(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
6 October 2016 (06.10.2016)

WIPO | PCT

(10) International Publication Number
WO 2016/154754 A1

(51) International Patent Classification:
A61H 3/04 (2006.01) *A61H 3/00* (2006.01)

(21) International Application Number:
PCT/CA2016/050371

(22) International Filing Date:
30 March 2016 (30.03.2016)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/139,893 30 March 2015 (30.03.2015) US

(71) Applicant: **EVOLUTION TECHNOLOGIES INC.**; 2530 Davies Avenue, Port Coquitlam, BC V3C 2J9 (CA).

(72) Inventor: **LIU, Julian**; 55 Birchwood Crescent, Port Moody, British Columbia V3H 5H7 (CA).

(74) Agent: **CAMERON IP**; 1401-1166 Alberni Street, Vancouver, British Columbia V6E 3Z3 (CA).

(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).

Declarations under Rule 4.17:

— *as to the identity of the inventor (Rule 4.17(i))*

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

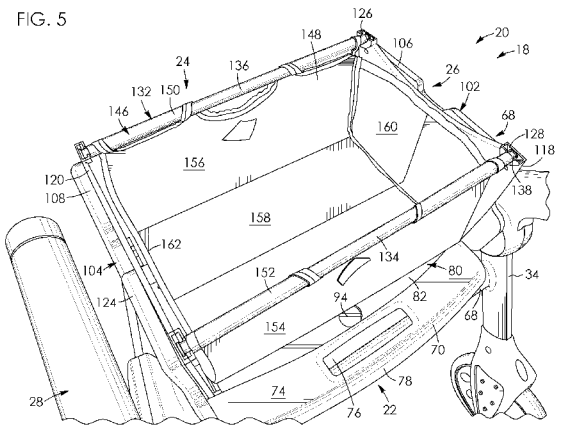
Published:

— *with international search report (Art. 21(3))*

WO 2016/154754 A1

(54) Title: WALKER APPARATUS HAVING A SEAT CONVERTIBLE INTO AN ACCESSORY HOLDER

FIG. 5



(57) Abstract: There is accordingly provided a seat assembly for a walker apparatus. The seat assembly includes a pair of seat members. Each of the seat members is selectively moveable from a lowered position in which the seat members extend in a substantially horizontal direction to an upper position in which the seat members extend in a substantially vertical direction. The seat members are configured to retain an object when in their upper positions. The object may be an accessory such as a basket, tray or the like, for example.

WALKER APPARATUS HAVING A SEAT CONVERTIBLE INTO AN ACCESSORY HOLDER

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application is a non-provisional of United States Provisional Patent Application No. 62/139,893 filed in the United States Patent and Trademark Office on March 30, 2015, and the disclosure of which is incorporated herein by reference and priority to which is claimed.

BACKGROUND OF THE INVENTION

Field of the Invention

[0002] There is provided a walker apparatus having a seat. In particular, there is provided a walker apparatus having a seat that is convertible into an accessory holder, such as a basket holder, tray holder or the like.

Description of the Related Art

[0003] United States Patent 5,816,650 to Lucas Jr. discloses a seat assembly for an interior of a motor vehicle interior is disclosed. A pair of opposed sidewalls extend upwardly from a floor of the vehicle, and a guide track disposed on an upper surface of the each of the sidewalls. A seat frame is movable along the guide track, with a seat back connected to a rear end of the seat frame. A cushion is connected to the seat frame proximate a front end of the seat frame, and pivotal between a closed position and an open position. A bin is disposed generally below the cushion and accessible when the cushion is pivoted to the open position. The bin is engaged with the seat frame and

movable therewith when the seat frame is moved along the guide track. Optionally, the bin is fastened to the seat frame, and accessible through a door disposed proximate the rear end of the seat frame.

[0004] United States Patent Application Publication No. 2014/0125037 A1 discloses a rolling walker. The walker comprises a frame, a seat supported by that frame, and a backrest supported by the frame. By one approach the backrest is configured to selectively move between a first position that provides back support for a person sitting in the seat facing in a forward direction and a second position that provides back support for a person sitting in the seat facing in a rearward direction. If desired, this backrest can be comprised of a material (such as a memory foam material) that biases the backrest towards that first position when the backrest is in the first position and that biases the backrest towards the second position when the backrest is in the second position.

[0005] United States Patent 6,161,896 to Johnson et al. discloses a selectively operable storage system incorporated within the passenger compartment of an automotive vehicle. The storage system is preferably deployed underneath the rear seat structure, for example, below the seat bottom structure. The storage system can include any number and combination of selectively operable sliding trays, pivoting trays, collapsible trays, pivoting lids, storage bins, and track systems.

[0006] The above-described prior art may suffer a number of disadvantages.

BRIEF SUMMARY OF INVENTION

[0007] There may accordingly be a need for, and it is an object to provided, an improved seat assembly.

[0008] There is accordingly provided a seat assembly. The seat assembly includes a pair of seat members. Each of the seat members is selectively moveable from a lowered

position in which the seat members extend in a substantially horizontal direction to an upper position in which the seat members extend in a substantially vertical direction. The seat members are configured to retain an object when in their upper positions. The object may be an accessory such as a basket, tray or the like, for example.

[0009] There is also provided a walker apparatus. The walker apparatus includes a pair of spaced-apart support members. The walker apparatus includes a seat assembly. The seat assembly comprises a pair of seat members pivotally connecting to respective ones of the support members. The seat members are moveable from lowered positions to upper positions. The walker apparatus includes an accessory extendable between and being supported by the seat members when in the seat members are in their upper positions.

[0010] There is further provided a walker apparatus comprising a pair of spaced-apart support members. The walker apparatus includes a seat member that pivotally connects to one of the support members. The seat member is moveable from a lowered position to a raised position. The seat member is spring-biased towards the raised position. The walker apparatus includes a catch mechanism that selectively biases the seat member towards its lowered position. Actuation of the catch mechanism enables the seat member to move towards its raised position. The seat member functions as an accessory holder in its raised position.

BRIEF DESCRIPTION OF DRAWINGS

[0011] The invention will be more readily understood from the following description of preferred embodiments thereof given, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a top, side perspective view of a walker apparatus according to a first embodiment, the walker apparatus having a seat assembly comprising a pair of seat members shown in lowered positions;

Figure 2 is a top, rear perspective view of the seat assembly of the walker apparatus of Figure 1, with the rest of the walker apparatus being shown in fragment;

Figure 3 is a top, rear perspective view of the seat assembly of the walker apparatus of Figure 1, with the rest of the walker apparatus being shown in fragment, and with the seat members of the seat assembly being shown in raised positions;

Figure 4 is an enlarged top, rear perspective view of one of the seat members of Figure 3;

Figure 5 is a top, rear perspective view of the seat assembly in the mode shown in Figure 3, with the rest of the walker apparatus being shown in fragment and with a basket coupled to and extending between the seat members of the seat assembly; and

Figure 6 is an enlarged top, rear perspective view of the basket of Figure 5 shown in fragment together with one of the seat members of Figure 5 shown in fragment;

Figure 7 is a rear, top, side perspective view of a walker apparatus similar to Figure 1 according a second embodiment, the walker apparatus having a seat assembly with the seat members thereof being shown in raised positions;

Figure 8 is a rear, top perspective view of the seat assembly of the walker apparatus of Figure 7;

Figure 9 is a rear, top, side perspective view of the walker apparatus of Figure 7, with the seat members of the seat assembly being shown in lowered positions;

Figure 10 is a rear, top, side perspective view of a walker apparatus similar to Figure 7 according a third embodiment, the walker apparatus having a seat assembly with the seat members thereof being shown in raised positions;

Figure 11 is a rear, top, side perspective view of the seat assembly of Figure 10, with the seat members of the seat assembly being shown in an intermediate position between their raised positions and lowered positions;

Figure 12 is a rear elevation view of the seat assembly of Figure 11, the walker apparatus includes a tray having a mesh fabric wall extending therearound;

Figure 13 is a rear, top, side perspective view of the seat assembly of Figure 11, with the seat members of the seat assembly being shown in further in the process of moving towards their lowered positions and with mesh fabric wall being shown folded downwards; and

Figure 14 is a rear, top, side perspective view of the seat assembly of Figure 13, with the seat members of the seat assembly being shown in their lowered positions and being shown partially in ghost to reveal the tray and flattened mesh fabric wall hidden below the seat members.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0012] Referring to the drawings and first to Figure 1, there is shown a walker apparatus 20 having a chair 18 that is part of a walker apparatus in this example. The apparatus has a rear 22, a front 24 opposite the rear, a pair of spaced-apart sides 26 and 28, a top 30 and a bottom 32 which is spaced-apart from the top. The rear 22 and front 24 of the walker appartus extend between the sides 26 and 28 thereof and the top 30 and bottom 32 thereof. The top and bottom of the apparatus also extend between the sides 26 and 28 thereof.

[0013] The walker apparatus 20 comprises a pair of spaced-apart support members 34 and 36. The support members align with respective ones of the sides 26 and 28 of the walker apparatus and extend from near the bottom 32 to the top 30 thereof. Each support member in this example comprises a pair of legs or elongate members having lower ends

and upper ends. This is seen for support member 36 by elongate members 38 and 40 having lower ends 42 and 44 and upper ends 46 and 48, respectively. A plurality of wheels rotatably couple to the lower ends of the elongate members via wheel forks in this example, as seen by wheel 50 coupling to end 44 of elongate member 40 via wheel fork 52.

[0014] Elongate members 38 extend upwards in a diagonal direction from rear to front in this example, with their lower ends 42 being positioned adjacent the front 24 and bottom 32 of the walker apparatus and with their upper ends 46 being positioned adjacent the top 30 and rear 22 thereof. Elongate members 40 extend upwards in a diagonal direction from rear to front in this example, with their lower ends 44 being positioned adjacent the rear 22 and bottom 32 of the walker apparatus 20. The upper ends 48 of the elongate members 40 couple to corresponding ones of the elongate members 38 at locations interposed between the lower ends 42 and upper ends 46 of the elongate members 38. Each of the support members 34 and 36 thus has the shape of an inverted Y in side profile in this example.

[0015] The walker apparatus 20 includes a pair of spaced-apart horizontally-extending elongate handles 54 and 56 which extend along the top 30 thereof and between the rear 22 and front 24 thereof. The handles are j-shaped in this example, with curved portions 60 thereof coupling to respective ones of the upper ends 46 of the elongate members 38. The walker apparatus includes an arcuate-shaped backrest 62 positioned along the front 24 thereof. The backrest is in the shape of a flexible strap in this example and extends between and couples the handles 54 and 56 together.

[0016] The walker apparatus 20 described to this stage is directed to one example of a walker appartus and walker apparatuses of other shapes and configurations are possible, as would be clear to one skilled in the art. For example, the support members, handles and backrests of the walker apparatuses set out in United States Patent No. 8,083,239 and United States Patent Application No. 14/193,806 could be used in other embodiments, the disclosures of which are incorporated herein by reference.

[0017] As seen in Figure 2, the walker apparatus 20 includes a seat mounting, in this example in the form of a pair of spaced-apart, elongate, laterally-extending members, in this example tubing 64 and 66 which extend between and couple together with the support members 34 and 36 in this example. Tubing 64 couples together and extends between elongate members 38 of the support members. Tubing 66 couples together and extends between elongate members 40 of the support members.

[0018] Referring back to Figure 1, the walker apparatus 20 includes a seat assembly 68 that couples to and extends between the support members 34 and 36. Chair 18 thus comprises elongate members 38 and 40, backrest 62 and seat assembly 68.

[0019] As seen in Figure 2, the seat assembly comprises a planar member in this example a base 70 which is rigid and which has a bottom 72 and a top 74 that is spaced-apart from its bottom. The bottom of the base abuts on top of and couples to tubing 64 and 66. The seat assembly 68 and base 70 are substantially rectangular in top profile in this example. Referring to Figure 2, base 70 has an elongate aperture 76 extending therethrough for inserting a user's hand and a gripping member 78 adjacent to the aperture for selectively gripping the seat assembly 68 and walker apparatus 20. The aperture 76 and gripping member 78 are positioned adjacent to the rear 22 of the walker apparatus.

