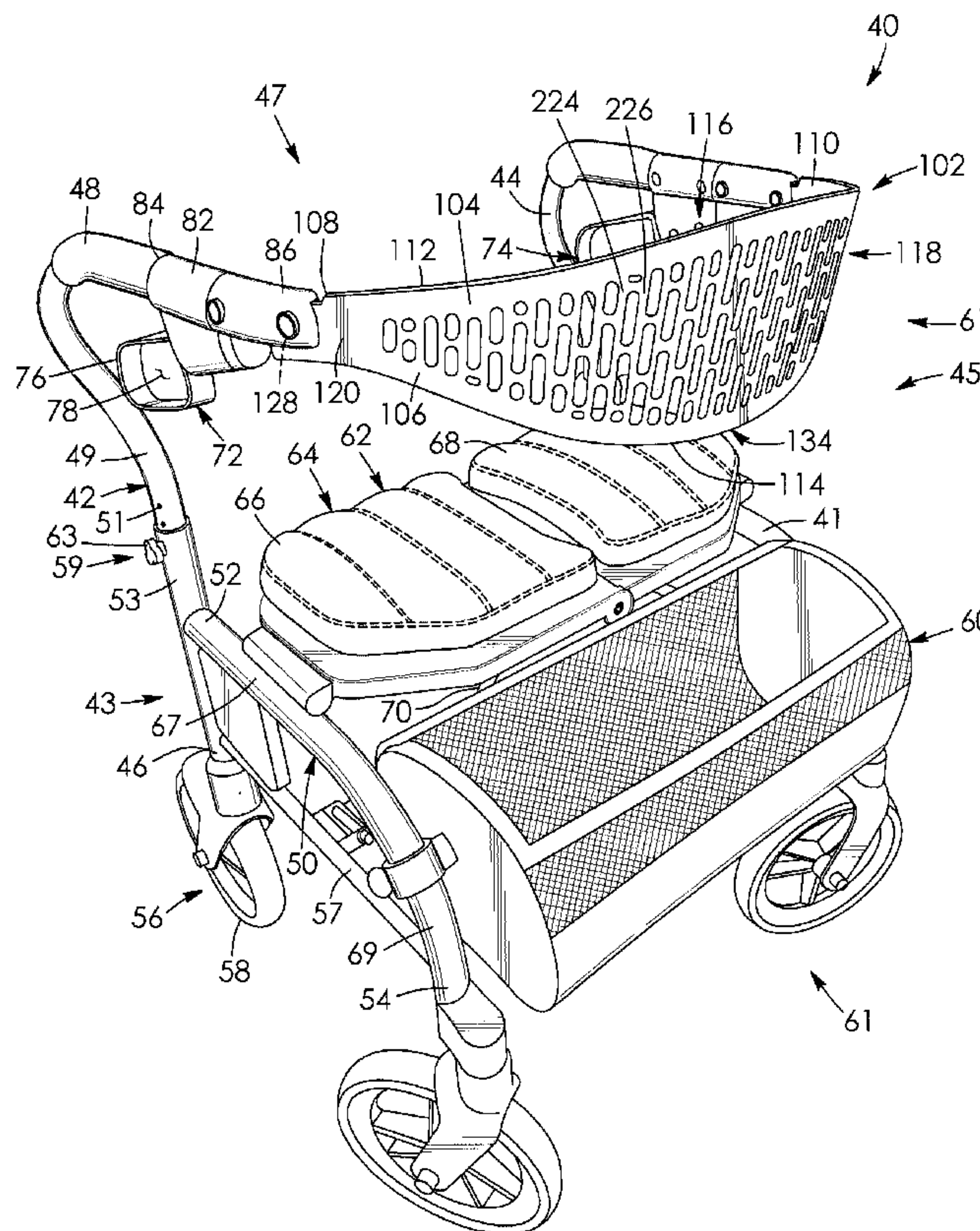




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(54) **Titre : APPAREIL DE DEAMBULATOIRE ET DOSSIER DESTINE AUDIT APPAREIL**  
 (54) **Title: WALKER APPARATUS AND BACKREST THEREFOR**



(57) **Abrégé/Abstract:**

There is provided a backrest for a walker apparatus. The backrest includes an upper bridging member and a lower bridging member. The backrest includes a plurality of horizontally spaced-apart vertical strips coupled to and extending between the bridging members. The backrest also includes a plurality of vertically spaced-apart, staggered horizontal strips coupled to and extending between adjacent vertical strips.

ABSTRACT OF THE DISCLOSURE

There is provided a backrest for a walker apparatus. The backrest includes an upper bridging member and a lower bridging member. The backrest includes a plurality of horizontally spaced-apart vertical strips coupled to and extending between the bridging members. The backrest also includes a plurality of vertically spaced-apart, staggered horizontal strips coupled to and extending between adjacent vertical strips.

Agent's Ref. 3697P36CA

**WALKER APPARATUS AND BACKREST THEREFOR**

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Field of the Invention

[0001] There is provided a walker apparatus. In particular, there is provided a walker apparatus and a backrest therefor.

10 Description of the Related Art

[0002] United States Patent No. 9,339,432 to Liu discloses a laterally-foldable walker apparatus. The walker apparatus includes a pair of spaced-apart, upright frame members. The walker apparatus includes a seat operatively connected to the upright frame members. The walker apparatus includes a backrest cantilevered from the frame members. The backrest includes a pair of spaced-apart upper and lower bridging members. The bridging members connect together at common ends. The bridging members are outwardly divergent relative to one another. An opening extends through the backrest between the bridging members for permitting a user's vision past the backrest when the user grips the upright frame members.

