



US011751689B2

(12) **United States Patent**
Pesek et al.

(10) **Patent No.:** **US 11,751,689 B2**
(45) **Date of Patent:** **Sep. 12, 2023**

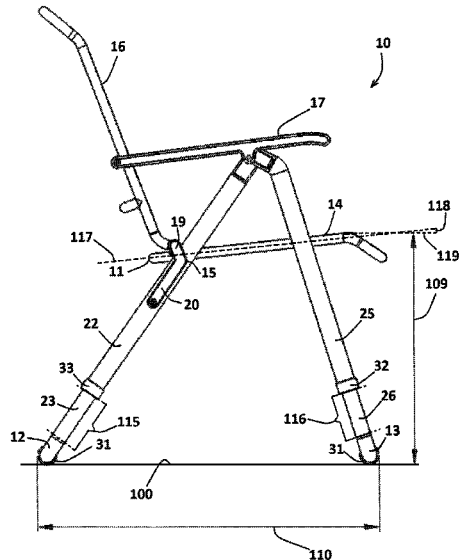
- (54) **HEIGHT ADJUSTABLE CHAIR**
- (71) Applicant: **Peak Degrees, LLC**, Trophy Club, TX (US)
- (72) Inventors: **Christopher Pesek**, Trophy Club, TX (US); **William Xiques**, Beachwood, NJ (US); **Tao Xu**, Stateline, NV (US)
- (73) Assignee: **Peak Degrees Holdings LLC**, Trophy Club, TX (US)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 7 days.
- (21) Appl. No.: **17/486,157**
- (22) Filed: **Sep. 27, 2021**
- (65) **Prior Publication Data**
US 2022/0007837 A1 Jan. 13, 2022

- (56) **References Cited**
U.S. PATENT DOCUMENTS
- 3,025,101 A * 3/1962 McKinnie A47C 13/00
182/125
- 4,557,350 A * 12/1985 Wang A47C 12/02
297/118
- 6,062,639 A * 5/2000 Hill A47C 4/20
297/39
- 6,095,607 A * 8/2000 Wenzel A47C 3/34
297/118
- 7,086,694 B1 * 8/2006 Huang A47C 4/28
297/39
- 9,877,587 B2 * 1/2018 Grace A47C 4/12
- 2004/0099479 A1 * 5/2004 Sagol E06C 1/393
182/165
- 2007/0144831 A1 * 6/2007 Cole A47C 12/02
182/33
- 2018/0338622 A1 * 11/2018 Doolan A47C 4/10
- * cited by examiner
- Primary Examiner* — David R Dunn
Assistant Examiner — Tania Abraham
(74) *Attorney, Agent, or Firm* — Christopher J. Scott

- (63) **Related U.S. Application Data**
- (63) Continuation-in-part of application No. 16/229,194, filed on Dec. 21, 2018, now Pat. No. 11,129,477.
- (60) Provisional application No. 63/120,760, filed on Dec. 3, 2020.
- (51) **Int. Cl.**
A47C 4/12 (2006.01)
A47C 4/04 (2006.01)
- (52) **U.S. Cl.**
CPC . *A47C 4/12* (2013.01); *A47C 4/04* (2013.01)
- (58) **Field of Classification Search**
CPC A47C 4/12
USPC 297/39–40
See application file for complete search history.

(57) **ABSTRACT**
A height adjustable chair includes a user support platform assembly, and posterior and anterior leg assemblies. The user support platform assembly includes first, second, and third platform portions, and a pair of pivot mechanisms. The posterior and anterior leg assemblies include laterally opposed upper leg portions, laterally opposed lower leg portions, and locking mechanisms for locking the lower leg portions in extended relation relative to the upper leg portions. The pivot mechanisms pivotally attach to first platform portion and the posterior leg assembly. The anterior leg assembly is pivotally attached to the posterior leg assembly, the first platform portion, and the third platform portions. The first support platform supports a user thereupon. The anterior and posterior leg assemblies enable the user to vary the height of the first support platform relative to a support surface.