[0020] As seen in Figure 3, the base 70 of the seat assembly 68 has recessed region 80 extending inwards from top 74 thereof. The recessed region includes a pair of spaced-apart laterally-extending elongate recessed channels 82 and 84 which align with the rear 22 and front 24 of the walker apparatus 20 in this example. The recessed region also includes spaced-apart outer elongate recessed channels 86 and 88 that align adjacent to sides 26 and 28 of the walker apparatus. Channels 86 and 88 extend between and are in communication with channels 82 and 84 in this example. The recessed region 80 includes spaced-apart inner elongate recessed channels 90 and 92 that are interposed between sides 26 and 28 of the walker apparatus 20. Channels 90 and 92 extend between and are in communication with channels 82 and 84 in this example.

[0021] Each of the elongate recessed channels 82, 84, 86, 88, 90 and 92 of the recessed region 80 of the base 70 of the seat assembly 68 are u-shaped in profile in this example. Recessed channels 82, 84, 90 and 92 in this example are curved and are outwardly convex relative to rear 22, front 24, side 26 and side 28, respectively, of the walker apparatus 20.

[0022] The base 70 has a pair of spaced-apart peripheral elevated portions 91 and 93 which extend between channels 82, 84, 86 and 90 and recessed regions 82, 84, 88 and 92, respectively. The base also has a centrally-positioned elevated portion 95 which is interposed between portions 91 and 93. Elevated portion 95 is oval in shape when viewed from above in this example and extends between channels 90 and 92 of the base 70.

[0023] Referring to Figure 3, the recessed region 80 further comprises a pair of centrally-disposed outer receptacles 94 and 96. The receptacles are in communication with and extend downwards from the channels 82 and 84, respectively. The receptacles 94 and 96 are cylindrical in shape in this example. The receptacles align with elevated portion 95 of the base 70 of the seat assembly 68. The receptacles 94 and 96 align with and are in communication with recessed channels 90 and 92.

[0024] As seen in Figure 3, the recessed region 80 has a pair of centrally-disposed inner receptacles 98 and 100. The receptacles are interposed between sides 26 and 28 and rear 22 and front 24 of the walker apparatus 20 in this example. The receptacles 98 and 100 are in communication with and extend downwards from channels 90 and 92, respectively. The receptacles are rectangular prisms in shape in this example.

[0025] The seat assembly 68 has a pair of seat members 102 and 104, each of which is generally rectangular when viewed from above in this example. The seat members have outer ends 110 and 112 align with sides 26 and 28, respectively, of the walker apparatus and inner ends 106 and 108 which are spaced-apart from the outer ends. Referring to Figure 3, the outer ends of the seat members 102 and 104 pivotally connect to the base 70 of the seat assembly 68 in this example via pairs of spaced-apart apart

pivot rods, as seen by pivot rod 114 for seat member 102 in Figure 4. The rods extend through bores in the seat members. Each of the seat members is selectively moveable from a lowered position seen in Figures 1 and 2, in which the seat members extend in a substantially horizontal direction, to an upper or raised position seen in Figures 3 to 6, in which the seat members extend in a substantially vertical direction. As seen in Figure 2, the inner ends 106 and 108 of the seat members 102 and 104 are adjacent to each other when the seat members are in their lowered positions. The seat members are spring-biased towards their raised positions via coil springs in this example, as best seen in Figure 4 by springs 116 which extend about pivot rods 114 and exert an upward force against seat member 102. Seat member 104 is biased in the same manner.

[0026] As seen in Figure 3, the seat members 102 and 104 include frame-like basket retaining members 118 and 120 and cushion members 122 and 124 connected thereto. Each basket retaining member is rigid and planar in this example. Basket retaining member 118 is shaped to be received by and substantially mirror the shape of channels 82, 84, 86 and 90 and receptacles 94, 96 and 98. Basket retaining member 120 is shaped to be received by channels 82, 84, 88 and 92 and receptacles 94, 96 and 100. The seat members are spaced-apart when raised to receive basket 132.

[0027] Each of the basket retainer members has a pair of connector mechanisms, in this example in the form of slotted channels positioned at distal corners thereof. This is seen by channels 126 and 128 for retaining member 120 in Figure 3 at corners 127 and 129, with the channels having slots as seen by slot 130 for channel 128. The slotted channels located adjacent to the inner ends of the seat members. Each of the slotted channels 126 and 128 is semi-cylindrical in outer shape in this example and is shaped to fit within half of its corresponding one of the receptacles 94 and 96, seen in Figure 3, when the seat members 102 and 104 are in their lowered positions seen in Figure 1. The slotted channels are configured to retain an object or accessory, in this example a basket 132 seen in Figure 5 when the seat members are in their raised positions; however, this is not strictly required and the object may be another type of selectively hidden accessory in

other embodiments. The seat assembly 68 may thus be said to function as an accessory holder, in this example a basket holder.

[0028] The basket 132 in this example has a pair of spaced-apart elongate members, in this example rods 134 and 136. The rods have spaced-apart ends shaped to be received within the slotted channels of the basket retaining members, as seen by end 138 of rod 134 being received within slotted channel 128 of basket retaining member 118 in Figure 6. Each of the ends of the rods includes an annular channel 140 shaped to be received by slots 130 with adjacent shoulders 142 and 144 thereof inhibiting dislodgement of the rods from the channels.

[0029] As seen in Figure 5, the basket 132 further includes a flexible member 146 that is in the shape of a hollow rectangular prism in this example with an open top 148. The flexible member is of fabric or other sheet-like material and has sleeves 150 and 152 through the rods 134 and 136 extend, the rods thus functioning to retain and suspend the flexible member in place. The flexible member 146 extends between the basket retaining members 118 and 120 when the rods 134 and 136 are so positioned within the slotted channels 126 and 128 of the retaining members. The flexible member 146 has a rear 154 that aligns with the rear 22 of the walker apparatus 20 and a front 156 which is spaced-apart from the rear and which aligns with the front of the apparatus. The flexible member has a bottom 158 which is spaced-apart from open top 148 and which aligns with the top 74 of the base 70 of the seat assembly. The flexible member 146 has a pair of spaced-apart sides 160 and 162 that align with the basket retaining members 118 and 120, respectively. The rear 154, front 156 and bottom 158 extend between the sides 160 and 162 of the flexible member 146. The rear, front, bottom and sides of the flexible member are each substantially rectangular in shape in this example.

[0030] Basket 132 thus may be inserted between the seat members 102 and 104 when the seat members are in the raised positions and supported by the seat members thereby. When the basket is not deployed, it may be connected to the side of the walker apparatus or held onto by the user, for example.

[0031] Referring to Figure 3, the seat assembly 68 includes a catch mechanism 164 for selectively biasing the seat members 102 and 104 towards their lowered positions seen in Figures 1 and 2. The catch mechanism includes a pair of protrusions, in this example spring-loaded pins 166 and 168. The pins are biased outwardly to abut against respective ones of the seat members 102 and 104 when the members are in their lowered positions. The basket retaining members have corresponding apertures, in this example disposed within housings, for selectively receiving the pins. This is shown by aperture 170 located within housing 172 of retaining member 118. Housings 172 are generally midway between corners 127 and 129 of the retaining members and are aligned by the inner ends 106 of the seat members in this example. As seen in Figure 3, receptacles 98 and 100 are shaped to receive the housings 172 when the seat members 102 and 104 are in their lowered positions. When the seat members are lowered, housings 172 abut against pins 166 and 168, causing the pins to retract inwards. As the seat members continue to be lowered, apertures 170 eventually align with the pins, enabling the pins to extend outwards and into the apertures for retaining the seat members 102 and 104 in their lowered positions as seen in Figures 1 and 2.

[0032] Referring to Figure 3, the catch mechanism 164 includes a push-button 174 that is operatively connected to the pins 166 and 168. Actuation of the push-button downwards causes the pins to retract, thereby freeing the seat members to move to their raised positions. Push-button 174 is between the seat members 102 and 104 and is centrally located on elevated portion 95 of the base 70 of the seat assembly 68 in this example.

[0033] Figures 7 to 9 show a walker apparatus 20.1 according to a second aspect. Like parts have like numbers and functions as the walker apparatus 20 shown in Figures 1 to 6 with the addition of decimal extension ".1". Walker apparatus 20.1 is substantially the same as walker apparatus 20 shown in Figures 1 to 6 with the following exceptions.

[0034] Referring to Figure 7, the walker apparatus 20.1 includes a tray, in this example a dinner tray 180. As seen in Figure 8, the tray has an upper surface 182 which

faces the top 30.1 of the walker apparatus and a lower surface 184 opposite the upper surface. The upper and lower surfaces of the tray are substantially rectangular in shape in this example. The tray 180 has a pair of spaced-apart sides 186 and 188 which align adjacent to sides 26.1 and 28.1, respectively, of the walker apparatus. The tray has a rear 190 which aligns adjacent to the channel 82.1 of the recessed region 80.1 of the seat assembly 68.1. The tray 180 has a front 192 which aligns adjacent to the front 24.1 of the walker apparatus 20.1. The tray includes a raised rim 194 which extends upwards from the upper surface 182 thereof, from the perspective of Figure 8. The rim extends about the top of the tray 180 and along the sides 186 and 188, rear 190 and front 192 of the tray. The tray has a plurality of corners, in this example, rounded corners 196, 198, 200 and 202: corner 196 is adjacent to the front 192 and side 186 of the tray; corner 198 is adjacent to the rear 190 and side 186 of the tray; corner 200 is adjacent to the side 188 and rear 190 of the tray; and corner 202 is adjacent to the side 188 and front 192 of the tray.

[0035] The tray 180 pivotally couples to inner sides 204 and 206 of seat members 102.1 and 104.1, respectively, of the seat assembly 68.1. In this example, the tray pivotally couples to the seat members via a plurality of outer link members 208, 210, 212, and 214. The link members have first ends which pivotally couple to the tray 180 adjacent to respective ones of the corners of the tray. This is shown by first end 216 of link member 210 coupling to the tray adjacent to corner 198 of the tray.

[0036] The seat members 102.1 and 104.1 have rear peripheral portions 218 and 220 which align with the rear 22.1 of the walker apparatus 20.1, and link members 210 and 212 align with said rear peripheral portions of the seat members in this example. The seat members 102.1 and 104.1 have front peripheral portions 222 and 224 which align with the front 24.1 of the walker apparatus 20.1, and link members 208 and 214 align with said front peripheral portions of the seat members in this example.

[0037] The link members 208, 210, 212 and 214 have second ends which pivotally couple to respective ones of the inner sides of the seat members. This is shown in Figure

8 by second end 226 of the link member 214 pivotally coupling to retaining member 120.1 adjacent to inner side 206 and front peripheral portion 224 of seat member 104.1 of the seat assembly 68.1. The second ends 226 of the link members 208, 210, 212 and 214 are spaced-apart above the first ends 216 of the link members when the seat members 102.1 and 104.1 are in their raised positions shown in Figure 8. The tray 180 is positioned so as to be selectively hidden when the seat members are in their lowered positions seen in Figure 9. The seat assembly 68.1 may thus be said to function as an accessory holder in the form a tray holder.

[0038] Backstrap 62.1 in this example includes a lower strap 228 which extends in a substantially horizontal manner generally in parallel with the elongate portions 230 and 232 of handles 56.1 and 54.1 in this example. The backstrap includes an upper strap 234 which couples to lower strap 228 via common ends 236 and 238. The upper strap of the backstrap 62.1 is positioned above lower strap 228 and elongate portions 230 and 232 of the handles. The backstrap has an aperture 240 extending therethrough. The aperture is positioned between the upper and lower straps. The aperture 240 is generally oval in shape in this example. The straps 228 and 234 and aperture 240 generally extend along the front 24.1 of the walker apparatus 20.1 in this example. The backstrap 62.1 further includes a pair of cushion members 242 and 244 in this example extending about straps 228 and 234, respectively.

[0039] Figures 10 to 14 show a walker apparatus 20.2 according to a third aspect. Like parts have like numbers and functions as the walker apparatus 20.1 shown in Figures 7 to 9 with decimal extension ".2" replacing decimal extension ".1" and being added for parts not previously having decimal extensions. Walker apparatus 20.2 is substantially the same as walker apparatus 20.1 shown in Figures 7 to 9 with the following exceptions.