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20BRIEF SUMMARY OF INVENTION

[0003] According to one aspect, there is provided a backrest for a walker apparatus. The backrest is arcuate-shaped and has a plurality of vertically-extending apertures extending therethrough. The apertures are staggered and arranged in a plurality of vertically-extending, spaced-apart columns.

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- [0004] According another aspect, there is provided a backrest for a walker apparatus. The backrest is arcuate-shaped and has a plurality of apertures, including a first vertically-extending column thereof comprising at least a pair of said apertures, a second vertically-extending column thereof comprising at least one said aperture, and a third vertically-extending column thereof comprising at least a pair of said apertures. The second column is between the first column and the third column. The apertures of the first column align with respective ones of the apertures of the third column. The aperture of the second column extends between the pair of said apertures of the first column and extends between the pair of said apertures of the first column.
- 10 [0005] According to a further aspect, there is provided a backrest for a walker apparatus. The backrest includes an upper bridging member and a lower bridging member. The backrest includes a plurality of horizontally spaced-apart vertical strips coupled to and extending between the bridging members. The backrest includes a plurality of vertically spaced-apart, staggered horizontal strips coupled to and extending  
15 between adjacent ones of the vertical strips.

#### BRIEF DESCRIPTION OF DRAWINGS

- [0006] 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:
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Figure 1 is a front, left side, top perspective view of a walker apparatus having a backrest, the walker apparatus being shown in an unfolded position;

- Figure 2 is a fragmentary, bottom, rear perspective view of the walker apparatus of Figure 1, showing the folding mechanism of the walker apparatus;
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Figure 3 is a right side, top, front perspective view of the walker apparatus of Figure 1 shown in a folded position;

Figure 4 is a rear fragmentary perspective view of the walker apparatus of Figure 1 showing the backrest thereof, with upright frame members and a seat assembly of the walker apparatus being shown in fragment;

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Figure 5 is an enlarged, fragmentary elevation view of the backrest of Figure 4 showing a plurality of apertures thereof; and

Figure 6 is a front, left side perspective view of the walker apparatus of Figure 1 with a user gripping the upper ends of the upright frame members of the walker apparatus and looking through the backrest and past the walker apparatus towards the front thereof.

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#### DESCRIPTION OF THE PREFERRED EMBODIMENTS

15 [0007] Referring to the drawings and first to Figure 1, there is shown a mobility aid device, in this example a walker apparatus 40 according to a first aspect. The walker apparatus includes a pair of spaced-apart, upright frame members 42 and 44 positioned at respective spaced-apart sides 43 and 45 of the walker apparatus adjacent the rear 47 of the walker apparatus. Each of the frame members includes a lower end and an upper end spaced-apart from the lower end, as shown by lower end 46 and upper end 48 for frame member 42.

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[0008] Each of the frame members 42 and 44 is telescoping in this example and includes an inner tube 49 through which extends a plurality of apertures 51 and an outer tube 53 shaped to receive the inner tube. The walker apparatus 40 has an adjustment mechanism 59 for selectively adjusting and locking the telescoping tubes together. In this example the adjustment mechanism includes thumb screws 63. The thumb screws may be inserted through selective ones of the apertures 51 to fixedly adjust the height of the telescoping tubes 49 and 53. This enables the height of the walker apparatus 40 to be adjusted to provide an optimized height for the user 65 seen in Figure 6.

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[0009] Referring back to Figure 1, the walker apparatus 40 includes a pair of support members 41 and 50 which are arc-shaped at least in part and j-shaped in this example. The support members include proximal ends connected to respective ones of the frame members and distal ends spaced-apart the proximal ends. This is shown by support member 50 having a proximal end 52 coupled to frame member 42 and a distal end 54 spaced-apart from the proximal end. Each support member includes an elongate portion 67 which extends from the proximal end towards the distal end in a generally horizontal manner. Each support member 50 includes an arc-shaped portion 69 which extends from the distal end 54 thereof to the elongate portion thereof in this example. The proximal ends 52 of the support members connect to the frame members at locations adjacent to and spaced-apart from the lower ends 46 of the frame members in this example. The walker apparatus 40 includes a pair of rods 57 which extend from the lower ends 46 of respective ones of the frame members 42 and connect to respective ones of the support members 50 adjacent to the distal ends 54 of the support members in this example.

[0010] The walker apparatus 40 includes a plurality of wheel assemblies rotatably connected to the lower ends of the frame members 42 and 44 and distal ends 54 of the support members 50. This is shown by wheel assembly 56 rotatably connecting to the end 46 of frame member 42. Each of the wheel assemblies includes a ground-engaging wheel 58. The walker apparatus 40 includes a collapsible basket 60 in this example. As seen in Figure 1, the basket selectively connects to and extends between the support members 41 and 50 adjacent to the distal ends 54 of the support members. The basket 60 is positioned adjacent to the front 61 of the walker apparatus in this example. The walker apparatus 40 further includes a seat assembly 62, in this example comprising a seat 64 having two substantially planar portions 66 and 68 pivotally connected together. Portions 66 and 68 of the seat assembly pivotally connect to the elongate portions 67 of respective ones of the support members 50 and 41. Seat 64 thus operatively connects to the upright frame members 42 and 44.