20 Claims, 18 Drawing Sheets



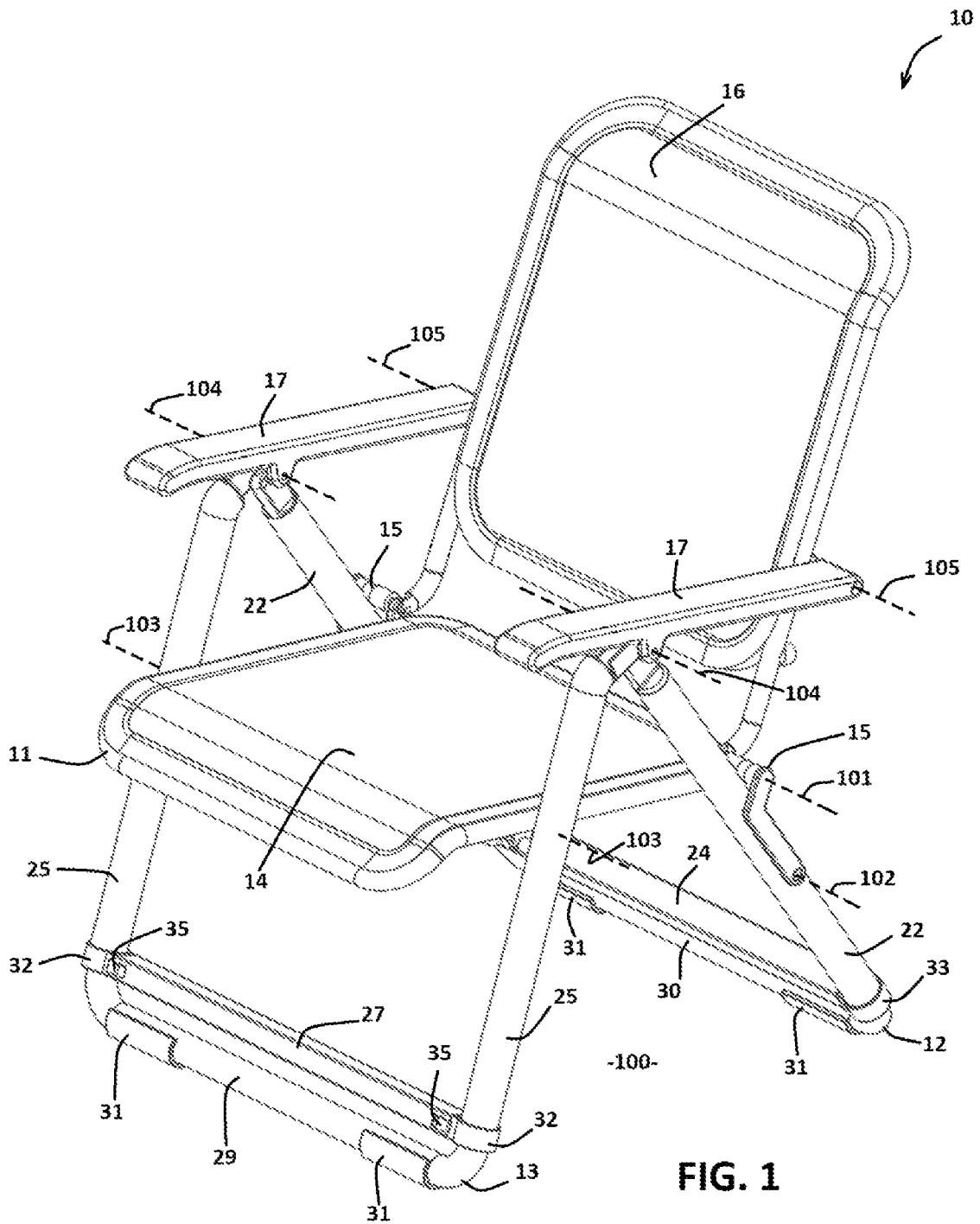


FIG. 1

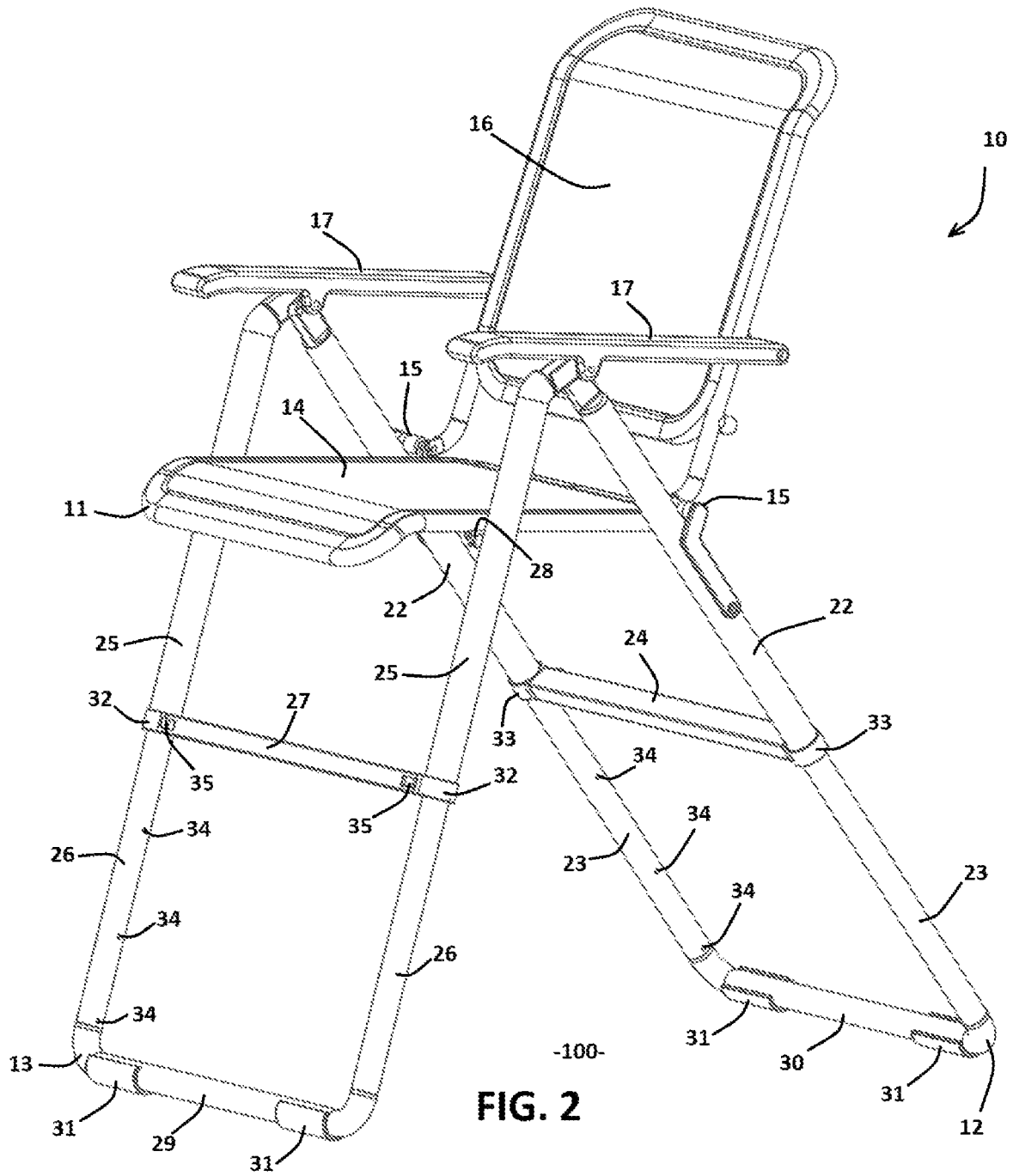


FIG. 2

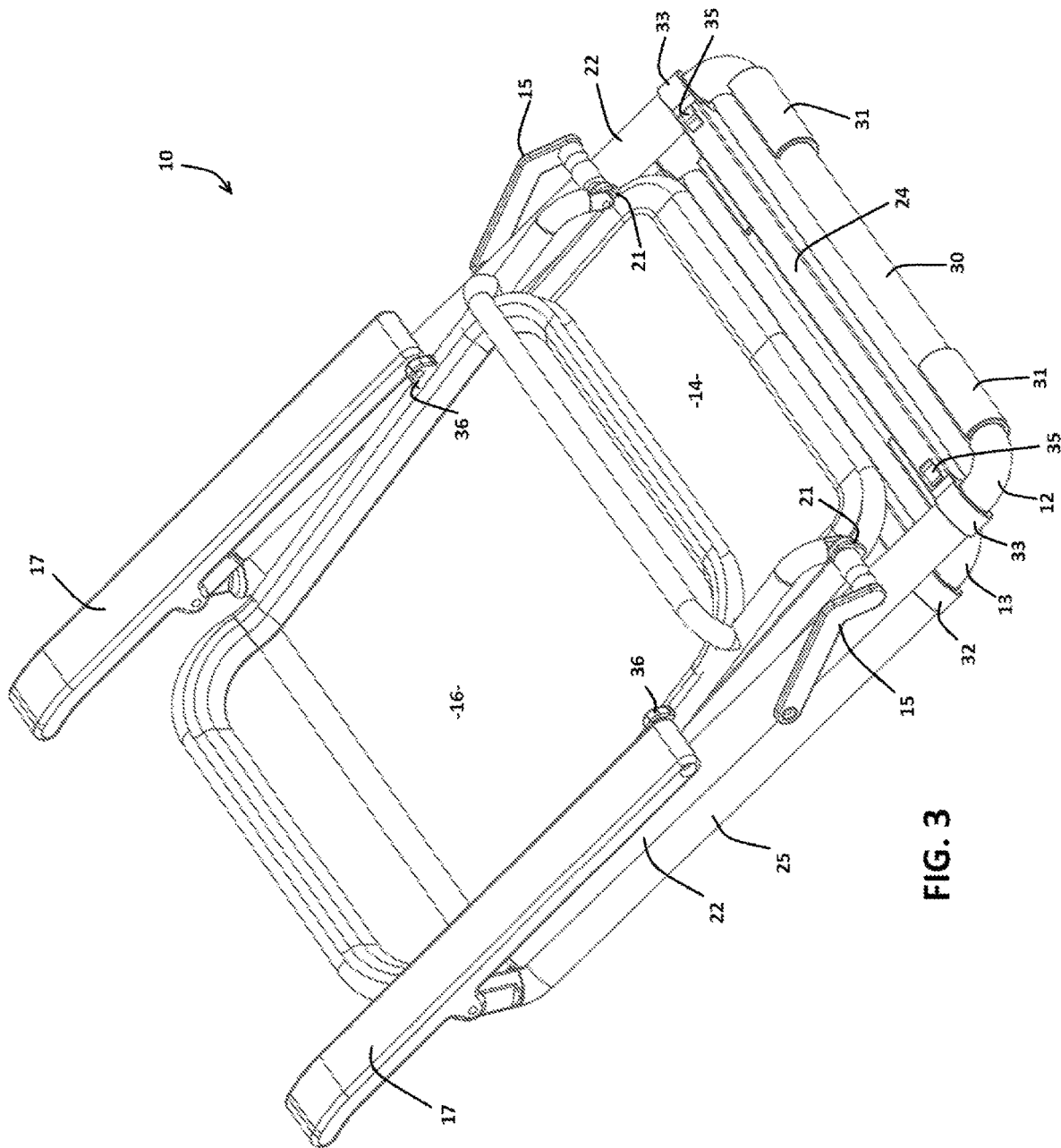


FIG. 3