[0040] Tray 180.2 in this embodiment includes a collapsible peripheral wall 246. As seen in Figure 11, the wall extends about the rear 190.2, front 192.2 and sides 186.2 and 188.2 of the tray and extends upwards from the rim 194.2 of the tray when the seat

members 102.2 and 104.2 are in their at least partially raised positions. As seen in Figure 12, the wall 246 has a lower peripheral edge 247 which in this example couples to rim 194.2. The wall has an upper peripheral edge 249 spaced-apart from the lower peripheral edge thereof.

[0041] Referring back to Figure 10, the wall 246 includes a plurality of elongate, rounded corner supports. This is shown by corner supports 248 and 250 in Figure 10 which are adjacent to the inner side 206.2 of seat member 104.2. The corner supports are flexible, arc-shaped in top profile in this example, and extend between the lower peripheral edge 247 and the upper peripheral edge 249 of the wall. The wall 246 further includes a plurality of flexible planar members, in this example flexible meshes. This is shown by mesh 252 extending between supports 248 and 250 and between the lower peripheral edge 247 and upper peripheral edge 249 of the wall. Each mesh is made of fabric in this example; however, this is not strictly required and the mesh may be made of other materials such as plastic or the like, in other example. The wall 246 may function to inhibit food from falling off of the tray 180.2, for example.

[0042] Seat assembly 68.2 does not include a catch mechanism in this example. As seen in Figure 10, the recessed region 80.2 of the base 70.2 of the seat assembly 68.2 is substantially in the shape of a rectangular prism in this example. The recessed region of the base of the seat assembly extends between sides 26.2 and 28.2, rear 22.2 and front 24.2 of the walker apparatus 20.2 in this example. The recessed region 80.2 of the base 70.2 of the seat assembly 68.2 is shaped to receive the tray 180.2 when the seat members 102.2 and 104.2 are in their lowered positions seen in Figure 14.

[0043] The wall 246 of the tray 180.2 is folded at least in part and positioned below the seat members 102.2 and 104.2 when the seat members are in their lowered positions. The meshes 252 and corner supports 248 and 250 of the wall fold inwards in this example so as to abut the upper surface 182.2 of tray 180.2 when the seat members are in their lowered positions. The wall 246 extends in a substantially planar manner when the seat members 102.2 and 104.2 are in their lowered positions in this example. The tray 180 is

substantially hidden beneath the seat members 102.2 and 104.2 of the seat assembly 68.2 in this embodiment when the seat members are in their lowered positions.

[0044] As seen in Figures 10 and 12, the seat assembly 68.2 further includes a pair of connecting members, in this example a pair of inner link members 254 and 256. As seen in Figure 12, first ends 258 and 260 of the link members 254 and 256, respectively, pivotally couple to inner sides 204.2 and 206.2 of seat members 102.2 and 104.2 at locations between the rear and front peripheral portions of the seat members in this example. Second ends 262 and 264 of the link members pivotally couple to upper peripheral edge 249 of the wall 246 adjacent to sides 186.2 and 188.2, respectively, of the tray 180.2.

[0045] When the seat members 102.2 and 104.2 are moved to their raised positioned seen in Figure 10, this causes the link members 254 and 256 seen in Figure 12 to pull upwards on the peripheral edge 249 of wall 246. The wall as a result is caused to unfold to its open position seen in Figure 10 to receive items therewithin. Tray 180.2, with its wall 246, may thus be referred to as a foldable or collapsible basket. Walker apparatus 20.2 as herein described thus provides a tray 180.2 that folds together with the rest of the seat assembly 68.2 covering down and therefore may save the user from having to look for a tray when needed.

[0046] As seen in Figure 12, each of the outer link members has a slot extending therethrough adjacent to its second end thereof in this example. This is seen by slot 266 extending through outer link member 212.2 adjacent to its end 226.2. The seat members of the seat assembly 68.2 pivotally couple to the outer link members via protrusions which extend through and slidably along said slots in this example. This is shown by protrusion 268 of seat member 104.2 slidably extending through slot 266 of link member 212.2.

[0047] It will be appreciated that many variations are possible within the scope of the invention described herein. The connectors that actuates lowering of the trays described

herein can be in various configurations, not limited to link members or hinge rods. For example, the connectors may be a piano-type hinge. Also, the specific positioning of the link members or connectors is not strictly required either, as they may be either located on both sides of the tray or at the center thereof, for example.

[0048] For example, the tray 180 in an alternative embodiment may be selectively removeable in order to lower the seat members 102.1 and 104.1 of seat assembly 68.1 of the walker apparatus 20.1. It will also be understood by someone skilled in the art that many of the details provided above are by way of example only and are not intended to limit the scope of the invention which is to be determined with reference to at least the following claims.

WHAT IS CLAIMED IS:

1. A seat assembly comprising:

a pair of seat members each of which is selectively moveable from a lowered position in which the seat members extend in a substantially horizontal direction to an upper position in which the seat members extend in a substantially vertical direction, the seat members being configured to retain an object when in their upper positions.

2. The seat assembly as claimed in claim 1 wherein the object is an accessory.

3. The seat assembly as claimed in claim 1, wherein the object is a basket.

4. The seat assembly as claimed in claim 3, further including said basket, the basket extending between and being supported by the seat members when the seat members are in the upper positions.

5. The seat assembly as claimed in any one of claims 3 and 4, wherein each of the seat members includes a connector mechanism that selectively connects the basket thereto.

6. The seat assembly as claimed in any one of claims 1 to 5 wherein each of the seat members has an outer end and an inner end, the inner ends of the seat members abutting each other when the seat members are in their lowered positions.

7. The seat assembly as claimed in claim 5 wherein each of the seat members has an inner end, the inner ends of the seat members abutting each other when the seat members are in their lowered positions, the connector mechanism being located adjacent to the inner ends of the seat members.

8. The seat assembly as claimed in claim 1 wherein each of the seat members has an inner end, the inner ends of the seat members abutting each other when the seat members are in their lowered positions, and a slot located adjacent to its respective inner end for receiving a respective end of a basket.

9. The seat assembly as claimed in any one of claims 1 to 8 further including a catch mechanism that selectively biases the seat members towards their lowered positions, actuation of the catch mechanism enabling the seat members move towards their upper positions.

10. The seat assembly as claimed in claim 9 wherein the seat members are spring-biased towards their upper positions.

11. The seat assembly as claimed in claim 1 further comprising a catch mechanism, the catch mechanism including a pair of protrusions which are outwardly-biased to abut against respective ones of the seat members in their lowered positions and a push-button operatively connected to the protrusions, actuation of the push-button causing the protrusions to retract, thereby freeing the seat members to move to their upper positions.

12. The seat assembly as claimed in claim 11 wherein the protrusions are spring-loaded pins.

13. The seat assembly as claimed in any one of claims 11 and 12, wherein the catch mechanism is interposed between the seat members.

14. The seat assembly as claimed in claim 1 further including a planar member to which the seat members pivotally couple.

15. The seat assembly as claimed in claim 14, wherein the seat members pivotally couple to the planar member at outer ends thereof and wherein the seat assembly further includes a catch mechanism coupled to the planar member, the catch mechanism selectively retaining the seat members in their lowered positions.

16. The seat assembly as claimed in claim 1, further including a planar member to which the seat members pivotally couple, the planar member having a recessed

region shaped to receive the object when the seat members are in their lowered positions.

17. The seat assembly as claimed in claim 16, wherein the object is pivotally coupled to respective ones of the seat members.

18. The seat assembly as claimed in any one of claims 16 to 17 wherein the object is pivotally coupled to inner sides of respective ones of the seat members via a plurality of link members.

19. The seat assembly as claimed in any one of claims 1 and 16 to 18, wherein the object is a tray.

20. The seat assembly as claimed in claim 19 wherein the link members are positioned adjacent to respective corners of the tray.

21. The seat assembly as claimed in any one of claims 19 and 20, further including the tray, the tray additionally including a collapsible peripheral wall, the wall extending in a substantially planar manner when the seat members are in their lowered positions.

22. The seat assembly as claimed in any one of claims 1 and 16 to 18, wherein the object is a collapsible basket.

23. The seat assembly as claimed in claim 22, wherein the collapsible basket is substantially hidden beneath the seat members when the seat members are in their lowered positions.

24. A chair comprising the seat assembly as claimed in any one of claims 1 to 23.

25. The chair as claimed in claim 24, further including a pair of spaced-apart support members, the seat members pivotally connecting to respective ones of the support members.

26. A walker apparatus comprising the seat assembly as claimed in any one of claims 1 to 25.

27. A walker apparatus comprising:

a pair of spaced-apart support members;

a seat assembly comprising a pair of seat members pivotally connecting to respective ones of the support members, the seat members being moveable from lowered positions to upper positions; and

an accessory extendable between and being supported by the seat members when in the seat members are in their upper positions.

28. The walker apparatus as claimed in claim 27 wherein the accessory is a basket.

29. The walker apparatus as claimed in claim 27 wherein the accessory is a foldable basket, the basket being both folded at least in part and positioned below the seat members when the seat members are in their lowered positions.

30. The walker apparatus as claimed in claim 27 wherein the accessory is a tray.

31. The walker apparatus as claimed in any one of claims 27 to 30 further including a catch mechanism which selectively biases the seat members in towards their lowered positions, actuation of the catch mechanism enabling the seat members to move towards their upper positions.

32. The walker apparatus as claimed in claim 31 wherein the catch mechanism is interposed between the seat members and wherein the seat members are spring-biased towards the upper positions thereof.

33. A walker apparatus comprising:

a pair of spaced-apart support members; and

a seat member which pivotally connects to one of the support members, the seat member being moveable from a lowered position to a raised position, the seat member being spring-biased towards the raised position, the seat member functioning as an accessory holder in its raised position.

34. The apparatus as claimed in claim 33 further including a catch mechanism that selectively biases the seat member towards its lowered position, actuation of the catch mechanism enabling the seat member to move towards its raised position.

