1 OR WO-2018057751-A1 OR US-20190110588-A1 OR US-10306977-B2 OR CN-108283365-A OR CN-101431916-	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO))	OR	ON	ON	2022/09/22 11:49 AM

		A).did.					
L5056	0	"factory ADJ direct ADJ wholesale"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/22 12:01 PM
L5057	10	("0200057" OR "0606845" OR "0835247" OR "1217772" OR "2692807" OR "3444830" OR "4072288" OR "4433759" OR "4558648" OR "9113703").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/23 07:34 AM
L5058	959	108/28.ccls.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/26 12:58 PM
L5059	28	"2014180572"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/26 01:04 PM
L5060	28	"105124920"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/26 01:05 PM
L5061	108	"636445"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/26 04:18 PM
L5062	91	("2070468"|"9808080"|"0636445"|"4718355"|"10499730"|"4303018"|"8490555"|"4259909"|"11047520"|"20150272316	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU,	OR	ON	ON	2022/09/26 04:19 PM

		"|"20200359782"|"8215241"|"10426259"|"6024025"|"20200029683"|"20120085267"|"10092089").PN.	SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L5063	19	("2070468"|"9808080"|"0636445"|"4718355"|"10499730"|"4303018"|"8490555"|"4259909"|"11047520"|"20150272316"|"20200359782"|"8215241"|"10426259"|"6024025"|"20200029683"|"20120085267"|"10092089").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/26 04:19 PM
L5064	6	("636445").urpn. AND (PGPB | USPT | USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/26 04:28 PM
L5065	0	"1051244920"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/27 08:06 AM
L5066	28	"105124920"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/27 08:06 AM
L5067	61	"9302967"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/27 08:50 AM
L5068	14	((("PONIATOWSKI") near3 ("Nathan"))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	OR	ON	ON	2023/05/11 04:34 PM
L5069	74	("1318564" | "2937003" | "3295800" | "4221280" | "4558648" | "4577821" | "4843978" | "5588377" | "5626323" | "5829948" | "5957426" | "6098961" | "6269753" | "6516478" | "6533479" | "6722618" | "6742768" | "8132518" | "8671853" | "9049923" | "9055810" | "9326598"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/05/11 04:35 PM

		| "9480332" | "9504316" | "9554644" | "20030213415" | "20040035332" | "20040040480" | "20070080564" | "20080000393" | "20090090832" | "20090200437" | "20110001033" | "20110024958" | "20120097822" | "20130145972" | "20130193392" | "20140144352" | "20150232005" | "20150375896" | "20160338486" | "20170174486" | "20180008037").pn. OR ("10244861").urpn. AND (PGPB | USPT | USOC).dbnm.					
L5070	245	("0317468"|"5588727"|"5729430"|"6220558"|"6381335"|"7793597"|"11395544"|"10159336"|"11388989"|"11388991"|"11464325"|"20040035332"|"20040040480"|"20050029849"|"20090090832"|"20090146389"|"20090200437"|"20110001033"|"20110024958"|"20130145972"|"20130199420"|"20140158026"|"20150232005"|"20150274038"|"20150368082"|"20150375896"|"20160051042"|"20160060084"|"20160106205"|"20160170402"|"20160258573"|"20160260019"|"20160309889"|"20170174486"|"20170360192"|"20180008037"|"20180055214"|"20180103752"|"20180255919"|"20180360208"|"3092918"|"20120060291"|"11470959"|"20070295882"|"20100257671"|"20130340655"|"20140339747"|"20140360411"|"20150231992"|"20180160799"|"3727245"|"4097941"|"4249749"|"4382573"|"4534544"|"4558847"|"461182	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/05/12 07:18 AM