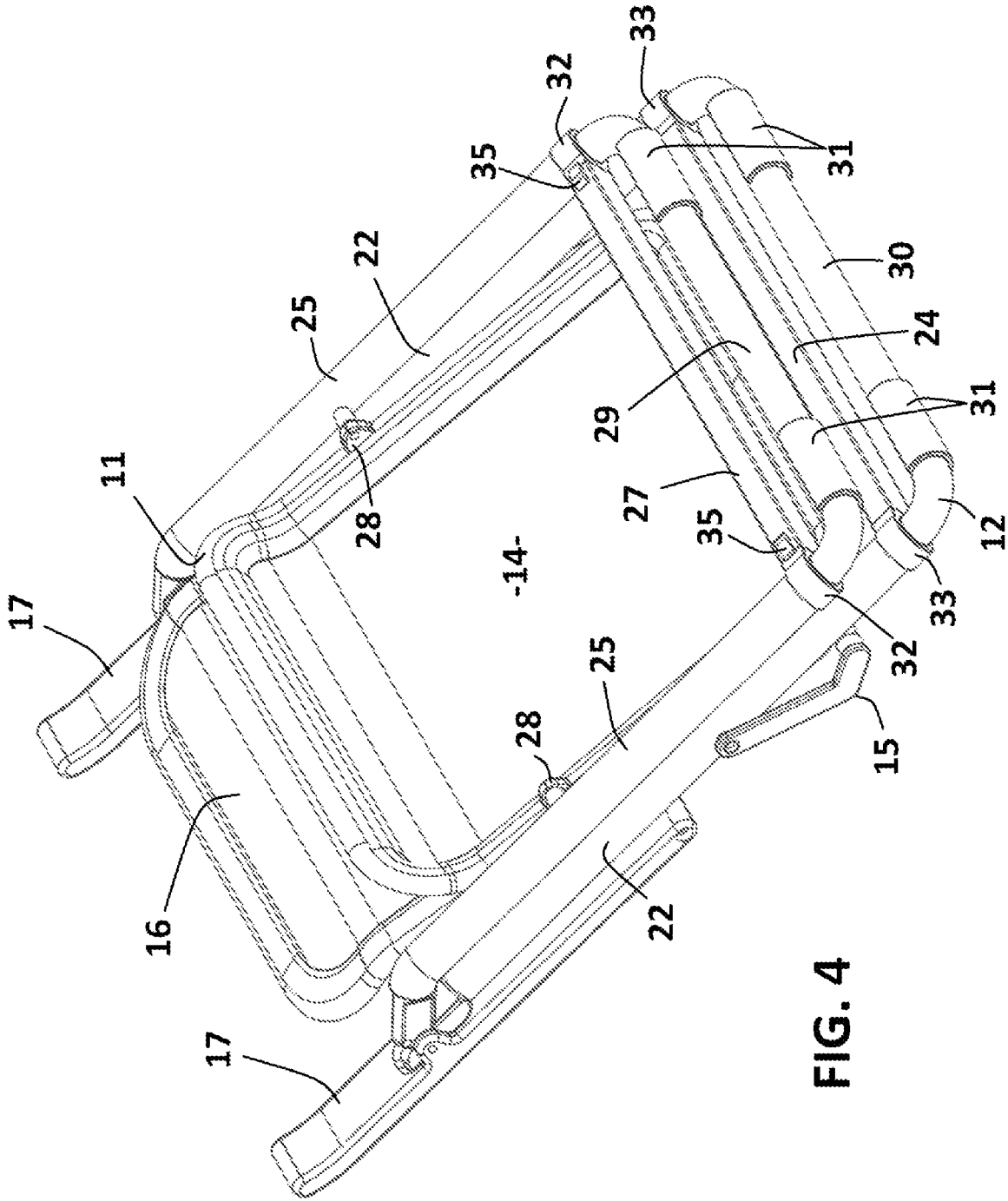


FIG. 4

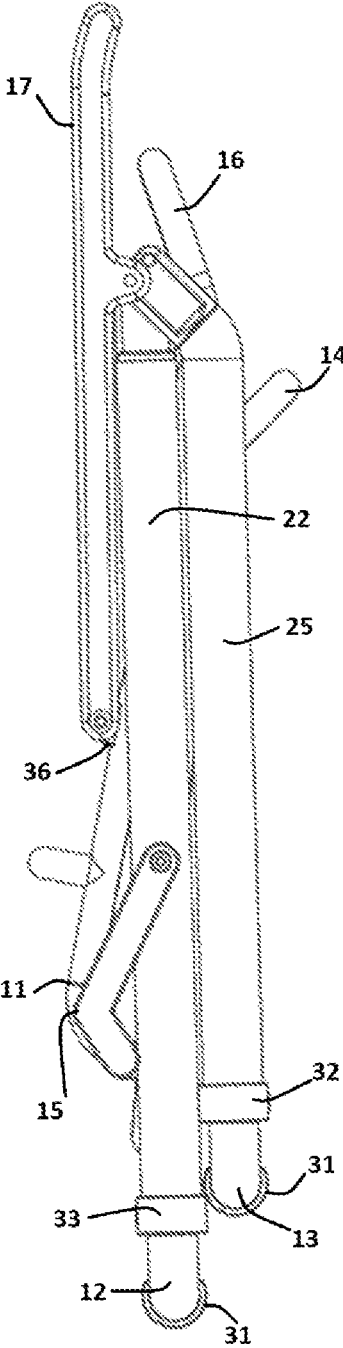


FIG. 5

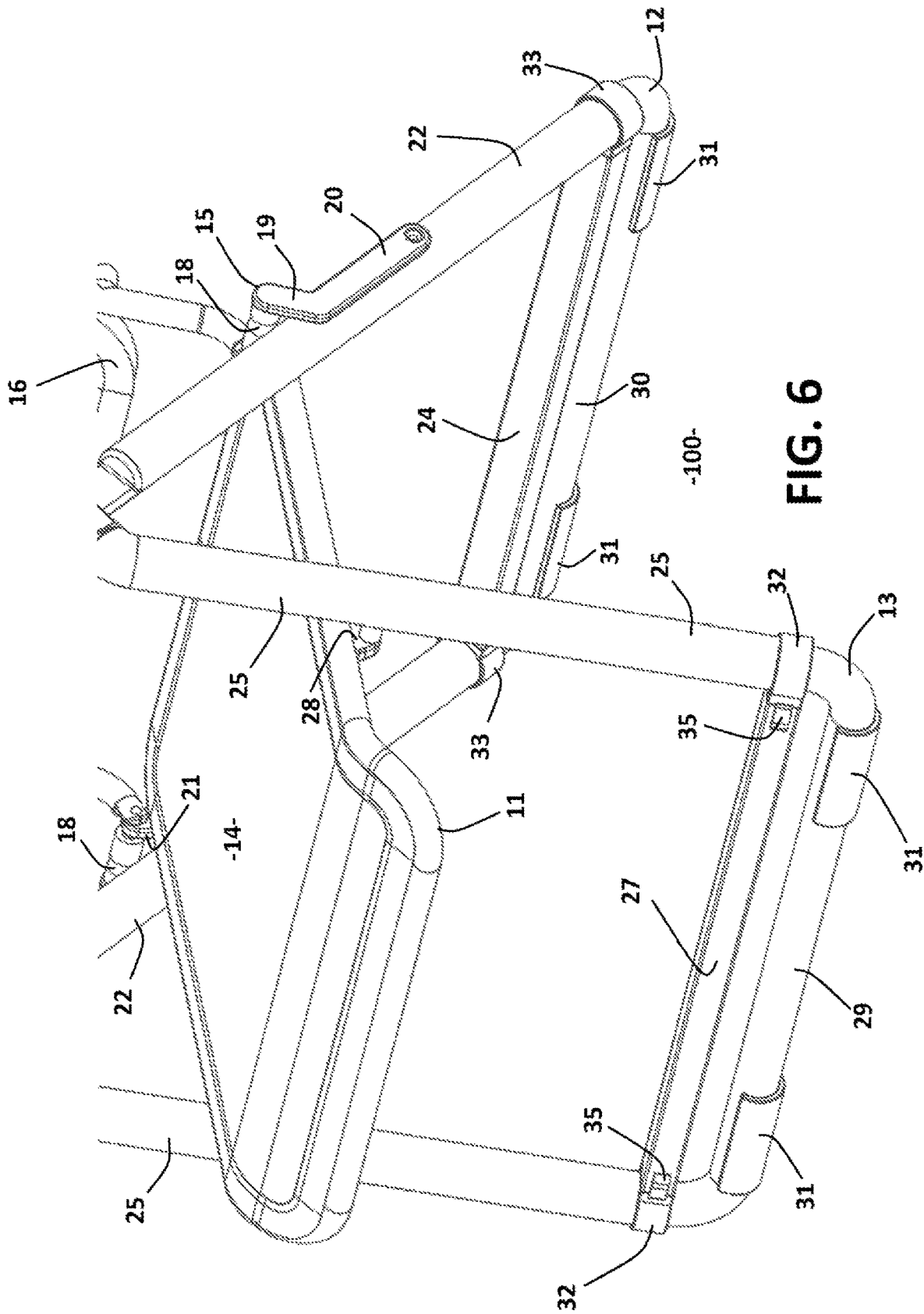


FIG. 6

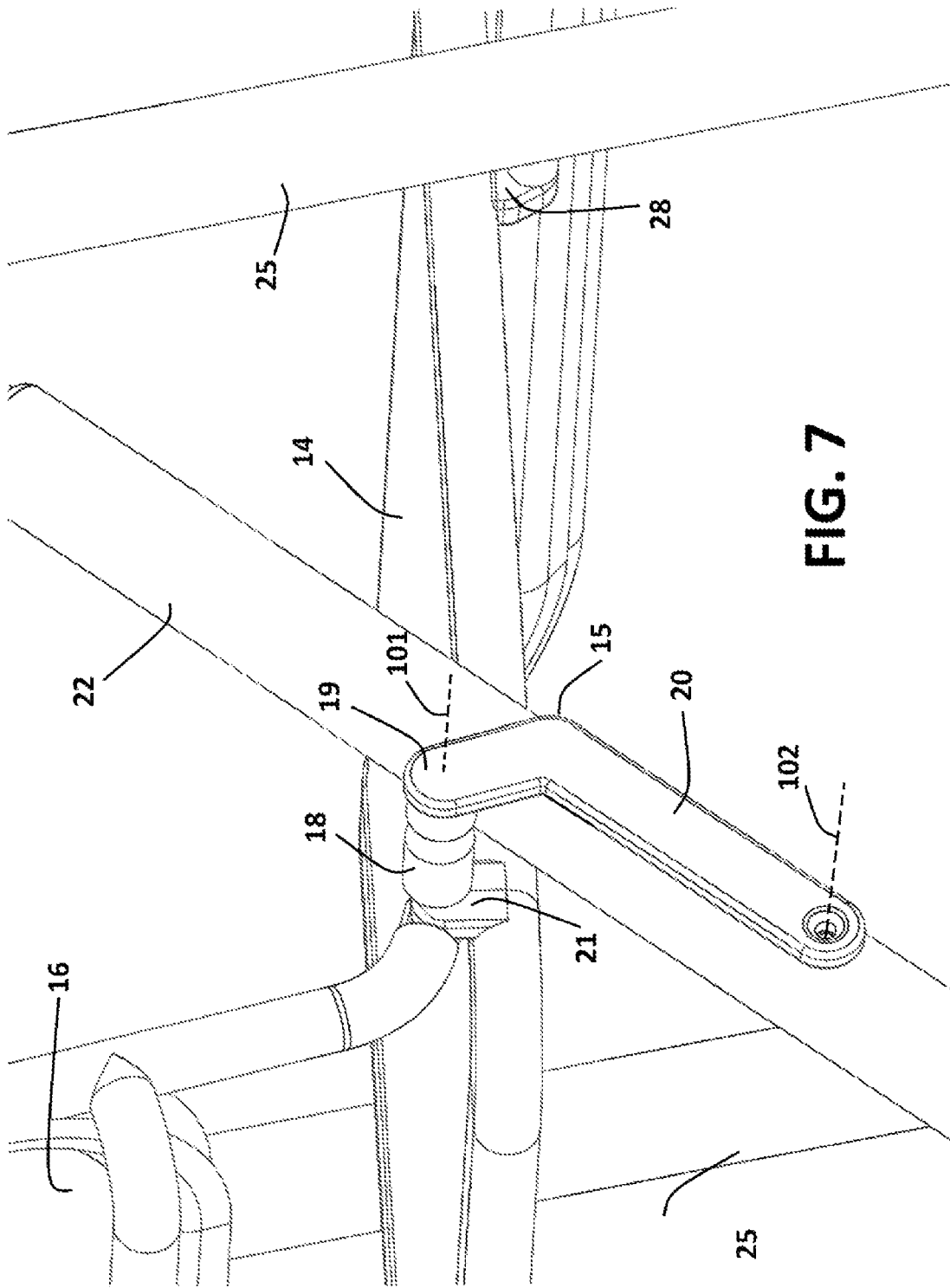