35. The walker apparatus as claimed in any one of claims 33 and 34, wherein the accessory holder is a basket holder.

36. The walker apparatus as claimed in any one of claims 33 and 34, wherein the accessory holder is a tray holder.

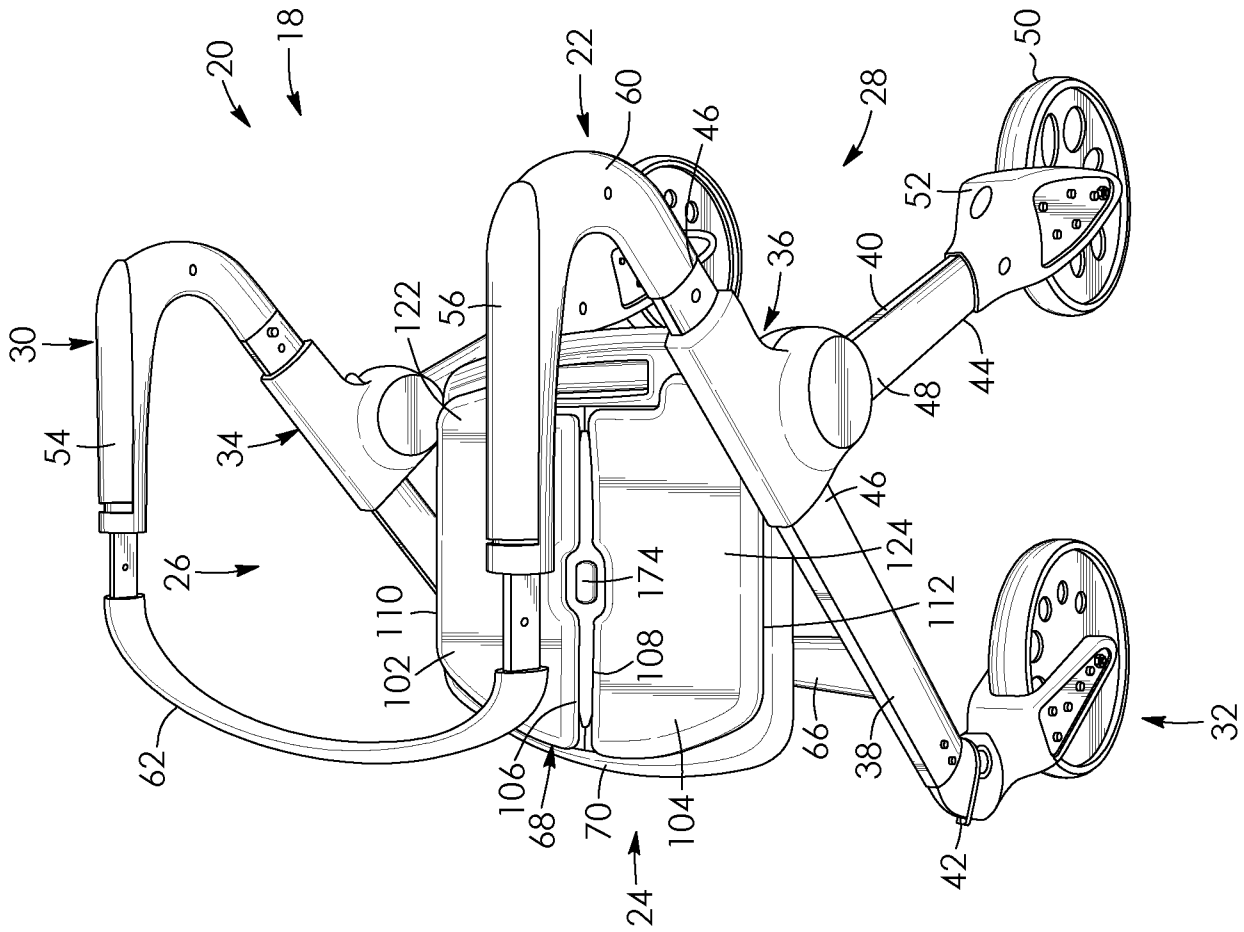

18
20
22
60
46
28
50
52
36
40
30
122
56
44
48
54
34
46
26
124
174
112
110
102
108
66
38
32
62
106
68
70
104
24
42

FIG. 1

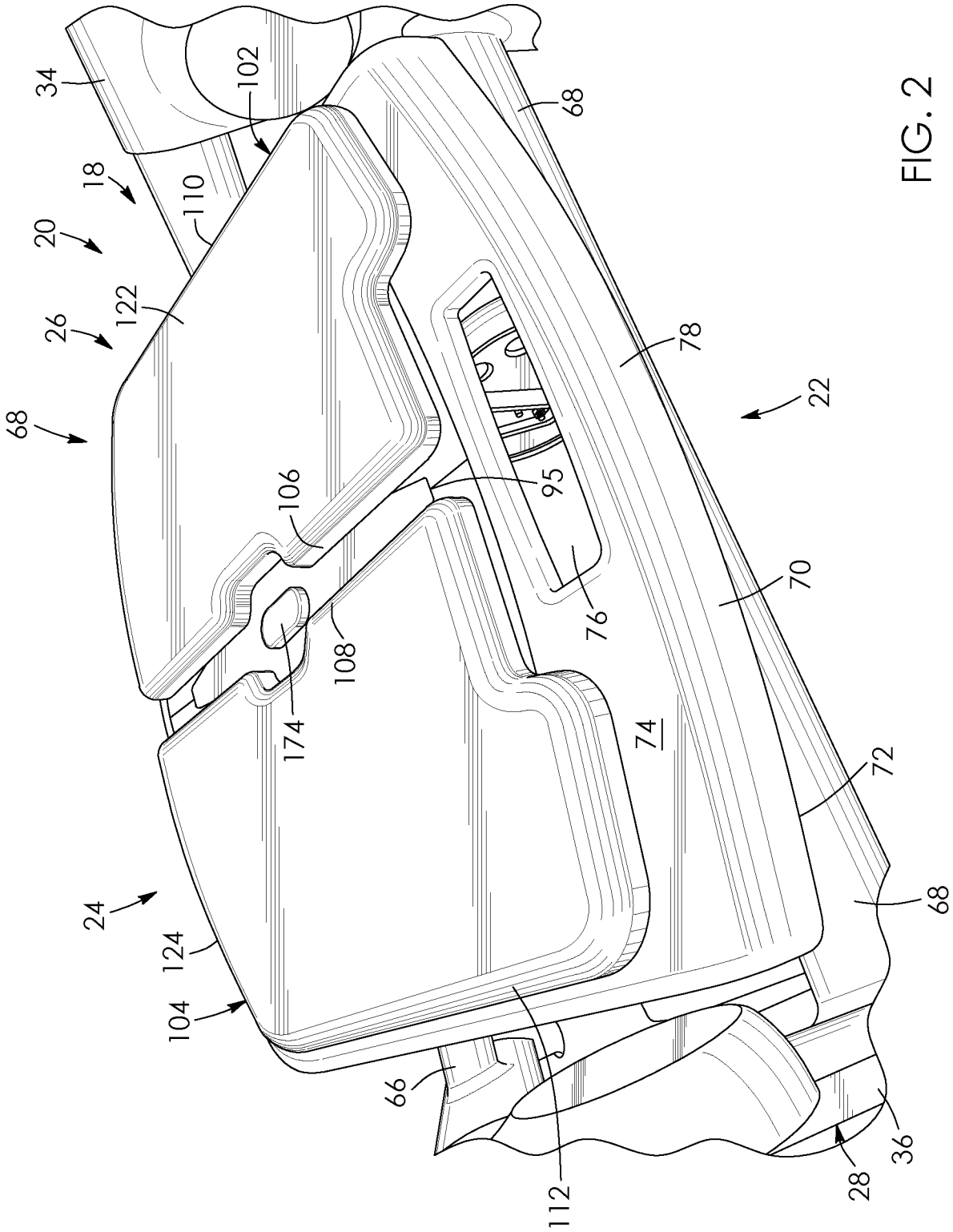

34
102
68
18
110
20
122
26
78
22
68
106
95
70
76
108
174
74
72
24
68
124
104
66
36
112
28

FIG. 2

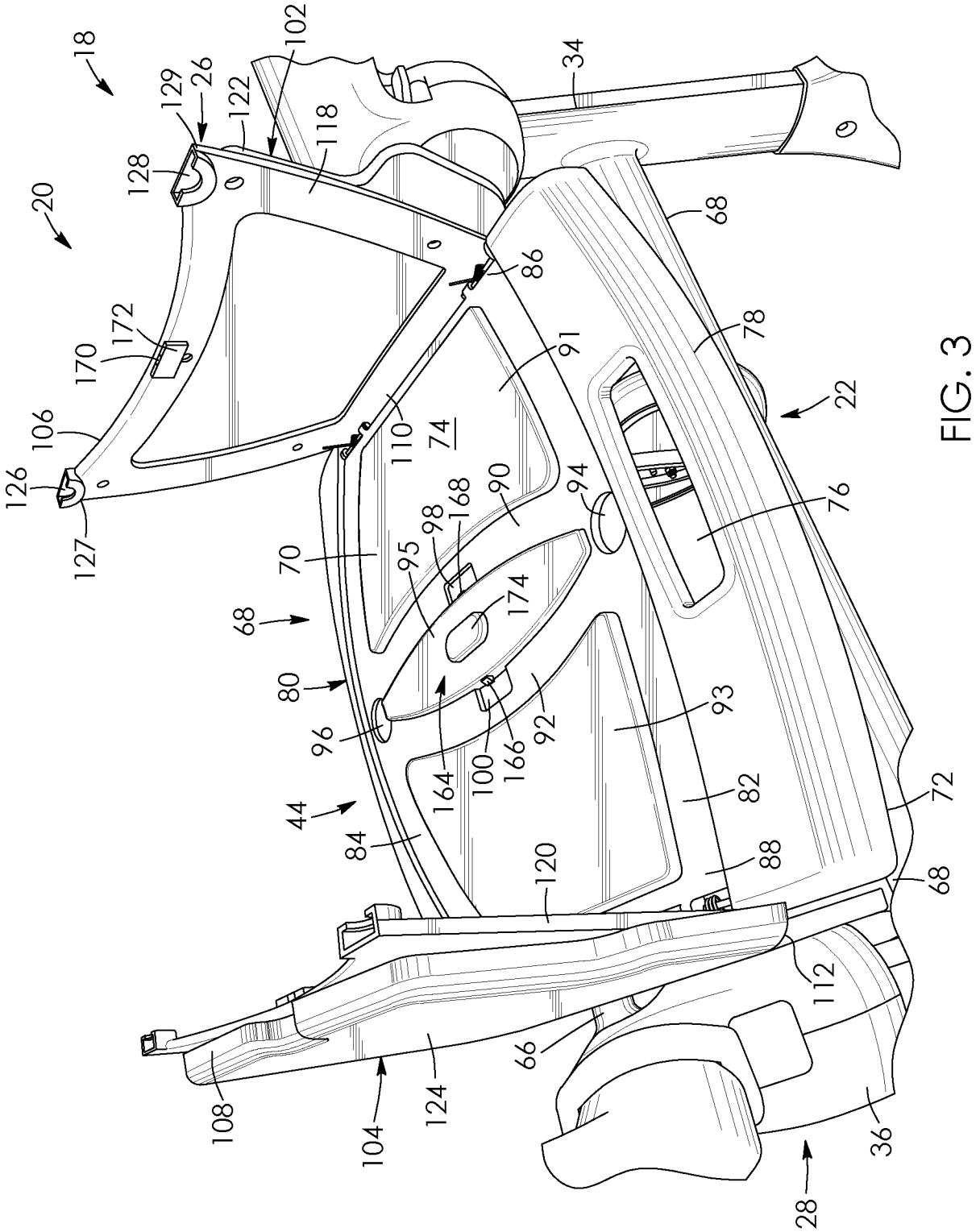

18
20
22
26
28
34
36
44
66
68
70
72
74
76
78
80
82
84
86
88
90
91
92
93
94
95
96
98
100
102
104
106
108
110
112
118
120
122
124
126
127
128
129
164
166
168
170
172
174