		3"|"5074000"|"5580027" |"6550740"|"7568675"|" 7988232"|"8800976"|"9 133976"|"9440559"|"99 61991"|"D832623"|"101 23613"|"10018298"|"10 023355"|"10114352"|"1 0244861"|"10258148"|" 10413055"|"10258149"| "10264877"|"10306977" |"10499730"|"10517390 "|"10524565"|"1054281 7"|"10544019"|"105684 16"|"10575630"|"10869 549"|"10893748"|"1108 3282"|"11134773"|"111 34774"|"11140977"|"11 147366"|"11160367"|"1 318564"|"20030042380 "|"20030213415"|"2005 0120922"|"2007000107 7"|"20070080564"|"200 70266912"|"200800003 93"|"20090145336"|"20 100242174"|"20120097 822"|"20120188302"|"2 0130193392"|"2014014 4352"|"20150028787"|" 20150216296"|"201502 89641"|"20160249737"| "20160338486"|"20160 353880"|"20170071332 "|"20170196351"|"2017 0354245"|"2018017728 9"|"20180213929"|"201 80279770"|"201901105 88"|"20190183239"|"20 190269237"|"20200029 685"|"20200107633"|"2 843418"|"2937003"|"32 95800"|"3823915"|"382 6457"|"4221280"|"4448 386"|"4449262"|"45497 20"|"4558648"|"457782 1"|"4625657"|"4640488" |"4659052"|"4702454"|" 4709972"|"4717112"|"4 741512"|"4753419"|"48 26123"|"4843978"|"494 1641"|"4967672"|"4995 130"|"5037163"|"50487 84"|"5211367"|"525186 4"|"5257767"|"5294087" |"5400720"|"5588377"|" 5626323"|"5722513"|"5 765797"|"5829948"|"58 36562"|"5926876"|"595 7426"|"6076785"|"6098					

		961"|"6148739"|"6176456"|"6179261"|"6269753"|"6273382"|"6488248"|"6516478"|"6533229"|"6533479"|"6672430"|"6701853"|"6702372"|"6722618"|"6742768"|"6792876"|"6938866"|"7048236"|"7188813"|"7204193"|"7207629"|"7246784"|"7575205"|"7677518"|"7841570"|"7845665"|"7946551"|"7950338"|"8015638"|"8132518"|"8303062"|"8469152"|"8490933"|"8544391"|"8671853"|"8684339"|"8931750"|"8950343"|"9049923"|"9055810"|"9232855"|"9326598"|"9480332"|"9504316"|"9554644"|"9668572"|"9681746"|"9809136"|"9815672"|"9854904"|"9955780"|"9981571"|"9993068"|"D302893"|"D830739"|"D845037"|"D854775"|"D870490"|"D901959"|"3444830"|"20180125227"|"6857493"|"1217772"|"0200057"|"2692807"|"4072288"|"4433759"|"4558648"|"0606845"|"0835247"|"9113703").PN.					
L5071	15427	(A47B9/16 OR A47B21/02 OR A47B21/0314 OR A47B21/04 OR A47B2021/0335).cpc.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/05/12 07:39 AM
L5072	4441	(A47B9/16 OR A47B21/02 OR A47B21/0314 OR A47B21/04 OR A47B2021/0335).cpc. AND (spring OR pneumatic OR elastic)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/05/12 07:39 AM
L5073	2181	(A47B9/16 OR A47B21/02 OR A47B21/0314 OR A47B21/04 OR A47B2021/0335).cpc. AND (spring OR pneumatic OR elastic)	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, CA, CH, CN, DD, DE, EA, EP, ES, FR, GB, JP, KR, OA, RU, SU, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2023/05/12 07:40 AM

		AND ((pivot$4 OR rotat$4) SAME slid$4)	IBM_TDB)				

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N1	103	A47B1/03.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/25 03:53 PM
N2	2773	A47B21/0314,00,02,03.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/25 04:07 PM
N3	372	A47B9/16.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/25 04:09 PM
N4	351	A47B2021/0321,0364.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/25 04:12 PM
N5	647	312/208.1,223.3.ccls.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/25 04:14 PM
N6	1939	248/421,562,588,585,431,432,439.ccls.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/25 04:16 PM
N7	3260	108/147,144.11,145,93,96,116-118,120,50.01,50.01,43,138.ccls.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/25 04:18 PM
N8	2933	108/147,144.11,145,93,96,116-118,120,43,138.ccls.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/25 04:18 PM
N9	1834	108/144.11,145,93,96,116-118,120,138.ccls.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/25 04:19 PM
N10	1138	108/147,50.01,50.01.ccls.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/25 04:20 PM
N11	917	A47B3/02,0809,0815.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/25 04:22 PM
N12	145	A47B2003/025.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/25 04:23 PM
N13	530	A47B3/00.cpc.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/25 04:25 PM
N14	126	poniatowski.in.	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/25 04:26 PM

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The time period for reply, if any, is set in the attached communication.

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