FIG. 7

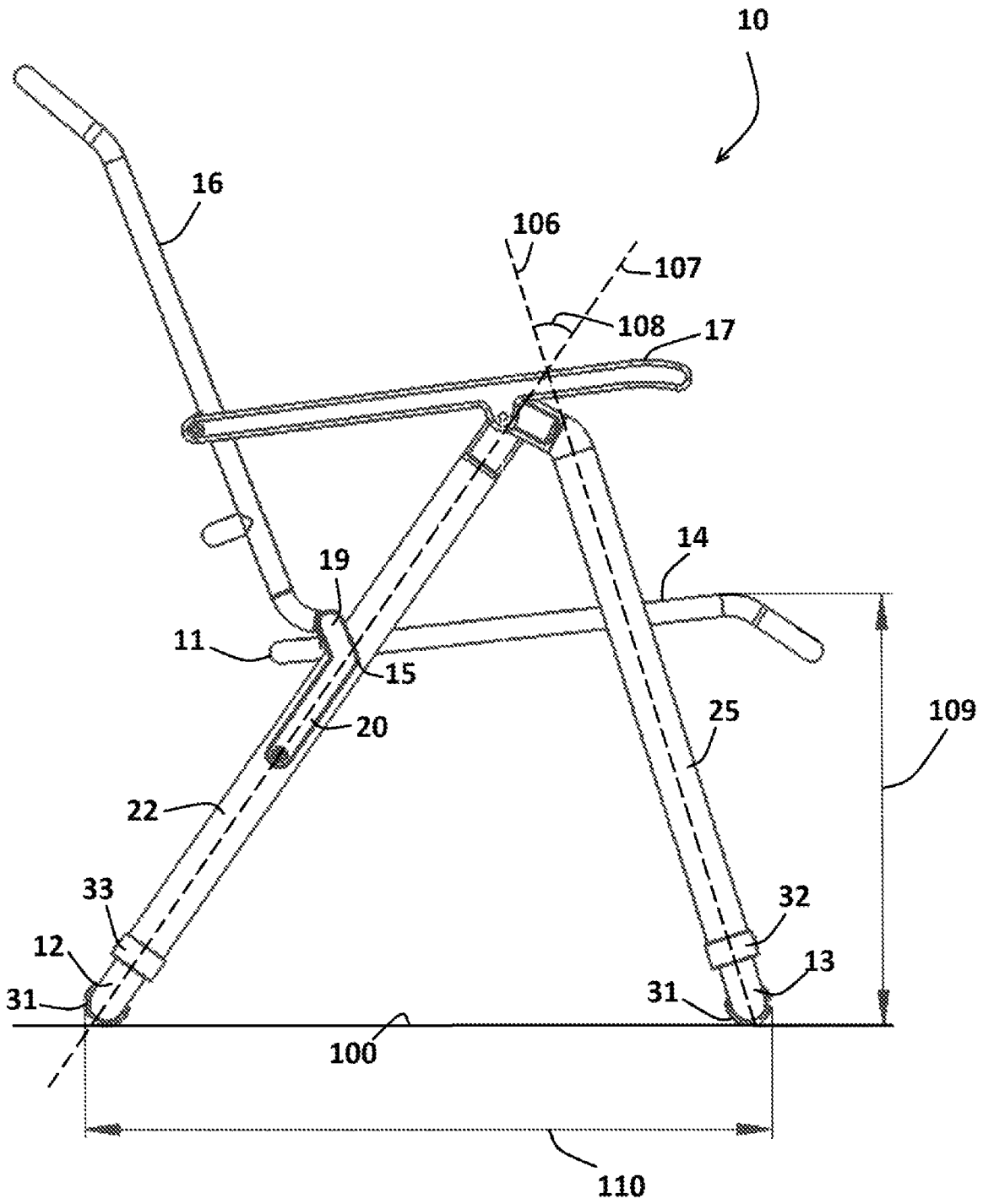


FIG. 8

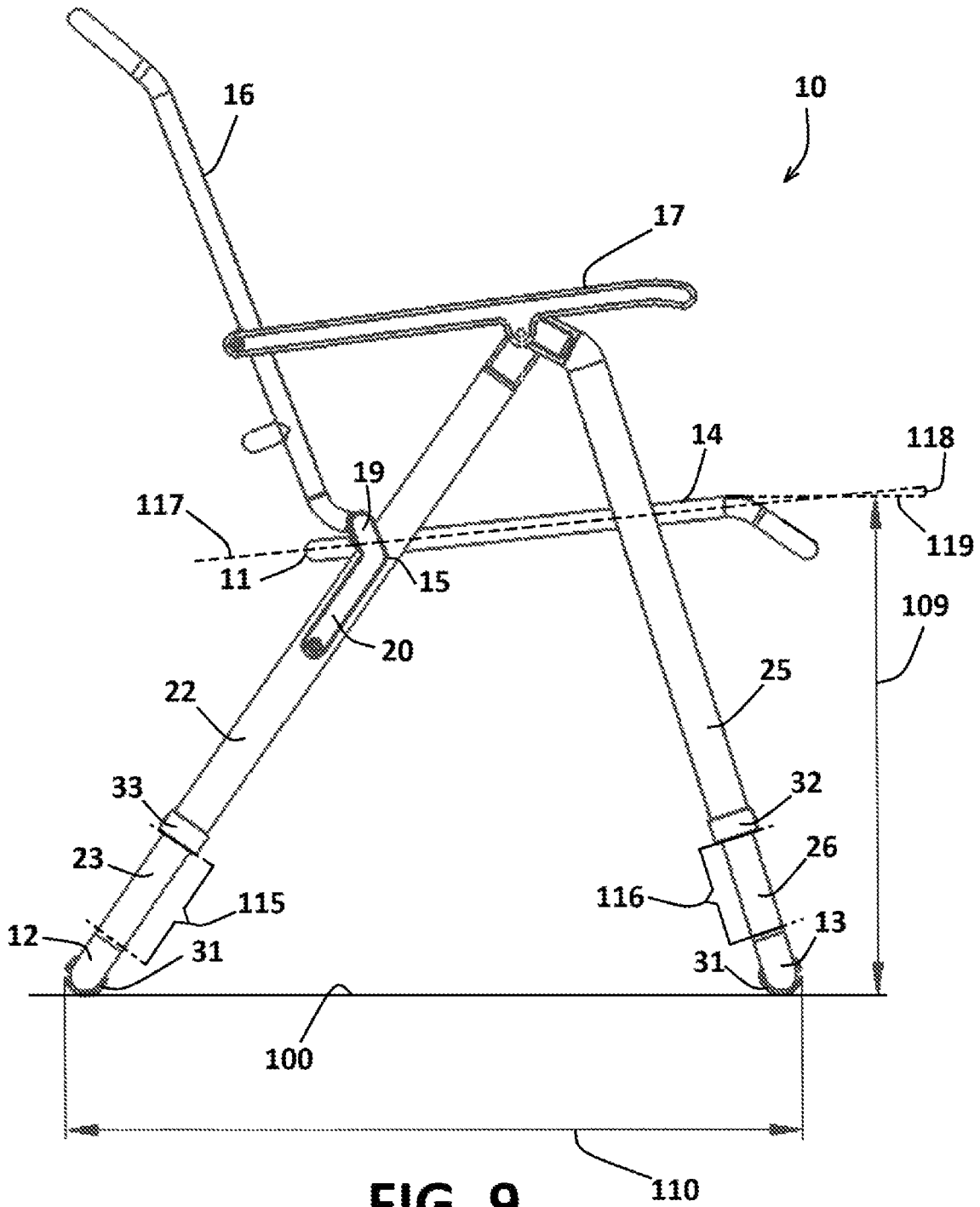


FIG. 9

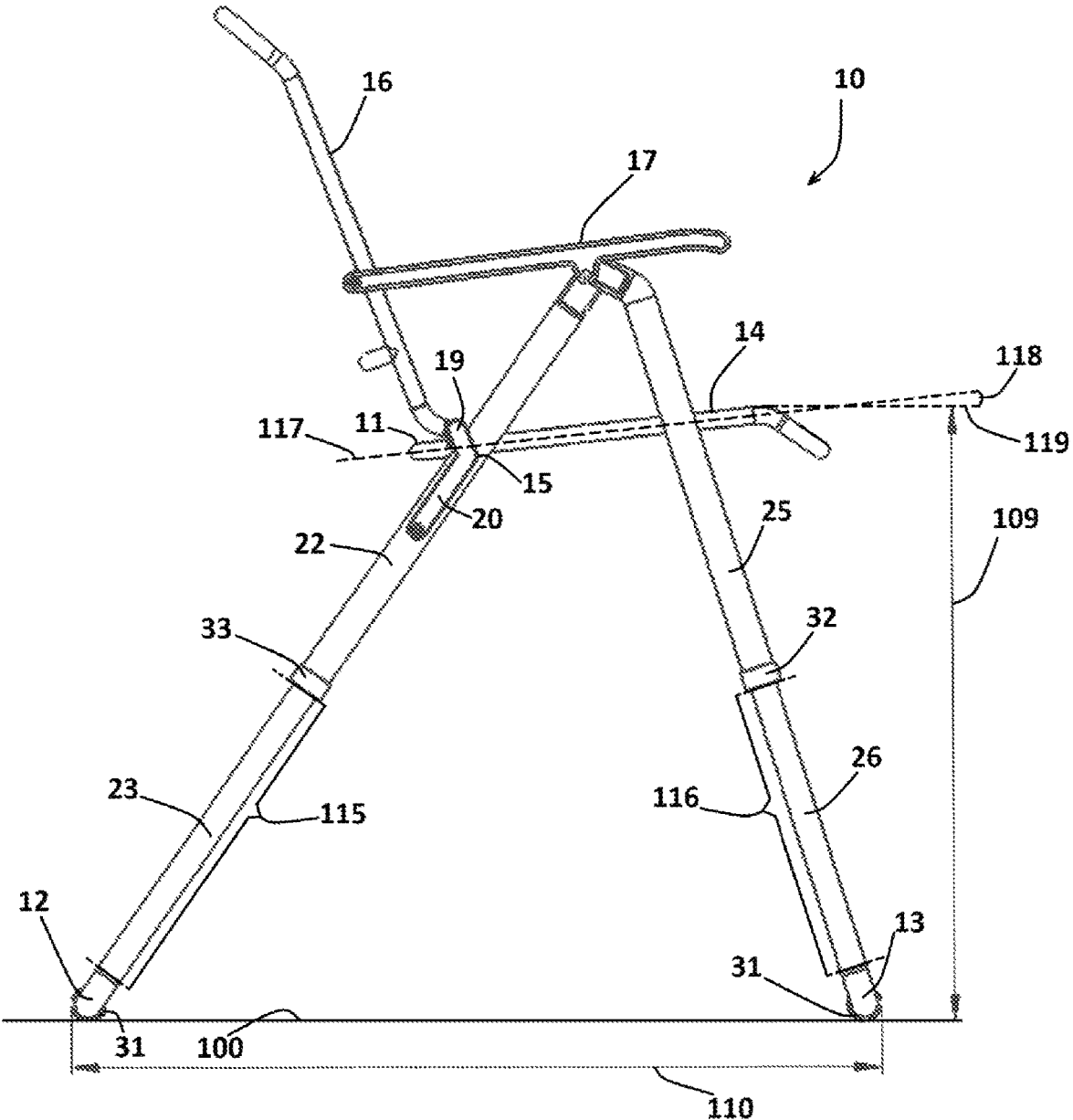
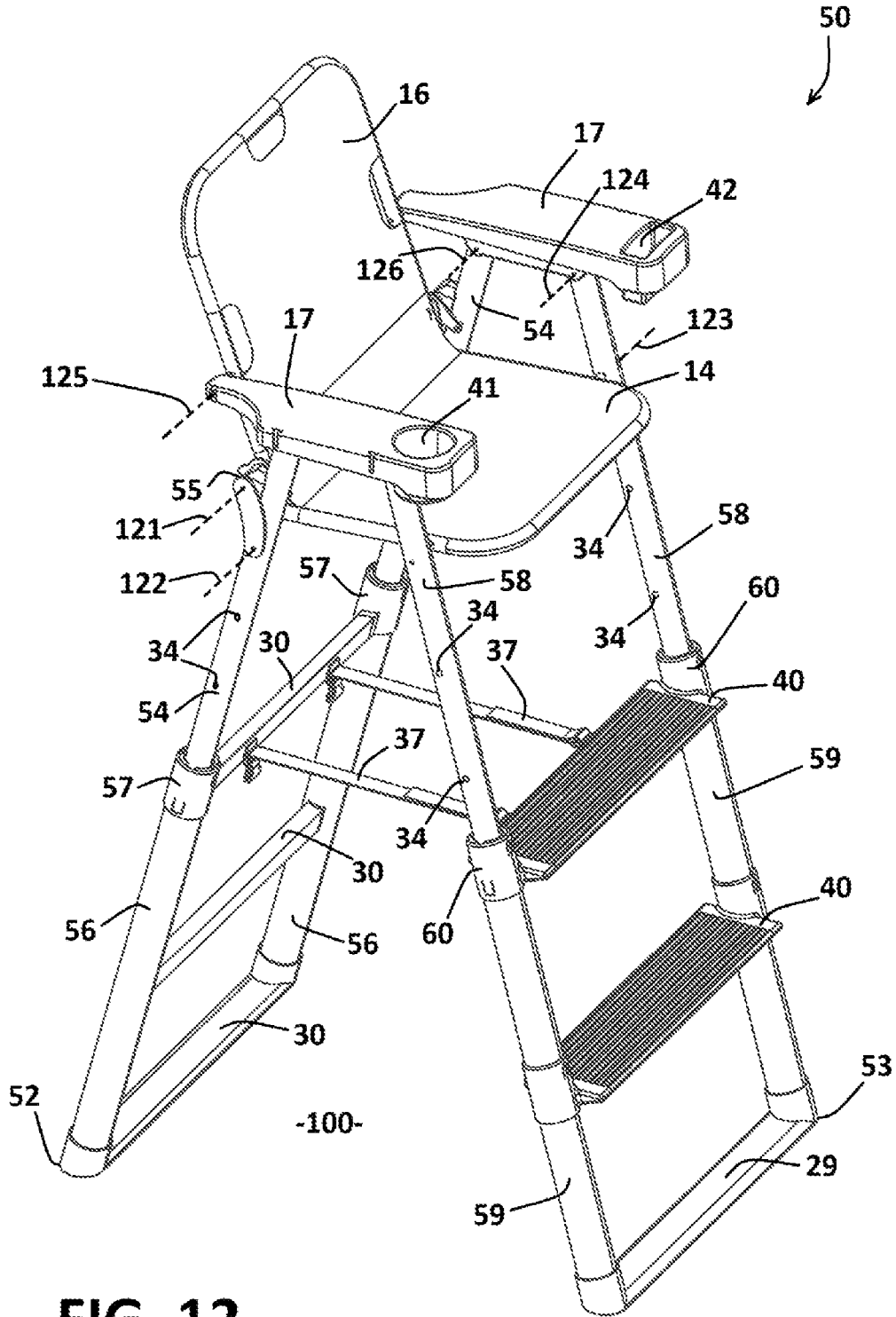