FIG. 3

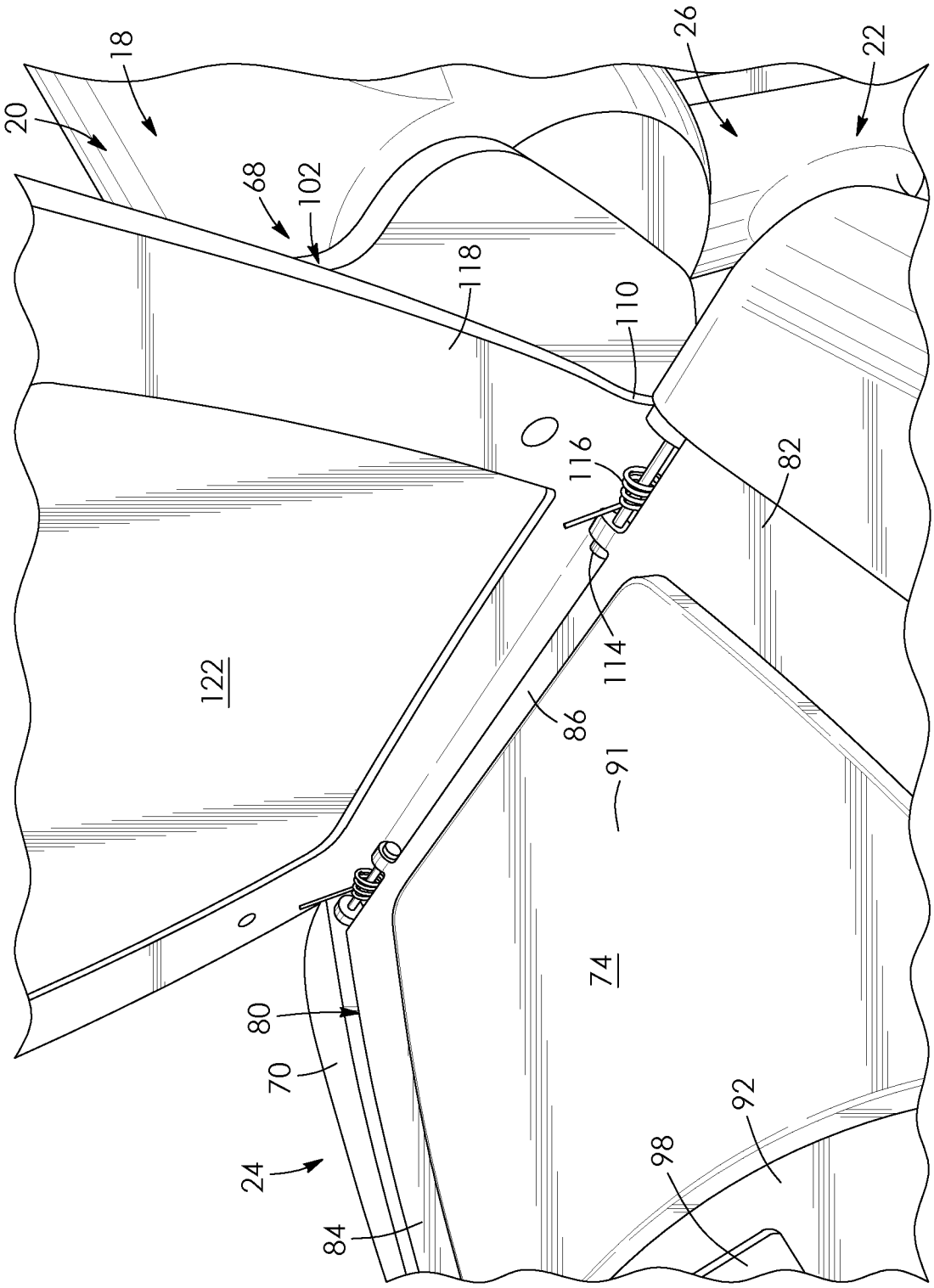


FIG. 4

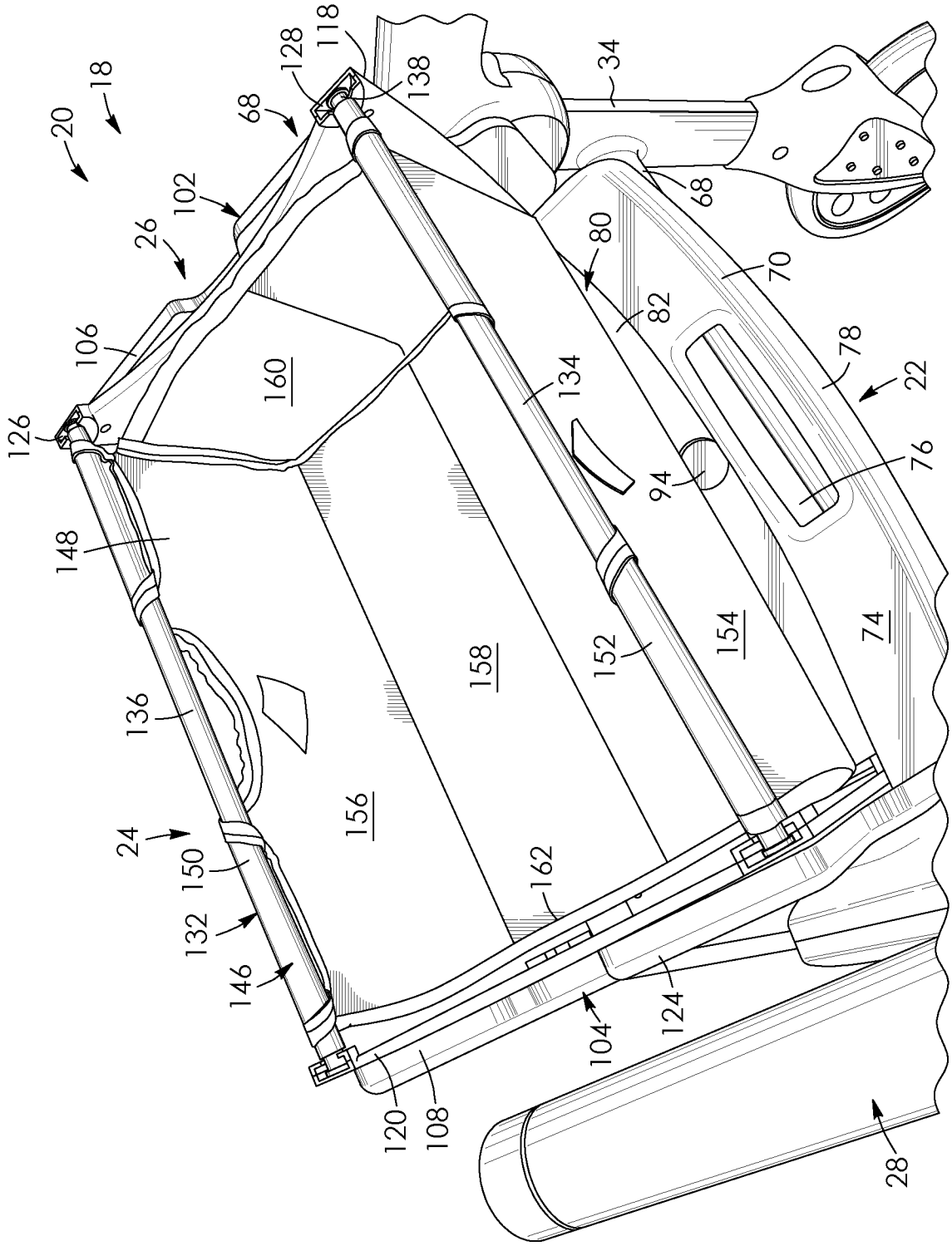

18
20
68
128
118
138
34
102
26
68
80
70
106
82
78
22
160
134
126
94
76
148
158
152
154
74
136
156
24
150
162
132
146
104
124
120
108
28

FIG. 5

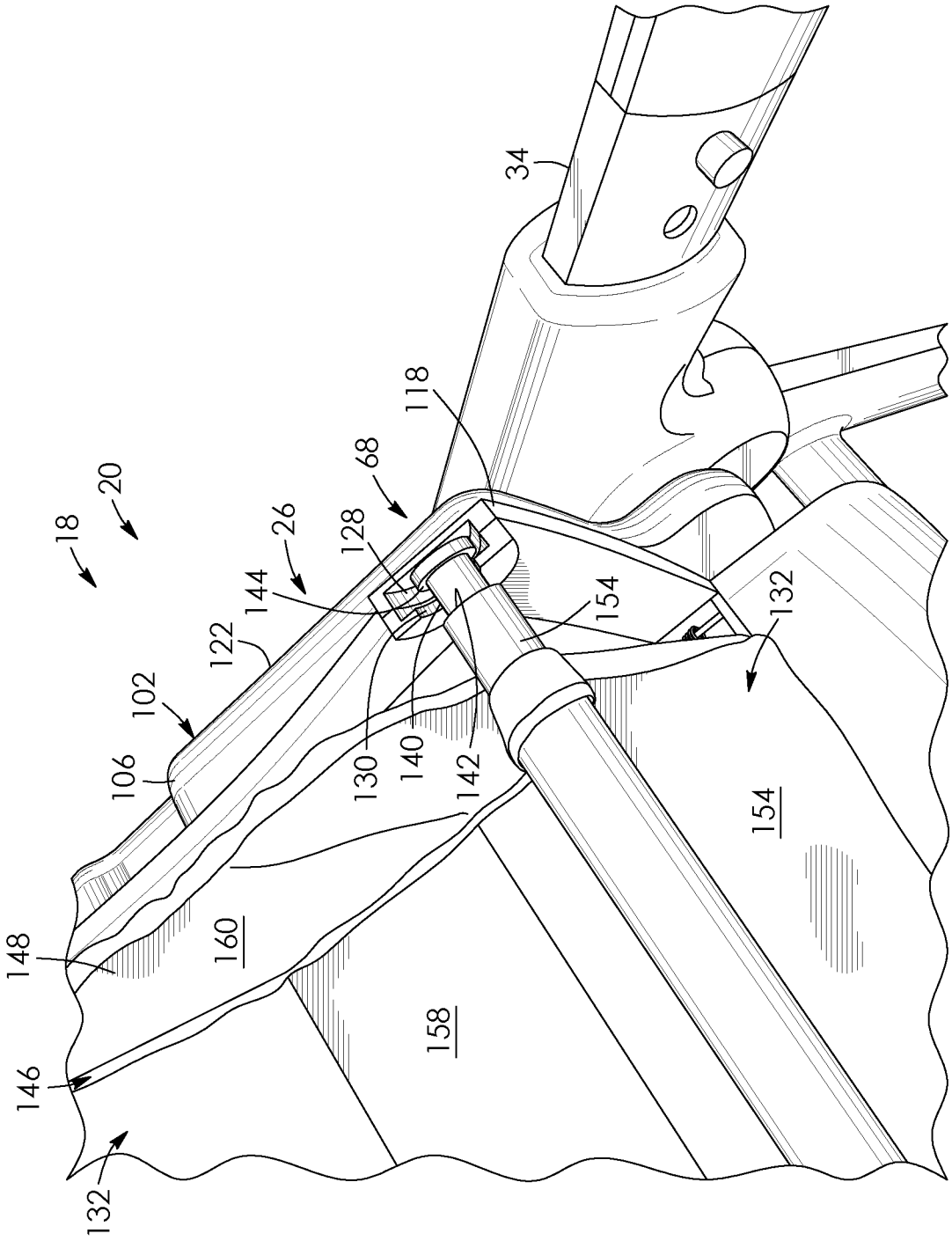

34
118
68
128
26
144
122
102
106
130
140
142
154
132
18
20
148
146
160
158
154
132

FIG. 6

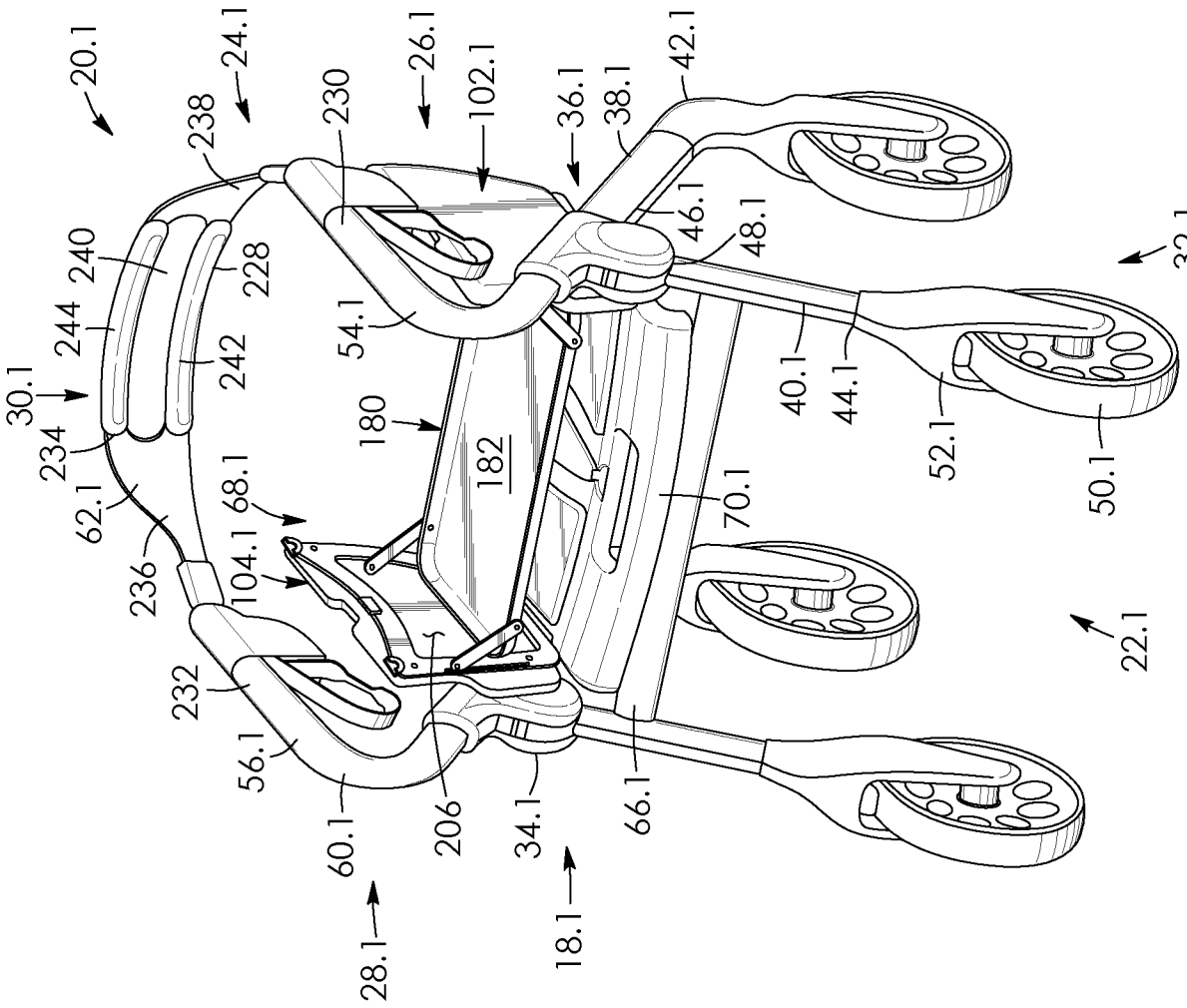

20.1
24.1
26.1
102.1
36.1
38.1
42.1
238
230
240
228
244
242
30.1
234
62.1
236
68.1
104.1
232
56.1
60.1
28.1
206
34.1
18.1
66.1
54.1
180
182
46.1
48.1
32.1
40.1
44.1
52.1
50.1
70.1
22.1