[0011] As best seen in Figure 2, the walker apparatus 40 includes a folding mechanism 70. The folding mechanism includes in this example an inner frame assembly

73 formed of two inner frame members 75 and 77 which are hingedly connected together via a hinge 83 and which pivotally connect to and extend from respective ones of the rods 57. The folding mechanism 70 in this example includes a pair of intercrossing link members 79 and 81 that pivotally connect to and extend from respective portions 66 and 68 of the seat assembly 62. The link members 79 and 81 also pivotally connect to inner frame members 77 and 75, respectively of the inner frame assembly 73. The folding mechanism 70 thus operatively connects to and is interposed between upright frame members 42 and 44 of the walker apparatus 40.

[0012] The folding mechanism is configured to selectively enable the walker apparatus to fold laterally, with the frame members 42 and 44 and support members 41 and 50 coming together thereby, as shown in Figure 3. The folding mechanism thus enables the walker apparatus 40 to be laterally-foldable about a folding axis 71 seen in Figure 3. The folding axis of the walker apparatus may also be referred to as a folding axis of the backrest. Folding mechanism per se for walker apparatuses, including their various parts and functionings, are well known to those skilled in the art and thus folding mechanism 70 will not be described in further detail.

[0013] Referring back to Figure 1, the walker apparatus 40 includes a pair of handle brake assemblies 72 and 74 that connect to and extend from respective ones of the upper ends 48 of the frame members 42 and 44. Each of the handle brake assemblies 72 and 74 includes a handle 76, actuation of which selectively causes at least one of the wheels 58 to brake. Each handle 76 is generally an elongate loop in shape and encloses an aperture 78 through which a user's hands may partially extend.

[0014] The walker apparatus to this point in the description is described in further detail in United States Patent No. 8,083,239 to Liu, for example. Examples of telescoping tubes, wheel assemblies, folding mechanisms and braking assemblies for walkers per se, including their various parts and functionings, are known to those skilled in the art and thus will not be described in further detail.

[0015] As seen in Figure 1, each of the handle brake assemblies has a housing to which respective ones of the handles 76 pivotally connect, as shown by housing 82 for assembly 72. Each housing has a proximal end 84 which operatively connects to the upper end 48 of its respective frame member 42, and a distal end 86 which is spaced-  
5 apart from its proximal end.

[0016] The walker apparatus 40 includes a backrest 102 extending and, in this example, cantilevered from the frame members 42 and 44. The backrest is flexible in this example and is arcuate-shaped when the walker apparatus is in its unfolded mode seen in Figure 1. The backrest 102, according to one aspect, comprises a pair of spaced-apart,  
10 arcuate-shaped elongate upper and lower portions, in this example in the form of an upper bridging member 104 and a lower bridging member 106. The bridging members connect together at common respective ends, in this example proximal ends 108 and 110 of the backrest 102. The bridging member 104 and 106 extend generally horizontally along the front 61 and sides 43 and 45 of the walker apparatus 40 in this example.

[0017] The backrest 102 has a top 112 on the upper bridging member 104 and a bottom 114 on lower bridging member 106. The top and bottom of the backrest 102 are generally arcuate-shaped in this example. The backrest 102 includes a concave interior 116 and a convex exterior 118. The interior and exterior of the backrest extend from the top 112 to the bottom 114 of the backrest. The backrest 102 includes a pair of apertures  
15 adjacent to respective ones of the proximal ends 108 and 110 of the backrest. This is seen in Figure 1 by aperture 128 adjacent to proximal end 108 of the backrest. The ends 108 and 110 of the backrest 102 couple to the distal ends 86 of the housings 82 of the handle brake assemblies 72 via connectors, in this example screws 130 which extend through apertures 128 in this example.  
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[0018] The upper bridging member 104 extends from the upper ends 48 of the frame members 42 and 44 in an upwardly curved manner, in this case in an upwardly-convex manner, from respective ones of the frame members. Lower bridging member 106 extends in this example in a downwardly curved manner, and in this case, a downwardly-  
25

convex manner. The bridging members 104 and 106 thus extend from the frame members 42 and 44 in outwardly divergent directions relative to each other.

**[0019]** The backrest 102 has a central region 134 positioned between the frame members 42 and 44 of the walker apparatus 40. The central region of the backrest is located between the ends 108 and 110 of the backrest. The bridging members 104 and 106 are further apart as they extend further outwards from proximal ends 108 and 110 of the backrest 102 and towards the central region 134 of the backrest. The bridging members therefore diverge from each other from ends 108 and 110 of the backrest towards the central region of the backrest. As seen in Figure 3, the bridging members are further spaced-apart relative to each other in a region 135 that aligns with the folding axis 71 of the walker apparatus 40. The folding axis of the walker apparatus may also be referred to as a folding axis of the backrest.

**[0020]** Referring to Figure 4, the backrest 102 includes a plurality of vertically-extending, spaced-apart elongate members, in this example vertical strips, as shown by adjacent strips 224, 225 and 226. The strips connect to and extend between the bridging members 104 and 106, with each strip having an upper end connected to the upper bridging member and a lower end connecting to the lower bridging member. This is seen in Figure 4 by upper end 229 of strip 224 coupled to upper bridging member 104 and lower end 231 of strip 224 coupling to lower bridging member 106. The strips 224, 225 and 226 are rectangular prisms in shape in this example. The longest vertical strips are adjacent to the central region 134 of the backrest 102 in this example. The vertical strips are shortest adjacent to the ends 108 and 110 of the backrest in this example, as seen by strip 227 adjacent to end 108 of the backrest which is shorter than strips 224, 225 and 226.