FIG. 11



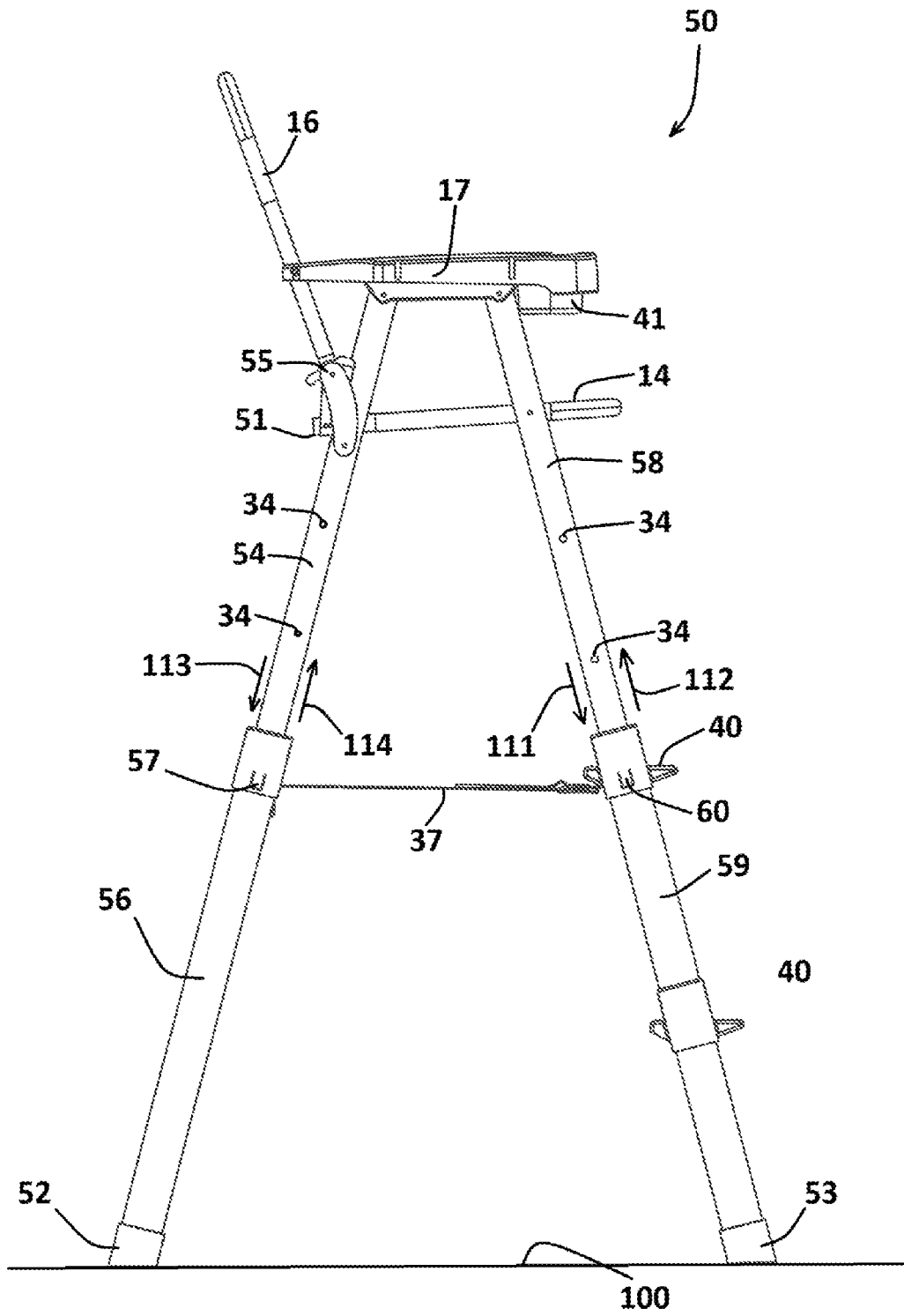


FIG. 13

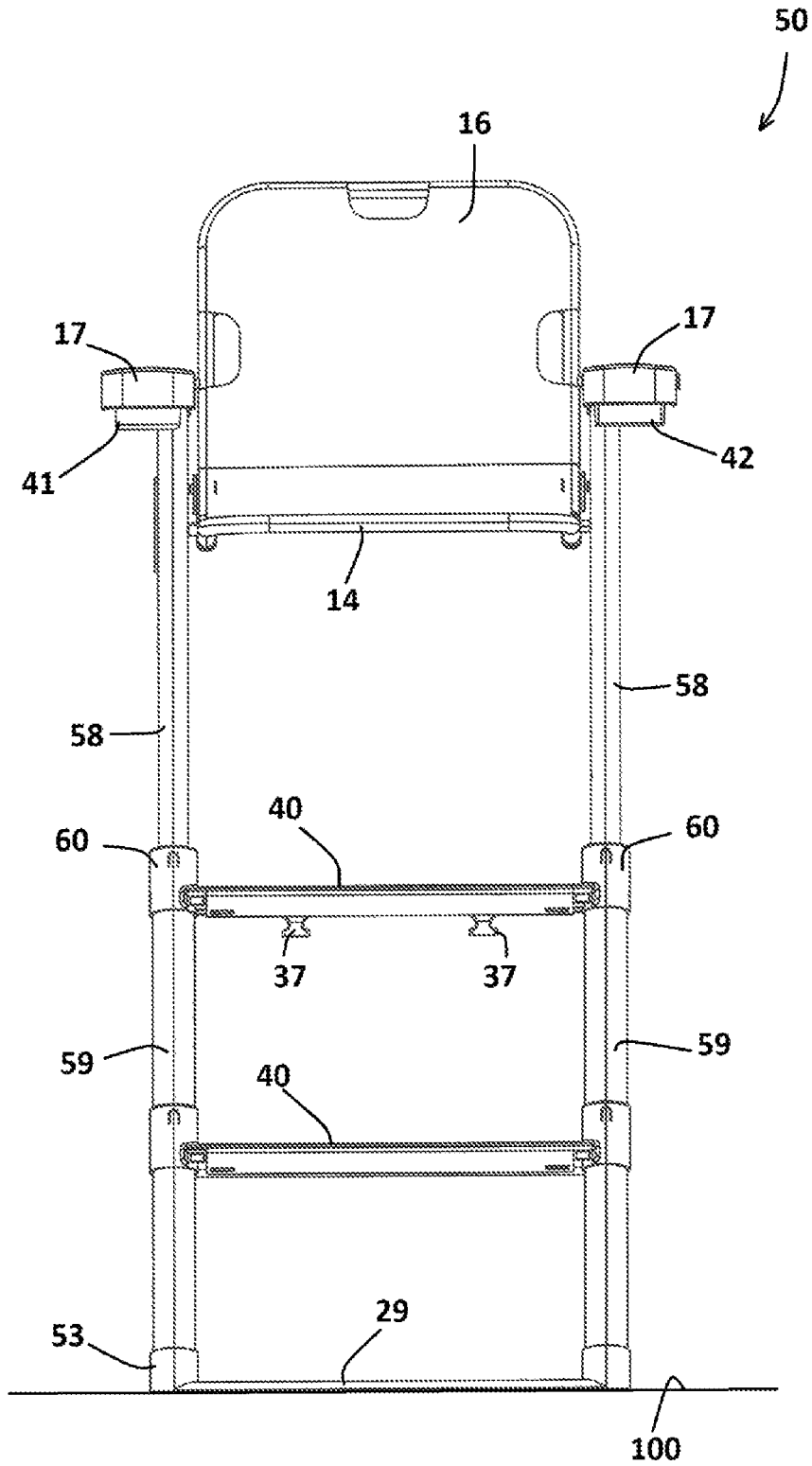


FIG. 14

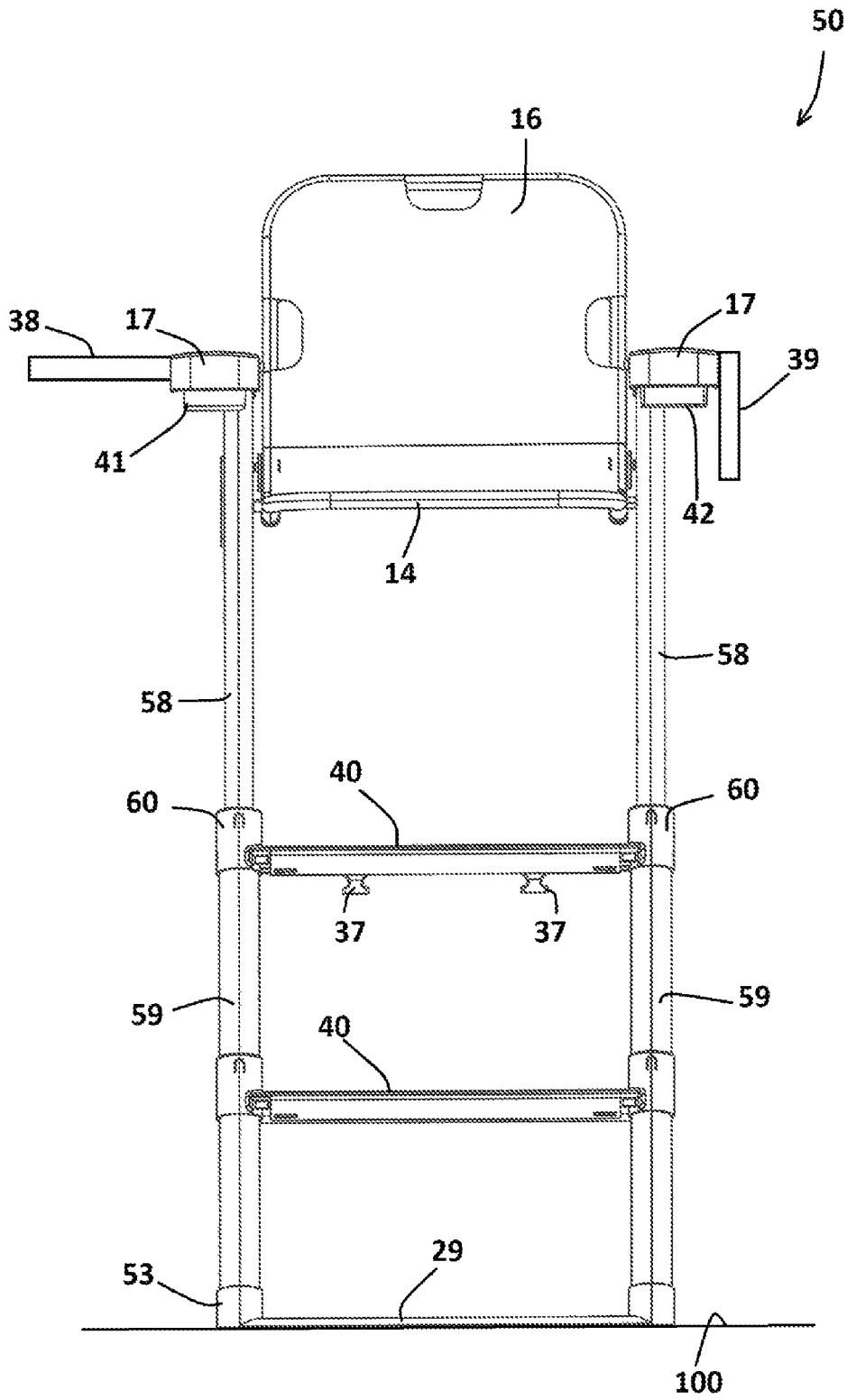


FIG. 14A

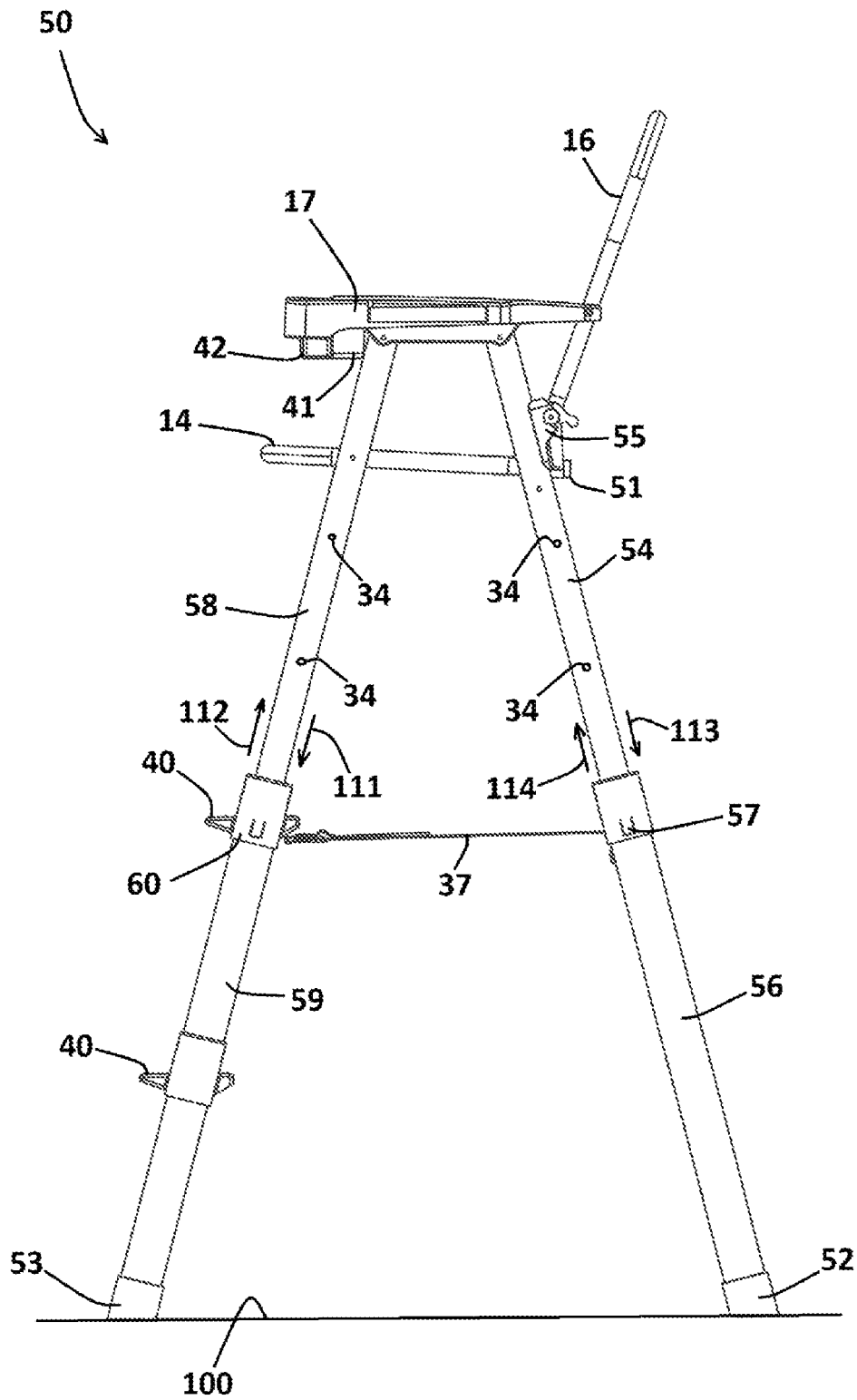


FIG. 15

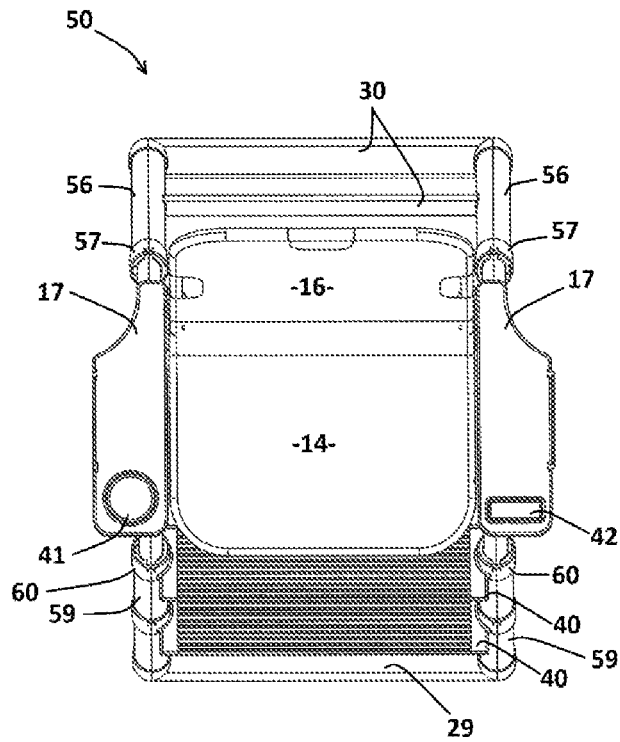


FIG. 16

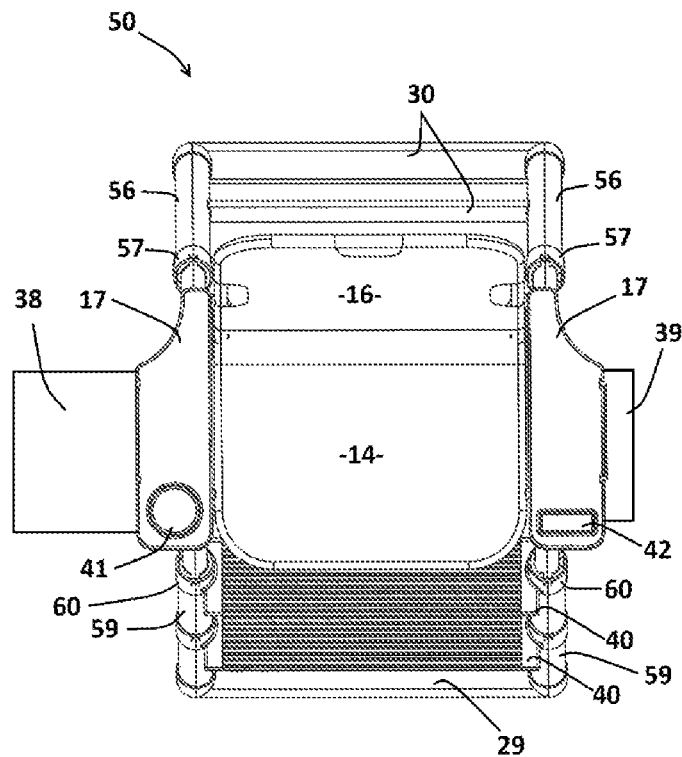


FIG. 16A

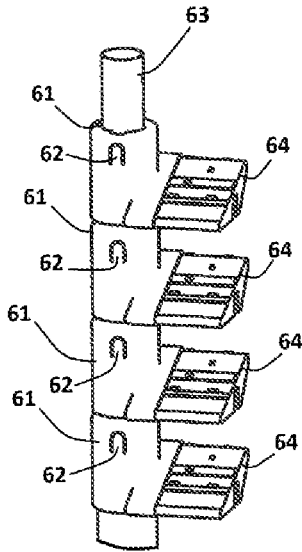


FIG. 17A

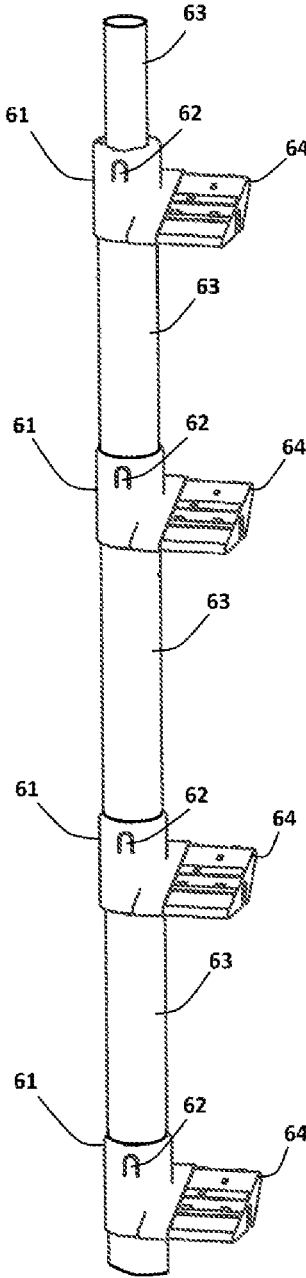


FIG. 17B

HEIGHT ADJUSTABLE CHAIR

PRIOR HISTORY

This application is a Continuation-in-Part patent application claiming the benefit of pending U.S. patent application Ser. No. 16/229,194 filed in the United States Patent and Trademark Office (USPTO) on 18 Dec. 2018 and further claims the benefit of U.S. Provisional Patent Application No. 63/120,760 filed in the USPTO on 3 Dec. 2020, the specifications and drawings of both applications being hereby incorporated by reference thereto.

FIELD OF THE INVENTION

The present invention relates generally to a portable, collapsible chair, and more particularly to a portable chair having structural features for enabling a user to vary the user-supportive height of the chair relative to a support surface, while further enabling the user to collapse the chair for ease of transport or portability and storage.

BRIEF DESCRIPTION OF THE PRIOR ART

Portable chairs are a common convenience used by many individuals in many applications. Portable chairs are typically provided in a form whereby they may be converted from a folded or collapsed position or configuration to an unfolded, user-supportive position or configuration. The folded, collapsed position or configuration allows for ease of storage and transport (portability) of the chair from location to location. One common use of the folding chair relates to outdoor recreational activities that allow for convenient opening and folding of a chair for comfortable positioning as needed.

Typically, a folding chair of this general type provides a user-supportive platform at a height of roughly 24 inches from the ground, floor or similar other support surface. It is noted, however, that in certain applications such a relatively low sitting or support position is not optimal for the user. A low sitting position may not provide a satisfying field of vision, for example, and the visibility of the user may thereby be restricted due to obstacles or other individuals. Further many of the chairs of relatively low elevation are used in various sporting events, concerts, beaches or other outdoor activities in which cases a greater field of vision is to be preferred. As such, the prior art perceives a need for a high-rise portable folding chair that enables a user to elevate the seating position when desired.