FIG. 7

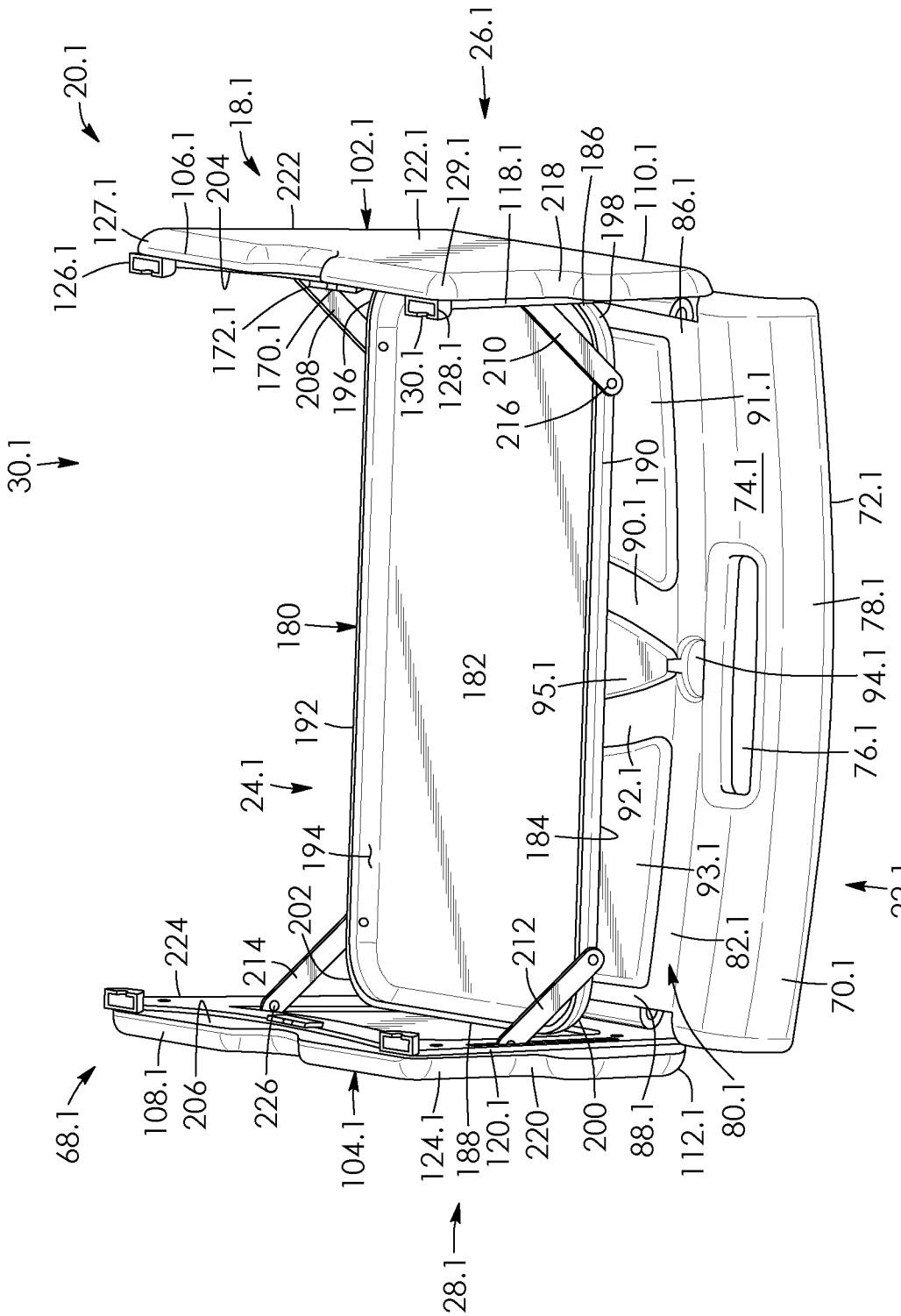

20.1
18.1
26.1
106.1
204
222
102.1
122.1
129.1
118.1
218
186
198
110.1
86.1
127.1
126.1
172.1
170.1
208
196
130.1
128.1
210
216
91.1
30.1
190
90.1
74.1
72.1
78.1
180
182
95.1
94.1
76.1
192
24.1
92.1
184
93.1
194
202
214
224
212
82.1
22.1
70.1
108.1
206
226
104.1
124.1
188
120.1
220
200
88.1
112.1
80.1
68.1
28.1

FIG. 8

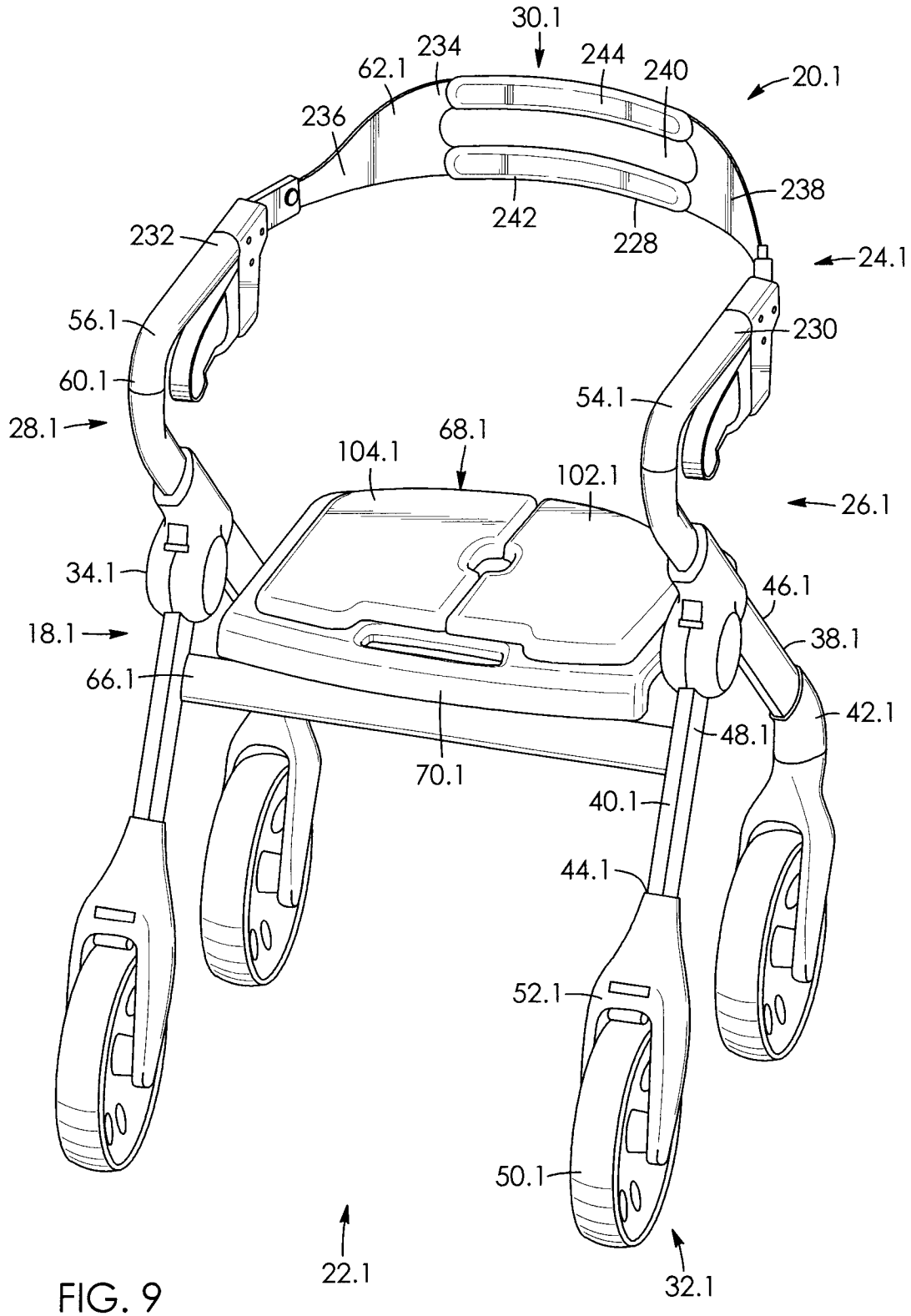

30.1
234
62.1
244
240
20.1
236
238
242
228
232
24.1
56.1
230
60.1
54.1
28.1
68.1
104.1
102.1
26.1
34.1
46.1
18.1
38.1
66.1
42.1
48.1
70.1
40.1
44.1
52.1
50.1
22.1
32.1

FIG. 9

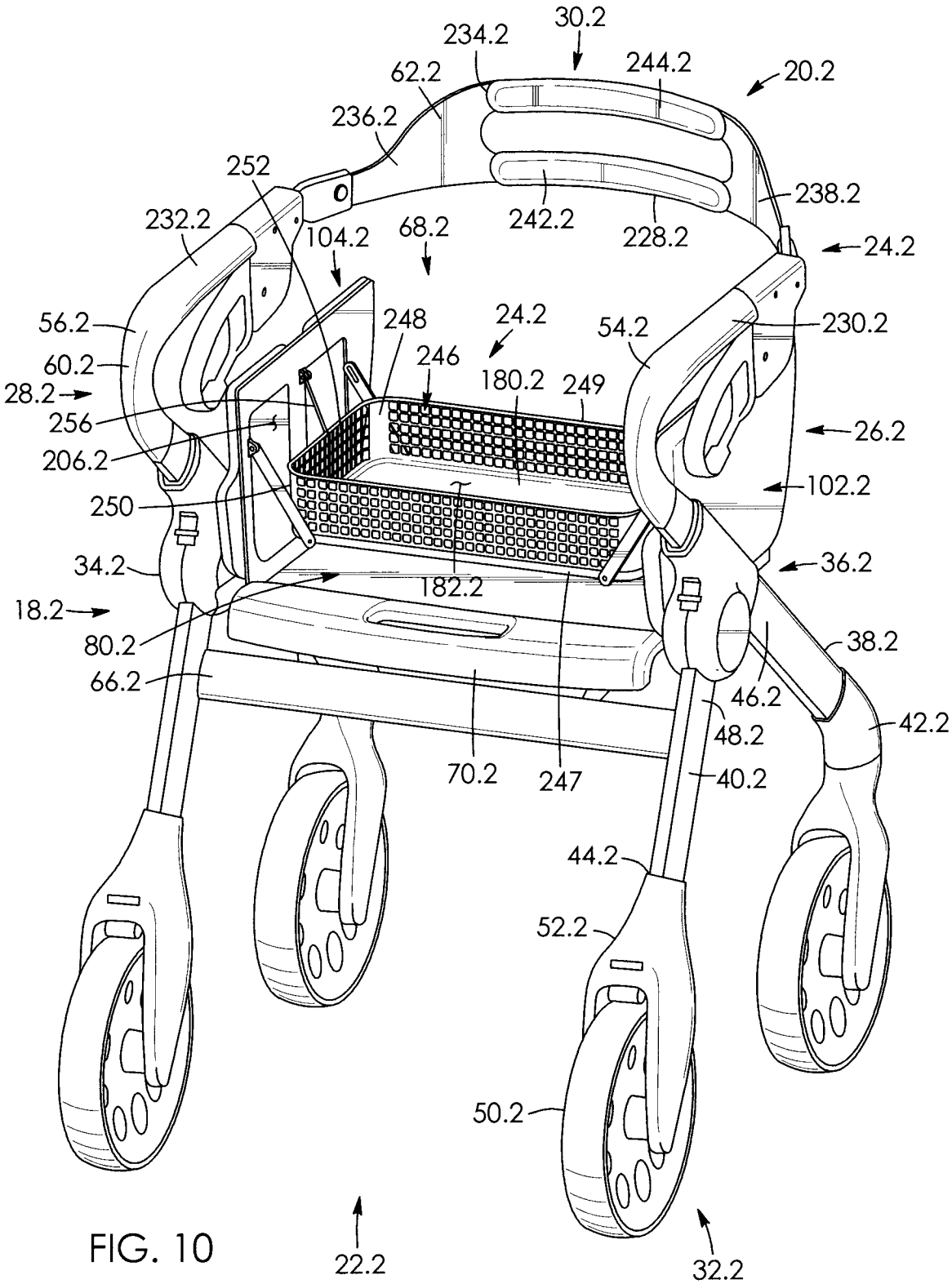

30.2
234.2
62.2
244.2
20.2
236.2
252
238.2
232.2
104.2
68.2
242.2
228.2
24.2
56.2
248
24.2
54.2
230.2
60.2
246
180.2
249
28.2
256
26.2
206.2
102.2
250
34.2
36.2
182.2
18.2
38.2
80.2
66.2
46.2
42.2
48.2
70.2
247
40.2
44.2
52.2
50.2
22.2
32.2