**[0021]** The backrest 102 includes a plurality of vertically-spaced-apart, staggered, horizontally-extending elongate members, in this example horizontal strips aligned in vertical columns with of adjacent columns thereof being vertically offset from each other. This is shown in Figure 5 by a first column of horizontal strips 253, 255 and 257, a

second column of horizontal strips 259 and 261, and a third column of horizontal strips 263, 265 and 267. The horizontal strips couple to and extend between adjacent ones of the vertical strips, as seen by horizontal strips 259 and 261 coupling to and extending between vertical strips 225 and 226. Each horizontal strip has a first end connected to a first vertical strip and a second end connected to a second vertical strip which is adjacent to the first vertical strip. This is seen in Figure 5 by first end 269 of horizontal strip 261 coupled to vertical strip 225 and second end 271 of horizontal strip 261 coupling to vertical strip 226.

**[0022]** The backrest 102 has a plurality of vertically-elongated, staggered apertures extending therethrough and arranged in a plurality of vertically-extending, spaced-apart columns, with each column having a series of said apertures. This is shown in Figure 5 by adjacent columns 228 and 230, with column 228 having apertures 232, 234, 236 and 238, and column 230 having apertures 240, 242, and 244.

**[0023]** As seen in Figure 4, the apertures are, for the most part, obround in shape in this example and are positioned between the bridging members 104 and 106. Referring to Figure 5, the vertically-elongated apertures are between adjacent ones of the vertical strips, as seen by column 228 of apertures 232, 234, 236 and 238 adjacent to vertical strips 224 and 225. The horizontal strips are interposed between respective apertures, as seen by aperture 234 is interposed between horizontal strips 253 and 255 and aperture 236 is interposed between horizontal strips 255 and 257.

**[0024]** The apertures of column 228 have respective center points 246 which are axially offset from the center points 248 of the respective adjacent apertures of column 230 in this example. Even numbered columns of the apertures align with each other and odd-numbered columns of the apertures align with each other. As seen in Figure 4, the apertures further align in diagonally-extending rows 250 and 252 in this example.

**[0025]** Referring back to Figure 5, the center point 246 of each aperture 234 aligns vertically with the center points of respective apertures of a first set of apertures in this

example column 228, aligns diagonally with the center points of respective apertures of a second set of apertures, namely, diagonal row 250 seen in Figure 4 and aligns diagonally with the center points of respective aperture of a third set of apertures, namely, diagonal row 252. Referring to Figure 5, every second aperture aligns in a horizontally-extending row as well in this example, as seen by apertures 254, 236 and 256 in horizontally-extending row 258.

**[0026]** Referring to Figure 6, the apertures 234 of the backrest 102 permit a user 65 to see past the backrest when the user grips the upright frame members 42 and 44. This is seen by line of vision 137 extending from the eyes 139 of the user, through the apertures of the backrest and to a region 141 of the ground 143 therebelow in front of the walker apparatus 40.

**[0027]** It will be appreciated that many variations are possible within the scope of the invention described herein. It will be further 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 walker apparatus comprising:

a pair of spaced-apart upright members; and

a backrest cantilevered to the upright members, the backrest being arcuate-shaped, including an upper bridge member extending from upper ends of the upright members in an upwardly curved manner, including a lower bridge member extending from the upper ends of the upright members in a downwardly curved manner, including a plurality of horizontally spaced-apart vertical strips coupled to and extending between the bridge members, and including a plurality of vertically spaced-apart, staggered horizontal strips coupling to and extending between adjacent said vertical strips.

2. The walker apparatus as claimed in claim 1, wherein the backrest has a series of apertures extending therethrough, the apertures aligning in diagonally-extending rows.

3. The walker apparatus as claimed in any one of claims 1 to 2, wherein the backrest has a central region and wherein the vertical strips vary in length and are longest adjacent to said central region.

4. The walker apparatus as claimed in claim 3, wherein the backrest has a pair of spaced-apart ends, said central region being between said ends of the backrest, and wherein the vertical strips are shortest adjacent to said ends of the backrest.
5. The walker apparatus as claimed in any one of claims 1 to 2, the backrest having a pair of spaced-apart ends and a central region between said ends of the backrest, and wherein the bridging members diverge from each other from said ends of the backrest towards said central region.
6. The walker apparatus as claimed in any one of claims 1 to 5, wherein the vertical strips are generally rectangular prisms in shape.
7. The walker apparatus as claimed in any one of claims 1 to 6, wherein the horizontal strips align in vertical columns with adjacent said columns thereof being vertically offset from each other.
8. The walker apparatus as claimed in claim 1, wherein the backrest has a plurality of apertures, including a first vertically-extending column of said apertures comprising at least a pair of said apertures, a second vertically-extending column of said apertures comprising at least one said aperture, and a third vertically-extending column of said apertures comprising at least a pair of said apertures, the second column being between the first column and the third column, the apertures of the first column aligning with the apertures of the third column, and the

aperture of the second column extending between the pair of said apertures of the first column and extending between the pair of said apertures of the first column.