US Patent Application Publication No. 2020/0196762 ('762 Publication for the High-Rise Sports Chair) based on U.S. patent application Ser. No. 16/229,194, from which this application claims a benefit essentially describes an elevated portable chair comprising a seat and a pair of collapsible legs, wherein the pair includes a front leg assembly and a rear leg assembly, wherein the rear leg assembly extends, and pivots open from a mid-point on the front leg. A rear bracket extends from a rear edge of the seat to a distal end of the rear leg assembly to provide stabilizing support, where a horizontal brace is placed at a midpoint of the rear bracket. Other features of the chair include a back support; first and second armrests; and a solar panel on a top edge of the back support. The solar panel provides a power source for the at least one power outlet provided on the chair.

SUMMARY OF THE INVENTION

The present invention builds upon the subject matter disclosed in the '762 Publication while carrying over various

key structural features such as the collapsible feature as well as the leg extendibility of the High-Rise Sports Chair. In this regard, the present invention relates to an elevated portable chair that includes: a seat and a pair of leg assemblies, wherein the pair of leg assemblies includes a front leg assembly and a rear leg assembly, wherein the front leg assembly and rear leg assembly pivot open from a point of attachment to the seat or first platform portion. The legs feature a telescopic leg-expansion and contraction mechanism central to the practice of the invention. In other words, the expansion/contraction mechanism is preferably provided in the form of telescoping tubular leg sections or similar other structure(s), which allow lengthening or shortening of the legs so as to provide the ability for adjusting the overall height of the chair itself.

This structural concept is believed originally supported by the '762 Publication at Paragraph No. 8 where it states that the seat is ideally positioned or placed at 42 inches above the floor or ground level from the bottom of legs to the seat whereafter the overall height of the seat can range up to 60 inches to the top of the backrest. Other features of the height adjustable chair according to the present invention include a back support; and first and second armrests. These armrests can be additionally supplemented with convenience features for the user such a fold-out tray and/or pouch for personal items. Other possible features of the chair can also include a solar panel to be located on some portion of the chair. The solar panel provides a power source for the at least one power outlet provided on the chair. A plurality of steps may further traverse along the length of the front leg assembly and provide ability for the user to mount the seat portion when the chair is in a position of raised height.

More particularly, the basic invention in a first iteration may be said to essentially teach or disclose a height adjustable chair for enabling a user to vary a select user support height thereof. The height adjustable chair according to the present invention is believed to essentially comprise a user support platform assembly, a posterior leg assembly, and an anterior leg assembly. The user support platform assembly preferably comprises a first platform portion or seat portion, and a pair of pivot mechanisms in a preferred embodiment.