FIG. 10

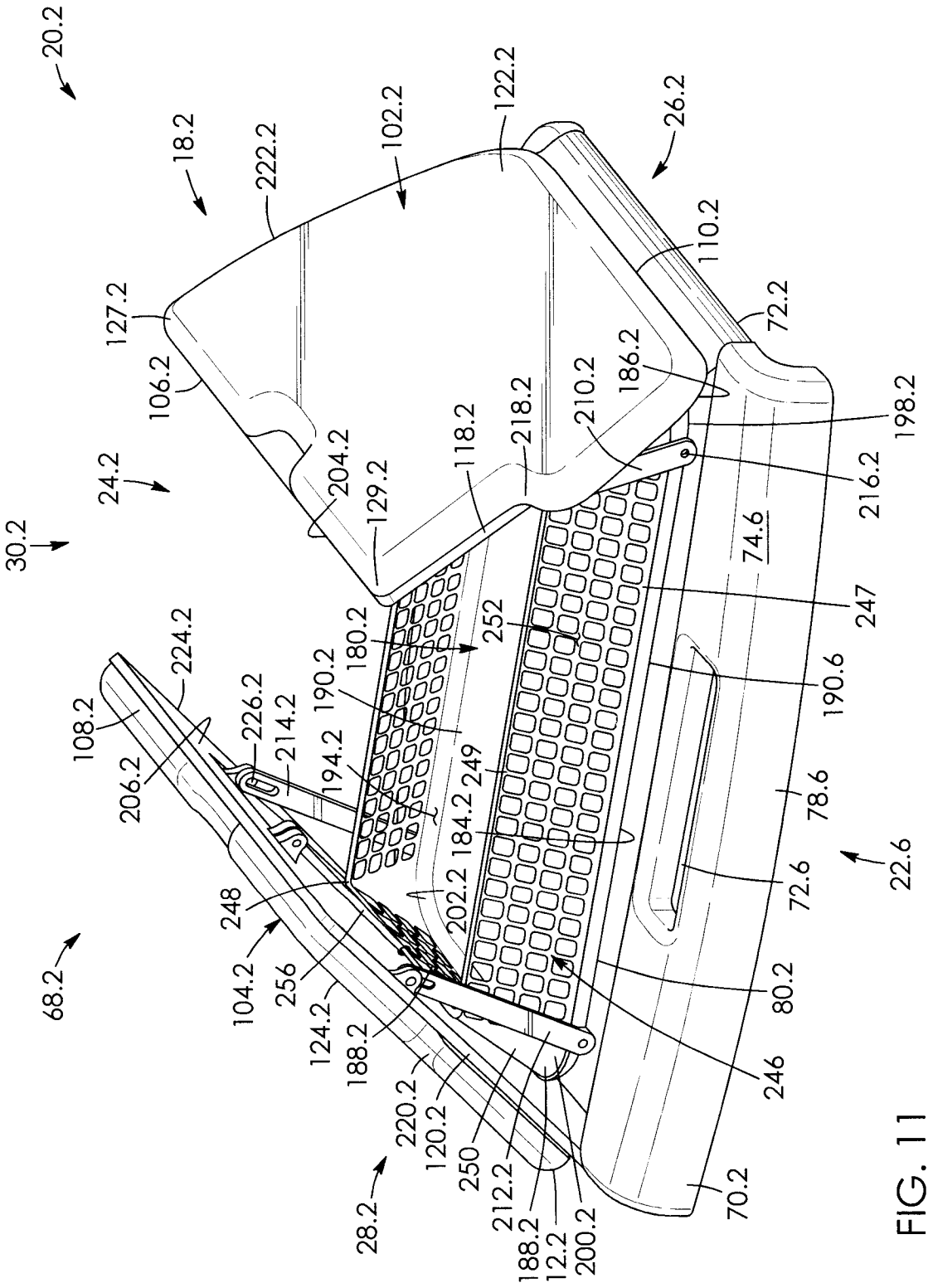

20.2
18.2
222.2
102.2
122.2
26.2
110.2
72.2
127.2
106.2
24.2
30.2
204.2
129.2
118.2
218.2
210.2
186.2
198.2
216.2
74.6
247
252
180.2
190.2
224.2
108.2
226.2
214.2
206.2
194.2
249
184.2
202.2
248
104.2
256
124.2
188.2
68.2
220.2
120.2
250
212.2
188.2
112.2
200.2
28.2
246
80.2
190.6
78.6
72.6
22.6
70.2

FIG. 11

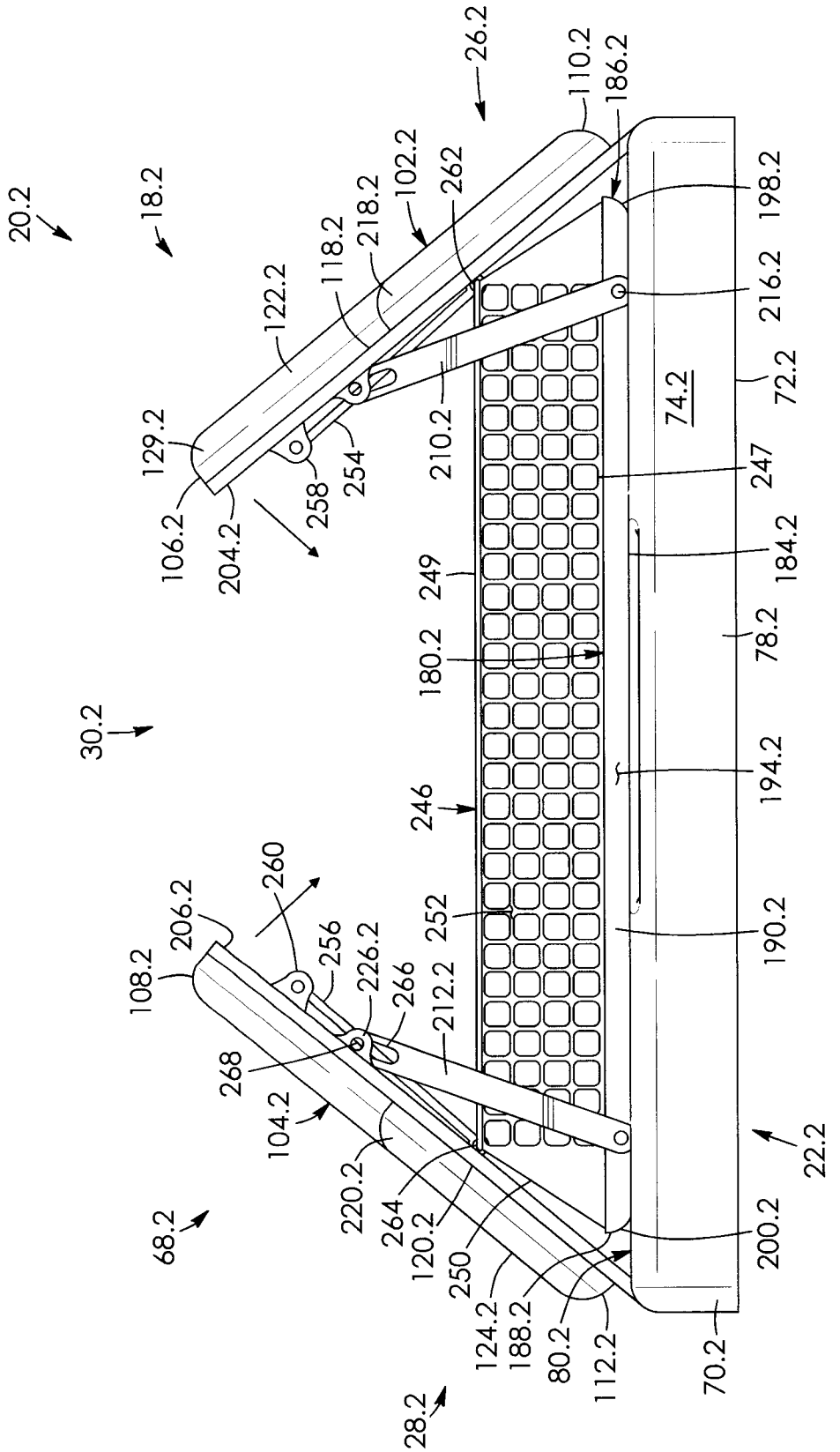

20.2
18.2
26.2
110.2
186.2
102.2
262
218.2
118.2
122.2
198.2
216.2
72.2
74.2
129.2
106.2
204.2
258
254
210.2
247
184.2
249
180.2
78.2
30.2
194.2
246
260
206.2
108.2
256
226.2
252
212.2
266
190.2
268
104.2
220.2
264
120.2
250
124.2
188.2
80.2
112.2
68.2
22.2
200.2
70.2
28.2