9. The walker apparatus claimed in claim 1, wherein the backrest has a plurality of apertures extending therethrough, the apertures being arranged in a plurality of vertically-extending, spaced-apart columns, with each column having a series of said apertures.
10. The walker apparatus as claimed in claim 9, wherein the backrest couples to the upright members via a pair of spaced-apart ends of the backrest, and wherein the backrest further has horizontally spaced-apart arrangements of one to two said apertures extending therethrough near the ends of the backrest.
11. The walker apparatus as claimed in any one of claims 9 to 10, wherein the backrest has a pair of spaced-apart ends and a central region between said ends of the backrest, and wherein the backrest has a greater number of said apertures in the columns thereof located in said central region of the backrest compared to the number of said apertures in the columns thereof located adjacent to the ends of the backrest.
12. The walker apparatus as claimed in any one of claims 9 to 10, wherein the backrest has a central region, wherein each of the columns of said apertures

located in said central region of the backrest comprises three or more said apertures.

13. The walker apparatus claimed in claim 1, wherein the backrest couples to the upright members via a pair of spaced-apart ends of the backrest, and wherein the backrest near the ends thereof has an arrangement of horizontally spaced-apart groups of one to two apertures extending therethrough.
14. The walker apparatus claimed in claim 1, wherein the backrest has a central region, and wherein the backrest in said central region has an arrangement of horizontally spaced-apart, vertically-extending columns of four or fewer apertures extending therethrough.
15. The walker apparatus as claimed in claim 13, wherein the backrest has a central region, and wherein the backrest in said central region has an arrangement of horizontally spaced-apart, vertically-extending columns of three or more apertures extending therethrough.
16. The walker apparatus as claimed in any one of claims 9 to 15, wherein the apertures are obround in profile.
17. The walker apparatus as claimed in any one of claims 9 to 16, wherein the walker apparatus and the apertures of the backrest are arranged to permit a user to see past the backrest when the user grips the upright members.

18. The walker apparatus as claimed in claim 17, wherein the walker apparatus and the apertures of the backrest are arranged to enable a line of vision to extend from eyes of the user, through the apertures of the backrest and to a region of the ground therebelow in front of the walker apparatus.
19. The walker apparatus as claimed in any one of claims 1 to 18 wherein the upper bridging member is upwardly-convex and wherein the lower bridging member is downwardly-convex.
20. The walker apparatus as claimed in any one of claims 1 to 19, wherein the backrest is made of a flexible material and has a uniform thickness.
21. The walker apparatus as claimed in any one of claims 1 to 20, wherein the upper bridge member, the lower bridge member, the vertical strips and the horizontal strips are integrally connected and form a unitary whole.
22. The walker apparatus as claimed in any one of claims 1 to 21 further including a folding mechanism, the folding mechanism enabling the upright members to be brought together, with the backrest folding thereby.