Each of the pair of pivot mechanisms comprises an upper pivot axis, a lower pivot axis, a leg bridge portion, a bridge-to-arm portion, and a pivot arm portion. The pair of pivot mechanisms are firstly and pivotally attached to laterally opposed posterior portions of the first platform portion via the leg-bridge portions. The upper pivot axes of the pair of pivot mechanisms are thereby axially aligned at the first platform portion along a first posterior pivot axis of rotation.

The posterior leg assembly essentially comprises laterally opposed upper posterior leg portions, laterally opposed lower posterior leg portions extendable relative to the upper posterior leg portions, and a posterior locking mechanism for locking the lower posterior leg portions in extended relation relative to the upper posterior leg portions. The pair of pivot mechanisms are secondly and pivotally attached to the upper posterior leg portions. The lower pivot axes of the pair of pivot mechanisms are thereby axially aligned at the upper posterior leg portions at a second posterior pivot axis of rotation.

The anterior leg assembly essentially comprises laterally opposed upper anterior leg portions, laterally opposed lower anterior leg portions extendable relative to the upper anterior leg portions, and an anterior locking mechanism for locking the lower anterior leg portions in extended relation relative to the upper anterior leg portions. The upper anterior leg

3

portions are pivotally attached to laterally opposed anterior portions the first platform portion along a first anterior pivot axis of rotation.

The anterior leg assembly is further pivotally attached to the posterior leg assembly at a second leg-to-leg anterior pivot axis of rotation. The first support platform is operable to support a user thereupon. The anterior and posterior leg assemblies together enable the user to vary the height of the first support platform relative to a support surface upon which the height adjustable chair is positioned. The height adjustable chair according to the present invention thereby enables the user to vary a select support height of the chair relative to the support surface.

The user support platform assembly preferably comprises a second platform portion or back support portion, which second platform portion is pivotally attached to the first platform portion at the first posterior pivot axis of rotation. The user support platform assembly further preferably comprises laterally opposed third platform portions, which laterally opposed third platform portions are pivotally attached to laterally opposed portions of the second platform portion along a third posterior pivot axis of rotation as well as being pivotally attached to the second leg-to-leg anterior pivot axis of rotation.

The anterior leg assembly comprises an anterior crossmember and the posterior leg assembly comprises a posterior crossmember. The anterior crossmember maintains a fixed first anterior distance between and stabilizes the lower anterior leg portions, and the posterior crossmember maintains a fixed first posterior distance between and stabilizes the lower posterior leg portions. The anterior locking mechanism extends intermediate lower portions of the upper anterior leg portions and the posterior locking mechanism extends intermediate lower portions of the upper posterior leg portions. The anterior locking mechanism maintains a fixed second anterior distance between and stabilizes the upper anterior leg portions. The posterior locking mechanism maintains a fixed second posterior distance between and stabilizes the lower posterior leg portions.

The anterior leg assembly extends in an anterior leg plane and the posterior leg assembly extends in a posterior leg plane. The anterior leg plane is preferably angled relative to the posterior leg plane at a select oblique angle. The select oblique angle is preferably between 50 and 55 degrees. In the preferred embodiment, the lower anterior leg portions are telescopically receivable in and extendable from the upper anterior leg portions and the lower posterior leg portions are telescopically receivable in and extendable from the upper posterior leg portions. An anterior distance between the first platform portion to a lowermost portion of the lower anterior leg portions provides a first quotient value and a lowermost distance between the lowermost portion of the lower anterior leg portions to a lowermost portion of the lower posterior leg portions provides a second quotient value. The ratio of the first quotient value to the second quotient value is preferably between 0.60 when in a minimum chair height configuration and 0.75 when in a maximum chair height configuration.

The first, second, and third posterior pivot axes are together cooperable with the first and second anterior pivot and the structural features to enable the user to collapse the height adjustable chair into a collapsed configuration for ease of transport and stowage. A select leg assembly may preferably comprise a series of steps as referenced at 36. The select leg assembly is selected from the group consisting of the anterior leg assembly and the posterior leg assembly, and the series of steps enable the user to more readily access the

4

first platform portion when the height adjustable chair is in an elevated configuration relative to the support surface. An anterior-to-posterior leg assembly crossmember mechanism maintains a fixed leg distance between the anterior leg assembly and the posterior leg assembly and stabilizes the same when in a user-support configuration.

The basic invention in a second iteration may be said to essentially teach or disclose a height adjustable chair for enabling a user to vary a select user support height thereof. The alternative height adjustable chair may be said to essentially comprise a user support platform assembly, a posterior leg assembly, and an anterior leg assembly. The user support platform assembly essentially comprises a first platform portion and a pair of pivot mechanisms. The pair of pivot mechanisms each provide first and second pivot axes of rotation, and are firstly and pivotally attached to laterally opposed posterior portions of the user support platform assembly thereby being axially aligned at the first platform portion along a first pivot axis of rotation.

The posterior leg assembly may be said to essentially comprise laterally opposed lower posterior leg portions, laterally opposed upper posterior leg portions extendable relative to the lower posterior leg portions, and a posterior locking mechanism for locking the upper posterior leg portions in extended relation relative to the lower posterior leg portions. The pair of pivot mechanisms secondly and pivotally attach to the upper posterior leg portions thereby being axially aligned at the upper posterior leg portions at a second pivot axis of rotation.

The anterior leg assembly comprising laterally opposed lower anterior leg portions, laterally opposed upper anterior leg portions extendable relative to the lower anterior leg portions, and an anterior locking mechanism for locking the upper anterior leg portions in extended relation relative to the lower anterior leg portions. The upper anterior leg portions are pivotally attached to laterally opposed anterior portions of the first platform portion along a third pivot axis of rotation. The first support platform supports a user, and the anterior and posterior leg assemblies enable the user to vary the height of the first support platform relative to a support surface.

The user support platform assembly of the alternative height adjustable chair may also comprise a second platform portion that pivotally attaches to the first platform portion at the first posterior pivot axis of rotation, and laterally opposed third platform portions that pivotally attach to laterally opposed portions of the second platform portion along a fourth posterior pivot axis of rotation.

The anterior leg assembly preferably comprises at least one anterior crossmember and the posterior leg assembly comprises at least one posterior crossmember. The at least one anterior crossmember maintains a fixed first anterior distance between the lower anterior leg portions and the at least one posterior crossmember maintains a fixed first posterior distance between the lower posterior leg portions.

The upper anterior leg portions of the alternative embodiment are preferably telescopically receivable in and extendable from the lower anterior leg portions and the upper posterior leg portions of the alternative embodiment are telescopically receivable in and extendable from the lower posterior leg portions. This feature is optional and not critical to the practice of the alternative embodiment, and the reader will note that the relative leg-to-leg portion extendibility is central to the practice of the present invention.

The first, second, third and fourth pivot axes of rotation are cooperable to enable the user to collapse the height adjustable chair into a collapsed configuration for ease of

5

transport and stowage. The height adjustable chair, as illustrated in connection with the alternative embodiment, may preferably comprise a series of steps for enabling the user to more readily access the first platform portion when the height adjustable chair is in an elevated configuration relative to the support surface. Further, to stabilize alternative embodiment, the invention contemplates an anterior-to-posterior leg assembly crossmember mechanism exemplified by strap-like elements for maintaining a fixed leg distance between the anterior leg assembly and the posterior leg assembly when in a user-support configuration.

BRIEF DESCRIPTION OF THE DRAWINGS

Other features and objectives of the invention will become more evident from a consideration of the following brief descriptions of patent drawings.

FIG. 1 is an anterior top perspective view of a first height adjustable chair apparatus according to the present invention shown in a minimized elevational height configuration.

FIG. 2 is an anterior top perspective view of the first height adjustable chair apparatus according to the present invention shown in a maximized elevational height configuration.

FIG. 3 is a first perspective view of the first height adjustable chair apparatus according to the present invention shown in folded, collapsed configuration for portability or stowage.

FIG. 4 is a second perspective view of the first height adjustable chair apparatus according to the present invention shown in folded, collapsed configuration for portability or stowage.

FIG. 5 is a lateral edge view of the first height adjustable chair apparatus according to the present invention shown in folded, collapsed configuration for portability or stowage.

FIG. 6 is an enlarged fragmentary perspective depiction of the anterior and posterior leg assemblies of the first height adjustable chair apparatus according to the present invention shown in the minimized elevational height configuration.

FIG. 7 is an enlarged fragmentary perspective depiction of a pivot mechanism pivotally connecting a first portion of the posterior leg assembly to a first platform or seat portion of the first height adjustable chair apparatus according to the present invention.

FIG. 8 is a first sequential elevational side view of the first height adjustable chair apparatus according to the present invention shown in the minimized elevational height configuration.

FIG. 9 is a second sequential elevational side view of the first height adjustable chair apparatus according to the present invention shown in a first elevational height configuration.

FIG. 10 is a third sequential elevational side view of the first height adjustable chair apparatus according to the present invention shown in a second elevational height configuration.

FIG. 11 is a fourth sequential elevational side view of the first height adjustable chair apparatus according to the present invention shown in the maximum elevational height configuration.

FIG. 12 is a first top perspective view of a second height adjustable chair apparatus according to the present invention.

FIG. 13 is a first elevational side view of the second height adjustable chair apparatus according to the present invention.

6

FIG. 14 is a first elevational front or anterior view of the second height adjustable chair apparatus according to the present invention.

FIG. 14A is a second elevational front or anterior view of the second height adjustable chair apparatus according to the present invention shown outfitted with optional attachment features at the armrest portions.

FIG. 15 is a second elevational side view of the second height adjustable chair apparatus according to the present invention.

FIG. 16 is a first top plan view of the second height adjustable chair apparatus according to the present invention.

FIG. 16A is a second top plan view of the second height adjustable chair apparatus according to the present invention shown outfitted with optional attachment features at the armrest portions.

FIG. 17A is a first sequential fragmentary perspective view of an alternative leg assembly unit with a series of individual telescopic leg segments shown in a fully telescopically collapsed configuration.

FIG. 17B is a second sequential fragmentary perspective view of the alternative leg assembly unit with the series of individual telescopic leg segments shown in a telescopically extended configuration.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Embodiments of systems, components, and methods of assembly and manufacture will now be described with reference to the accompanying figures. Although preferred and alternative embodiments, examples, and illustrations are disclosed below, it will be understood by those of ordinary skill in the art that the embodiments described herein extend beyond the specifically disclosed configurations, examples, and illustrations, and can include other users of the disclosure and obvious modifications and equivalents thereof. The terminology used in the descriptions presented herein is not intended to be interpreted in any limited or restrictive manner simply because it is being used in conjunction with a detailed description of certain specific embodiments of the disclosure. In addition, embodiments of the disclosure can comprise several novel features and no single feature is solely responsible for its desirable attributes or is essential to practicing any one of the several embodiments herein described.

Certain terminology may be used in the following description for the purpose of reference only, and thus are not intended to be limiting. For example, terms such as "above" and "below" refer to directions in the drawings to which reference is made. Terms such as "front," "back," "left," "right," "rear," "top," "bottom" and "side" describe the orientation and/or location of portions of the components or elements within a consistent but arbitrary frame of reference which is made clear by reference to the text and the associated drawings describing the components or elements under discussion. Moreover, terms such as "first," "second," "third," and so on may be used to describe separate components. Such terminology may include the words specially mentioned above, derivatives thereof, and words of similar import.

Referring now the drawings with more specificity, the present invention essentially provides a first height adjustable chair apparatus as referenced at 10 in FIGS. 1-11 and a second height adjustable chair apparatus as referenced at 50 in FIGS. 12-16A. The first and second height adjustable

chair apparatuses **10** and **50** enable a user to vary a select support height thereof so that the user may sit or support oneself at varying heights above a support surface as needed or desired.