FIG. 12

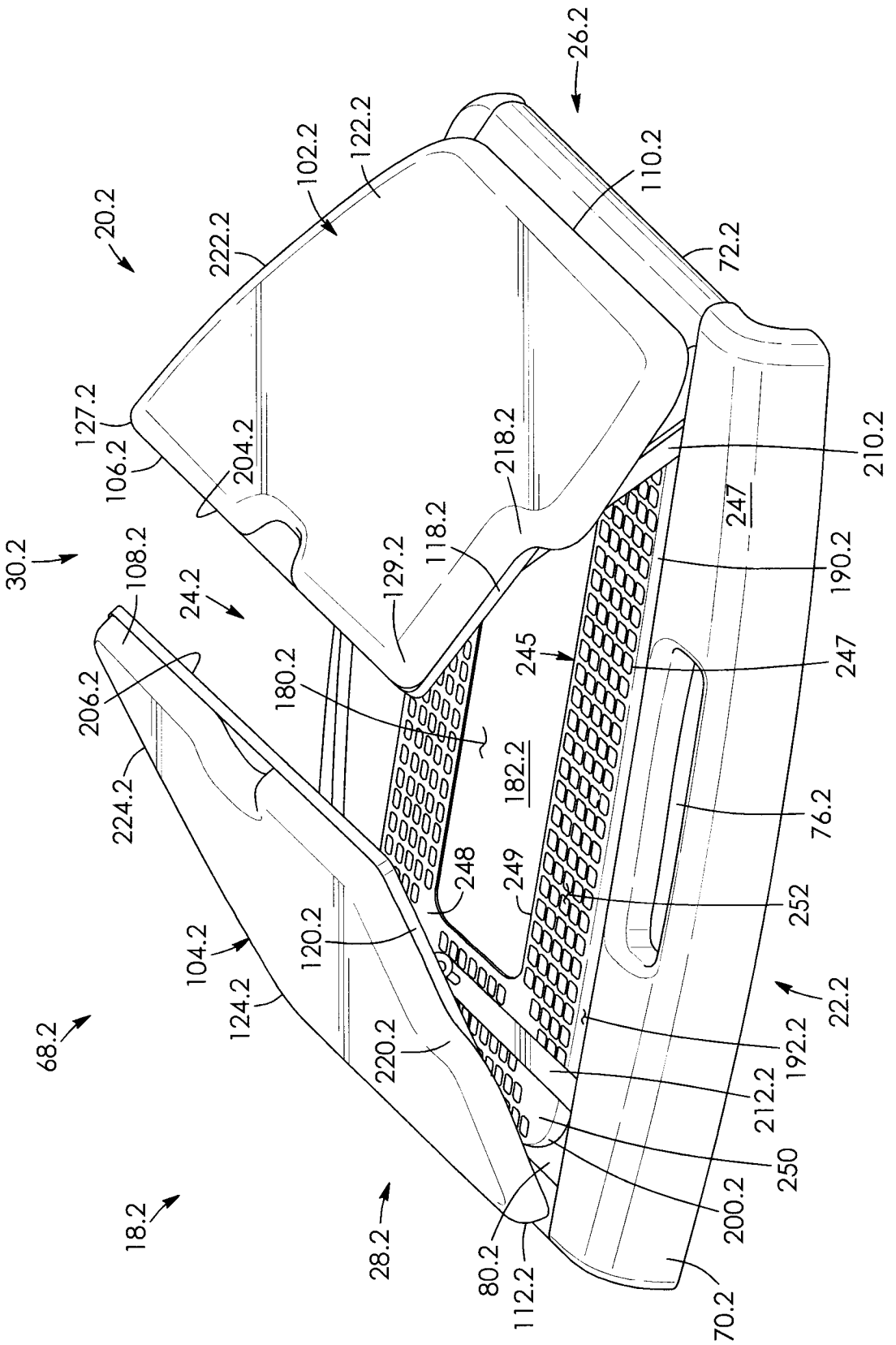

26.2
102.2
122.2
110.2
20.2
222.2
72.2
127.2
106.2
204.2
218.2
210.2
247
30.2
108.2
24.2
129.2
118.2
190.2
245
247
206.2
180.2
182.2
224.2
76.2
248
249
252
104.2
120.2
124.2
68.2
220.2
22.2
192.2
212.2
250
200.2
18.2
28.2
80.2
112.2
70.2

FIG. 13

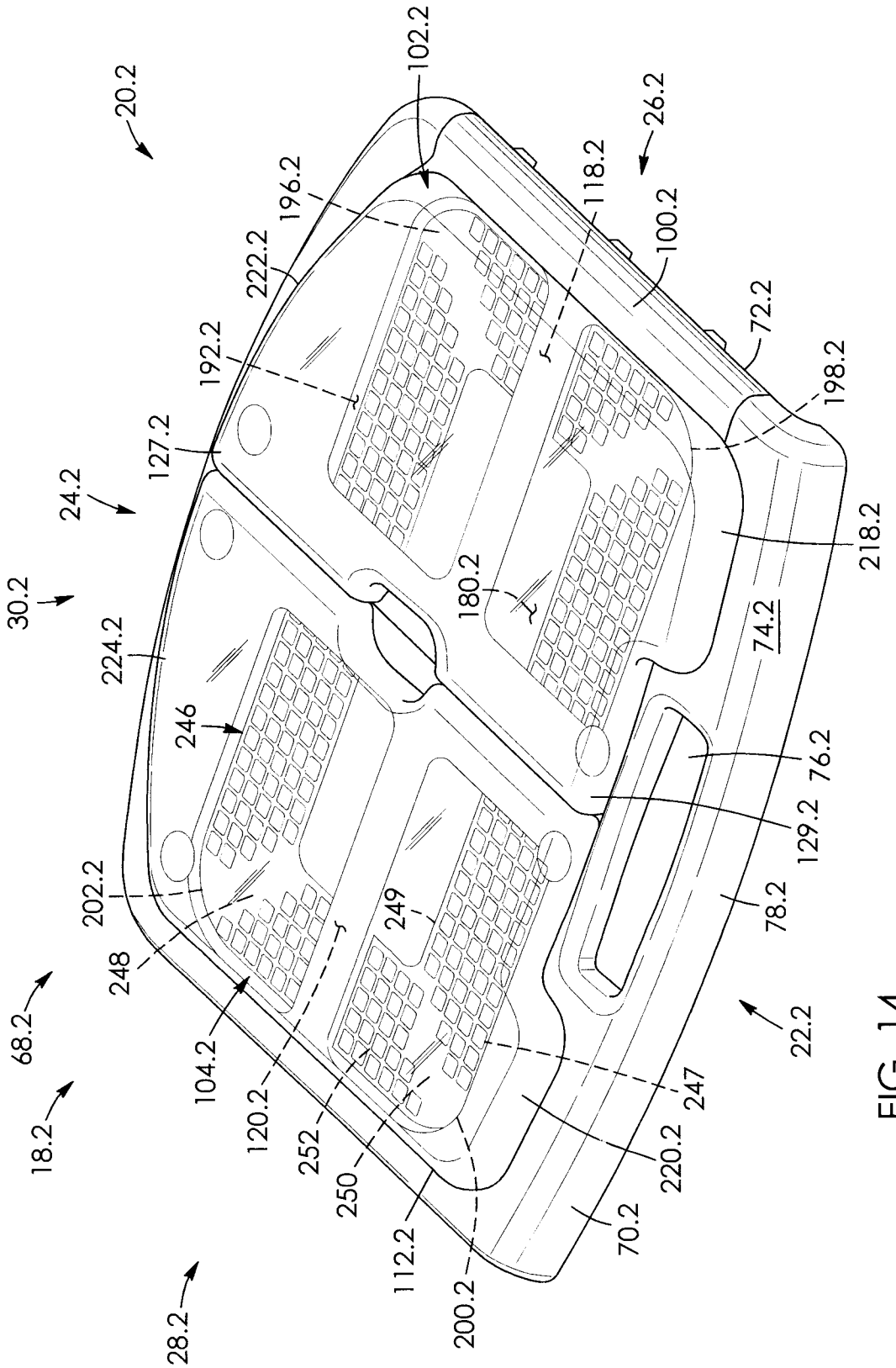

20.2
102.2
26.2
118.2
196.2
100.2
222.2
72.2
192.2
198.2
127.2
24.2
218.2
30.2
180.2
74.2
224.2
246
76.2
129.2
202.2
78.2
249
248
68.2
104.2
22.2
120.2
247
18.2
252
220.2
250
70.2
112.2
200.2
28.2

FIG. 14

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CA2016/050371

A. CLASSIFICATION OF SUBJECT MATTER
IPC: ***A61H 3/04*** (2006.01) , ***A61H 3/00*** (2006.01)

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: A61H 3/04 (2006.01), A61H 3/00 (2006.01), A61H, A47C 7/62(2006.01), A47C 7/02(2006.01), A47C 13/00(2006.01), A47C 4/00(2006.01), Keywords across all IPC; CPC: A47C 7/024, A61H 2003/004

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

Electronic database(s) consulted during the international search (name of database(s) and, where practicable, search terms used)
Questel Orbit (FAMPAT), Canadian Patent Database, Google Patent
Keywords: seat, storage, pivot*, halves, basket, horizontal, vertical, collap*, flip up, rollator, walker
Google keywords: seat, pivot, storage, basket

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN102512310A (ZHANG, H. et al.), 27 June 2012 (27-06-2012) *Fig. 1 and 2*	1 to 36
X	US2008093874A1 (PARTCH, T.), 24 April 2008 (24-04-2008) *Fig. 2 and 3*	1 to 6, 14, 22 and 24
X	DE10021151A1 (NEUMANN, O. et al.), 25 April 2002 (25-04-2002) *Fig. 1a and 1b*	1 to 6, 14, 16, 19 and 21 to 24
X	US2005248169A1 (CLARK, K. et al.), 10 November 2005 (10-11-2005) *Fig. 6, 8 and 9*	1 to 25

☑ Further documents are listed in the continuation of Box C. ☑ See patent family annex.

*	Special categories of cited documents:	"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
"A"	document defining the general state of the art which is not considered to be of particular relevance	"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
"E"	earlier application or patent but published on or after the international filing date	"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
"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)	"&"	document member of the same patent family
"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		

Date of the actual completion of the international search 09 June 2016 (09-06-2016)	Date of mailing of the international search report 09 June 2016 (09-06-2016)
Name and mailing address of the ISA/CA Canadian Intellectual Property Office Place du Portage I, C114 - 1st Floor, Box PCT 50 Victoria Street Gatineau, Quebec K1A 0C9 Facsimile No.: 819-953-2476	Authorized officer Christine Lord (819) 639-7867

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US2014125037A1 (ANDERSON, M.), 08 May 2014 (08-05-2014) *Whole document*	1 to 36
A	US2013061893A1 (NILSSON, T. et al.), 14 March 2013 (14-03-2013) *Whole document*	1 to 36
A	US6247741B1 (SEEL, H. et al.), 19 June 2001 (19-06-2001) *Fig. 1, 15 and 16*	1 to 25
A	US2812227A (HILL, A.), 05 November 1957 (05-11-1957) *Whole document*	1 to 25

Patent Document Cited in Search Report	Publication Date	Patent Family Member(s)	Publication Date
CN102512310A	27 June 2012 (27-06-2012)	None	
US2008093874A1	24 April 2008 (24-04-2008)	US2008093874A1	24 April 2008 (24-04-2008)
		US7628438B2	08 December 2009 (08-12-2009)
		CN101168357A	30 April 2008 (30-04-2008)
		CN101168357B	15 June 2011 (15-06-2011)
DE10021151A1	25 April 2002 (25-04-2002)	None	
US2005248169A1	10 November 2005 (10-11-2005)	US2005248169A1	10 November 2005 (10-11-2005)
		US7104580B2	12 September 2006 (12-09-2006)
		AT367287T	15 August 2007 (15-08-2007)
		AU2003272408A1	30 April 2004 (30-04-2004)
		AU2003272408A8	30 April 2004 (30-04-2004)
		DE60315040D1	30 August 2007 (30-08-2007)
		DE60315040T2	20 March 2008 (20-03-2008)
		EP1536981A2	08 June 2005 (08-06-2005)
		EP1536981B1	18 July 2007 (18-07-2007)
		ES2293014T3	16 March 2008 (16-03-2008)
		JP2005538885A	22 December 2005 (22-12-2005)
		JP4242342B2	25 March 2009 (25-03-2009)
		WO2004024508A2	25 March 2004 (25-03-2004)
		WO2004024508A3	15 July 2004 (15-07-2004)
US2014125037A1	08 May 2014 (08-05-2014)	US2014125037A1	08 May 2014 (08-05-2014)
		US9226868B2	05 January 2016 (05-01-2016)
		AU2013341540A1	28 May 2015 (28-05-2015)
		CA2890870A1	15 May 2014 (15-05-2014)
		CN103800180A	21 May 2014 (21-05-2014)
		CN203677478U	02 July 2014 (02-07-2014)
		EP2916795A1	16 September 2015 (16-09-2015)
		US2016113833A1	28 April 2016 (28-04-2016)
		WO2014074415A1	15 May 2014 (15-05-2014)
US2013061893A1	14 March 2013 (14-03-2013)	US2013061893A1	14 March 2013 (14-03-2013)
		US8746265B2	10 June 2014 (10-06-2014)
		CA2779821A1	23 December 2012 (23-12-2012)
		DK2537503T3	02 February 2015 (02-02-2015)
		EP2537503A1	26 December 2012 (26-12-2012)
		EP2537503B1	05 November 2014 (05-11-2014)
		EP2537503B9	21 January 2015 (21-01-2015)
US6247741B1	19 June 2001 (19-06-2001)	US6247741B1	19 June 2001 (19-06-2001)
		DE19854365A1	08 June 2000 (08-06-2000)
		DE19854365C2	14 December 2000 (14-12-2000)
US2812227A	05 November 1957 (05-11-1957)	None	