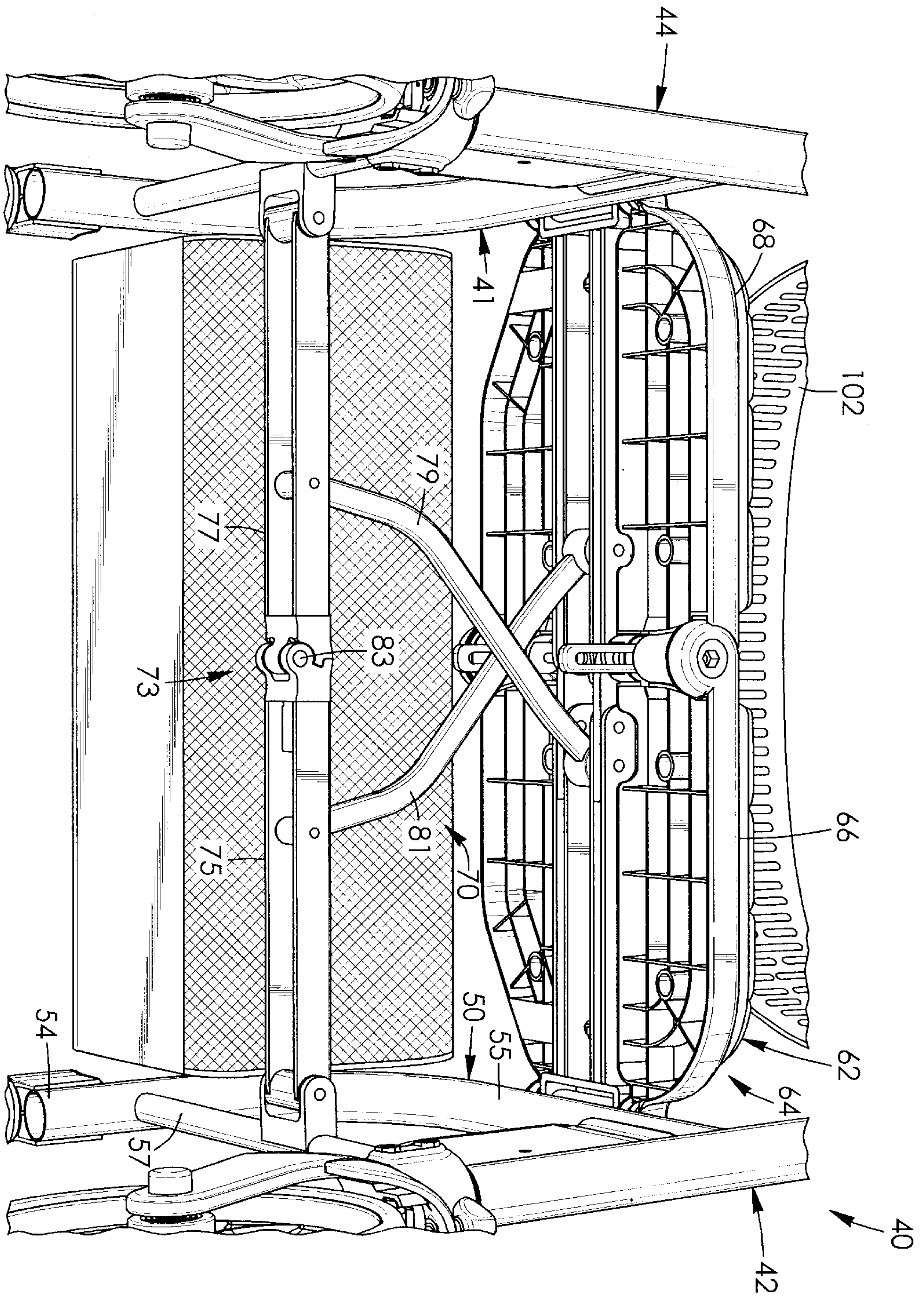


FIG. 2

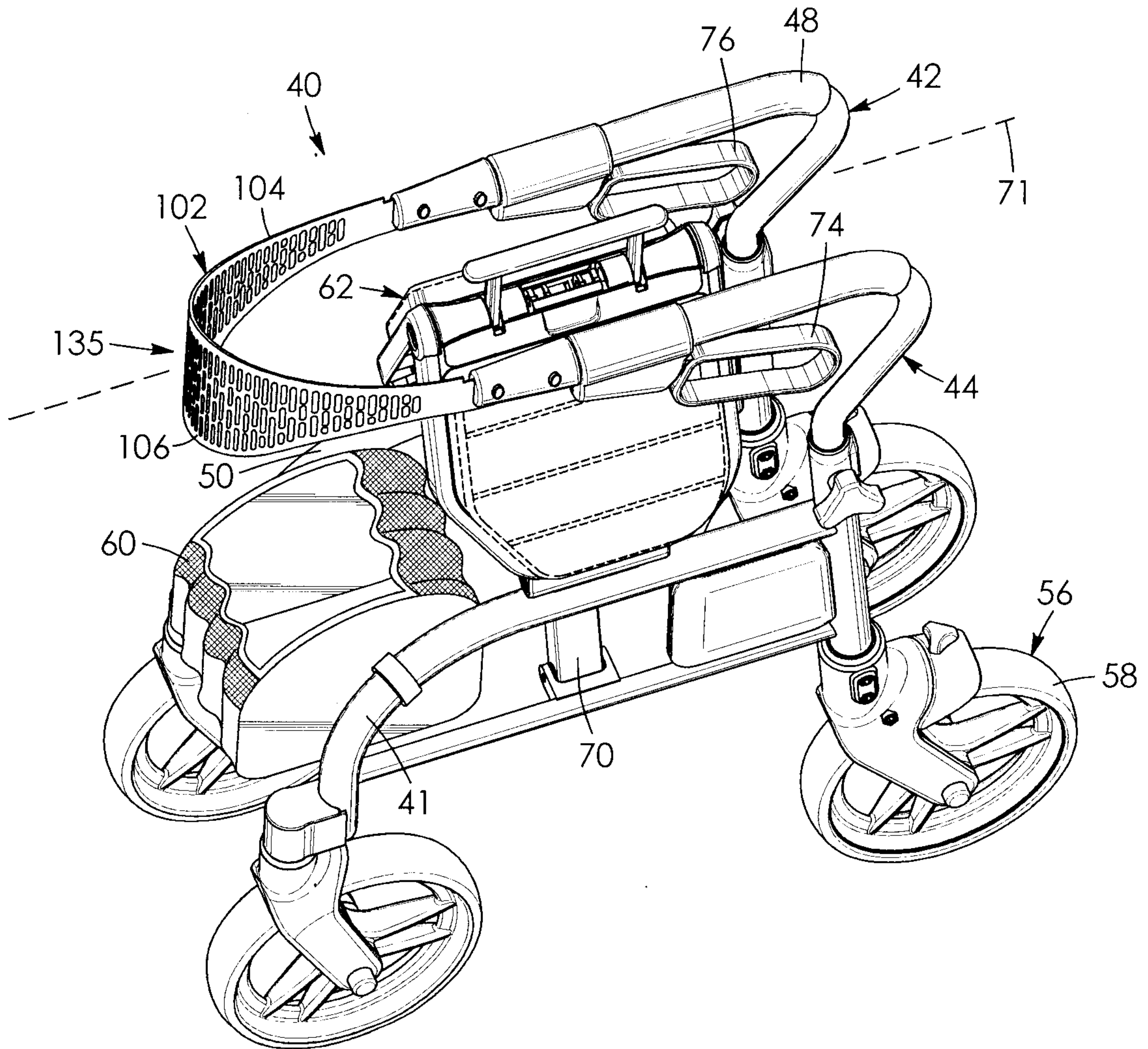


FIG. 3

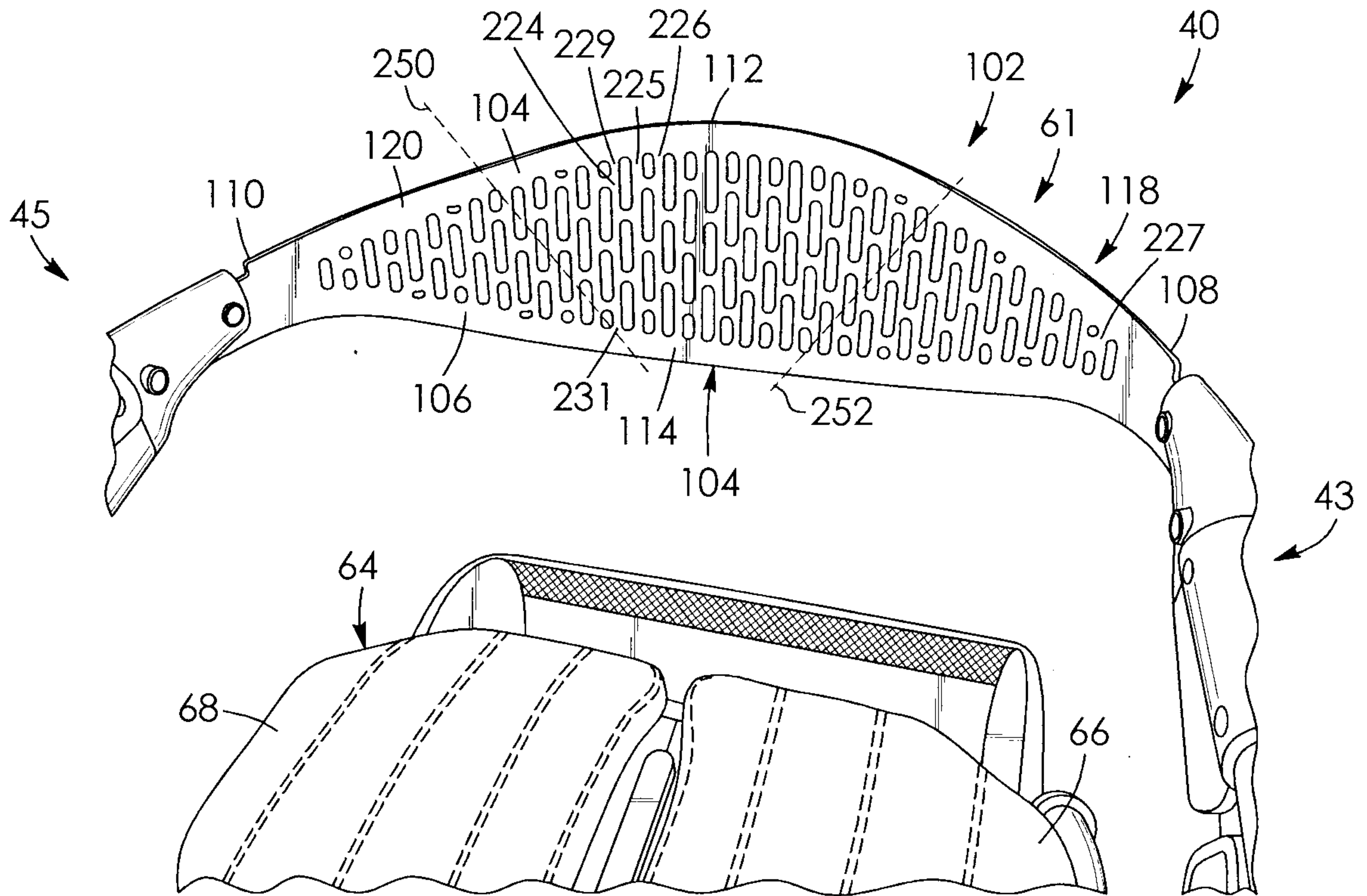


FIG. 4

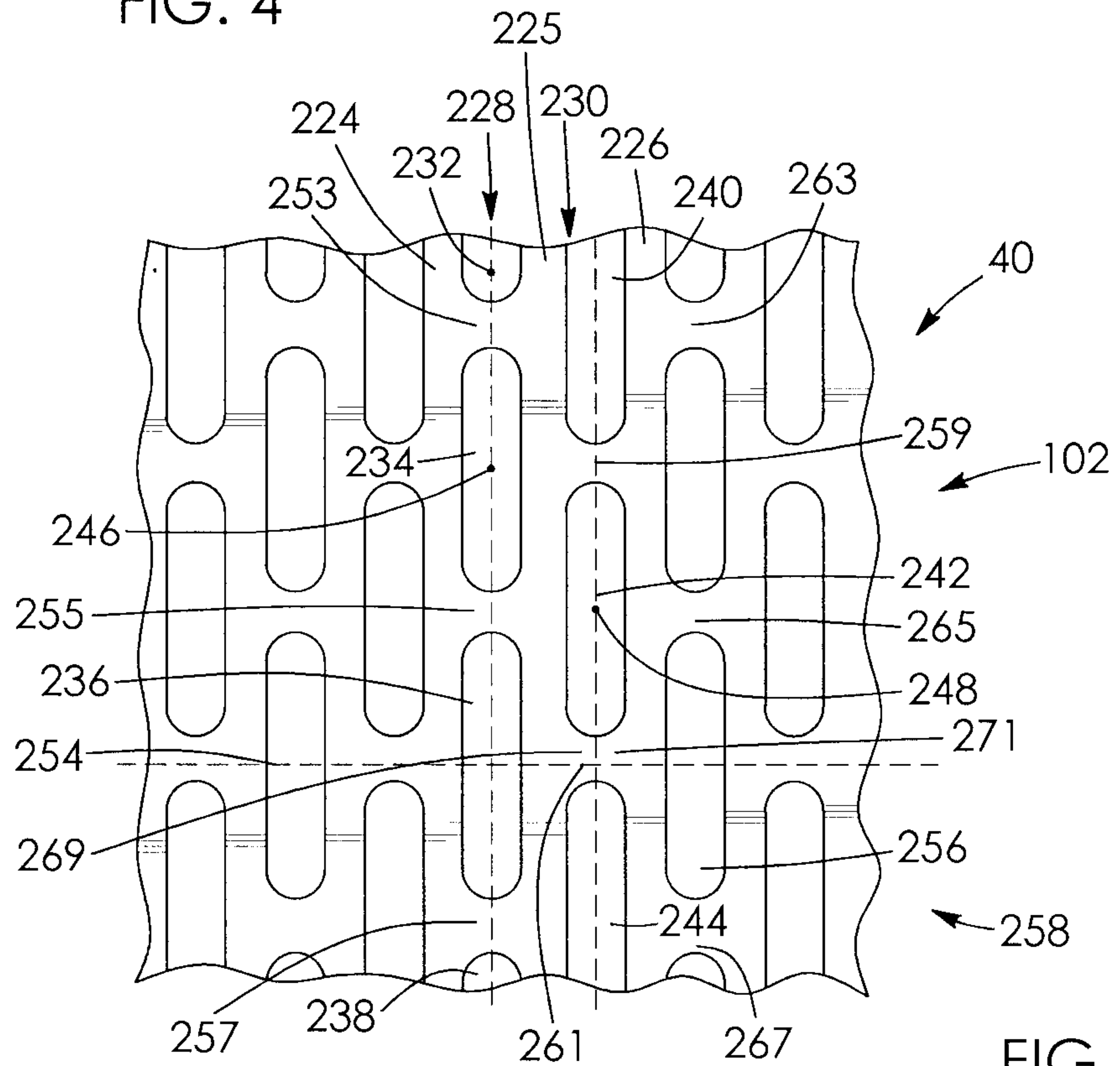


FIG. 5

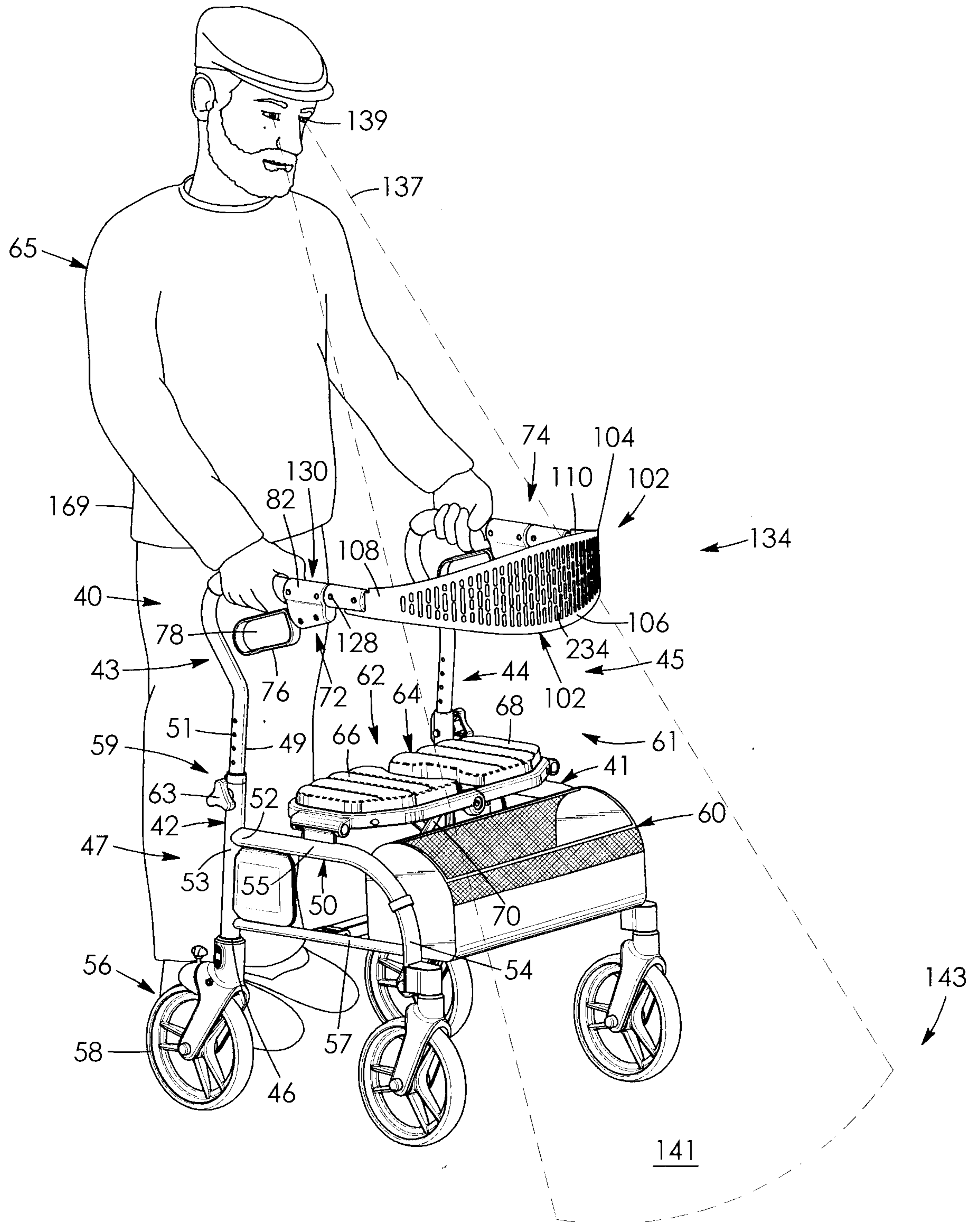


FIG. 6