The height adjustable chair apparatus **10** according to the present invention may be said to preferably comprise a user support platform assembly as at **11**, a posterior leg assembly as at **12**, and an anterior leg assembly as at **13**. The user support platform assembly **11** preferably comprises a first platform portion or seat portion as at **14**, a pair of pivot mechanisms as at **15**, a second platform portion or back support portion as at **16**, and laterally opposed third platform portions or armrest portions as at **17**. The first support platform or seat platform **14** is configured to support a user as seated thereupon when in a user-supportive configuration as generally depicted in FIGS. **1**, **2**, and **8-11** with the second support platform or back support portion **16** providing rear support and the third support platforms or armrest portions **17** providing arm support.

Each of the pair of pivot mechanisms **15** preferably comprises an upper pivot axis, a lower pivot axis, a leg-bridge portion as at **18** extending in a first dimension through which the upper pivot axis axially extends; a bridge-to-arm portion or linkage as at **19** extending in a second dimension orthogonal to the first dimension; and a pivot arm portion **20** extending obliquely relative to the bridge-to-arm portion or linkage **19** in the second and a third dimension and through which the lower pivot axis orthogonally extends in parallel relation to the upper pivot axis.

The leg-bridge portions **18** bridge or span posterior sides of the laterally opposed upper posterior leg portions of the posterior leg assembly **12** and, when pivotally attached to the first platform portion **14**, extend in, along, or about a first posterior pivot axis of rotation as at **101**. The pair of pivot mechanisms **15** are firstly and pivotally attached to laterally opposed posterior portions **21** of the first platform portion **14**. The upper pivot axes of the pair of pivot mechanisms **15** extend through the leg-bridge portions **18** are thereby axially aligned at the first platform portion **14** in, along or about the first posterior pivot axis of rotation **101**.

The posterior leg assembly **12** preferably comprises laterally opposed upper posterior leg portions as at **22**, laterally opposed lower posterior leg portions **23** extendable relative to the upper posterior leg portions **22**, and a posterior locking mechanism as at **24** for locking the lower posterior leg portions **23** in extended relation relative to the upper posterior leg portions **22**. The pair of pivot mechanisms **15** are secondly and pivotally attached to the upper posterior leg portions **22** and the lower pivot axes of the pair of pivot mechanisms **15** are thereby axially aligned at the upper posterior leg portions **22** orthogonally relative to the pivot arm portions **20** at a second posterior pivot axis of rotation as at **102**.

The anterior leg assembly **13** preferably comprises laterally opposed upper anterior leg portions as at **25**, laterally opposed lower anterior leg portions **26** extendable relative to the upper anterior leg portions **25**, and an anterior locking mechanism **27** for locking the lower anterior leg portions **26** in extended relation relative to the upper anterior leg portions **25**. The upper anterior leg portions **25** are pivotally attached to laterally opposed anterior portions **28** of the first platform portion **14** along a first anterior pivot axis of rotation as at **103**. The anterior leg assembly **13** is further pivotally attached to the posterior leg assembly **12** at a second (leg-to-leg) anterior pivot axis of rotation as at **104**.

In the preferred embodiment or height adjustable chair apparatus **10**, the lower anterior leg portions **26** are tele-

scopically receivable in and extendable from the upper anterior leg portions **25** and the lower posterior leg portions **23** are telescopically receivable in and extendable from the upper posterior leg portions **22**. The anterior leg assembly **13** and the posterior leg assembly **12** together enable the user to particularly vary the height of the first support platform **14** relative to a support surface as at **100**. The height adjustable chair apparatus **10** enables the user to vary a select support height thereof relative to the support surface **100** so that a user may adjust the height at which he or she sits upon the chair apparatus **10**.

Recalling that the user support platform assembly **11** comprises second platform portion or back support portion **16**, the reader will note the second platform portion **16** is preferably pivotally attached to the first platform portion **14** at the first posterior pivot axis of rotation **101**. The laterally opposed third platform portions or arm rest portions **17** are preferably pivotally attached to laterally opposed pivot portions **36** of the second platform portion **16** along a third posterior pivot axis of rotation as at **105** and are further pivotally attached to the posterior leg assembly **12** and the anterior leg assembly **13** at the second anterior pivot axis of rotation **104**.

The height adjustable chair apparatus **10** according to the present invention may be reconfigured or folded into a collapsed configuration for ease of transport or portability and storage as generally depicted in FIGS. **3-5**. In this regard, the first, second, and third posterior pivot axes **101**, **102**, and **105** are cooperable with the first and second anterior pivot axes **103** and **104** and the structures interconnected thereby to enable the user to collapse or fold the height adjustable chair apparatus **10** into a collapsed configuration for ease of transport or portability and/or storage.

The anterior leg assembly **13** preferably further comprises an anterior crossmember as at **29** and the posterior leg assembly **12** preferably further comprises a posterior crossmember as at **30**. The anterior crossmember **29** extends intermediate the lower anterior leg portions **26** interconnecting the lower anterior leg portions **26** thereby maintaining a fixed first anterior distance between and stabilizing the lower anterior leg portions **26**. The posterior crossmember **30** extends intermediate the lower posterior leg portions **23** interconnecting the lower posterior leg portions **23** thereby maintaining a fixed first posterior distance between and stabilizing the lower posterior leg portions **23**. The anterior crossmember **29** and the posterior crossmember **30** may be preferably outfitted with feet elements **31** preferably formed from a resilient, high friction material exemplified by rubber to prevent movement of the outfitted features relative to the support surface **100**.

The anterior locking mechanism **27** may be preferably integrated with a crossbar element that extends intermediate and interconnects lower anterior portions **32** of the upper anterior leg portions **25** and the posterior locking mechanism **24** may be preferably integrated with a crossbar element that extends intermediate and interconnects lower posterior portions **33** of the upper posterior leg portions **22**. The anterior locking mechanism **27** is preferably outfitted with laterally opposed spring-biased pin mechanisms **35** (pins not specifically illustrated) which cooperate with pin-receiving apertures **34** formed in the lower anterior leg portions **26**. The laterally opposed spring-biased pin mechanisms **35** are cooperable with the series of pin-receiving apertures **34** for enabling the user to selectively lock the lower anterior leg portions **26** in a telescopically extended state relative to the upper anterior leg portions **25**.

The posterior locking mechanism **24** is also preferably outfitted with laterally opposed spring-biased pin mechanisms **35** which cooperate with pin-receiving apertures **34** formed in the lower posterior leg portions **23**. The laterally opposed spring-biased pin mechanisms **35** are cooperable with the series of pin-receiving apertures **34** formed in the lower posterior leg portions **23** for enabling the user to selectively lock the lower posterior leg portions **23** in a telescopically extended state relative to the upper posterior leg portions **22**. The anterior locking mechanism **27** with integrated crossbar element further maintains a fixed second anterior distance between and stabilizes the upper anterior leg portions **25** at the lower anterior portions **32**. Similarly, the posterior locking mechanism **24** with integrated crossbar element maintains a fixed second posterior distance between and stabilizes the upper posterior leg portions **22** at lower posterior portions **33**.

The anterior leg assembly **13** is substantially planar and thus preferably extends in an anterior leg plane **106**. Similarly, the posterior leg assembly **12** is also substantially planar and preferably extends in a posterior leg plane **107**. When the height adjustable chair apparatus **10** is in a user-support configuration as generally and comparatively depicted in FIGS. **1**, **2**, and **8-11**, the anterior leg plane **106** is preferably angled relative to the posterior leg plane **107** at a select oblique angle **108**, which select oblique angle **108** is preferably between 50 and 55 degrees. Excellent results have been achieved with a select oblique angle **108** of between 50 and 55 degrees for structurally cooperating with the anterior leg assembly **13** and the posterior leg assembly **12** during elevation of the user platform assembly **11** so as to provide a limited vertical first support platform height to horizontal leg span ratio range.

Referencing FIGS. **8-11**, the reader will there consider a variable height or anterior distance **109** as measured between the first platform portion **14** to a lower portion of the lower anterior leg portions **26** at the anterior crossmember **29**. The anterior distance or variable height **109** provides a first quotient value. A variable support surface span distance as at **110** extends between a lower portion of the lower anterior leg portions **26** to a lower portion of the lower posterior leg portions **23**. The variable support surface span distance **110** provides a second quotient value.

The height-to-leg span ratio derived from the first quotient value of the variable vertical height or anterior distance **109** to the second quotient value of variable support surface span distance **110** is preferably between 0.60 when in a minimum height configuration as generally depicted in FIG. **8** and 0.75 when in a maximum height configuration as generally depicted in FIG. **11**. The height-to-leg span ratio is on the order of 0.67 in FIG. **9** and the height-to-leg span ratio is on the order of 0.72 in FIG. **10**.

The first support platform **14** extends in a support plane as at **117** when the height adjustable chair **10** is supported by a support surface as at **100**, which support surface **100** is substantially parallel to the plane **119** defining the upper limit of the variable height or anterior distance **109**. The first support platform **14** supports a user thereupon in elevated relation relative to the support surface **100**, and the support plane **117** extends in a select oblique angle relative to the support surface **100** as generally depicted and referenced at oblique angle **118**.

The laterally opposed lower posterior leg portions **23** are configured to extend incrementally relative to the upper posterior leg portions **22**, and the laterally opposed lower anterior leg portions **26** are configured to extend incrementally relative to the upper anterior leg portions **25**. The

posterior incremental extensions **115** of the laterally opposed lower posterior leg portions **23** are greater in length or are relatively longer than the anterior incremental extensions **116** of laterally opposed lower anterior leg portions **26**. The difference in length of the incremental extensions **115** and the incremental extensions **116** maintains the select oblique angle **118** as the user varies the height of the first support platform **14** relative to the support surface **100**.

Recalling the variable height or anterior distance **109** between the first platform portion **14** and the first lower portion of the lower anterior leg portions **26** provides a first quotient value, and the horizontal distance or variable support surface span distance **110** between the second lower portion of the lower anterior leg portions **26** to first lower portion of the lower posterior leg portions **23** provides a second quotient value. The ratio of the first quotient value to the second quotient value is between 0.60 when in a minimum chair height configuration as depicted in FIG. **8**, and 0.75 when in a maximum chair height configuration as depicted in FIG. **11**. The differing lengths of the posterior incremental extensions **115** and the anterior incremental extensions **116** maintain the select oblique angle **118** and support this ratio as the user varies the height of the first support platform **14** relative to the support surface **104**.

Referring now more particularly to the height adjustable chair apparatus **50** according to the present invention, the same may be said to preferably comprise a user support platform assembly as at **51**, a posterior leg assembly as at **52**, and an anterior leg assembly as at **53**. The user support platform assembly **51** preferably comprises a first platform portion or seat portion as at **14**, a pair of pivot mechanisms as at **55**, a second platform portion or back support portion as at **16**, and laterally opposed third platform portions or arm rest portions as at **17**.

The posterior leg assembly **52** preferably comprises laterally opposed upper posterior leg portions as at **54**, laterally opposed lower posterior leg portions **56**, and at least one posterior locking mechanism as at **57** for locking the lower posterior leg portions **56** in extended relation relative to the upper posterior leg portions **54**. The upper posterior leg portions **54** are preferably extendable relative to the lower posterior leg portions **56** although the reader will note the key structural feature is extendibility of opposed leg portions relative to one another.

Each of the pair of pivot mechanisms **55** preferably comprises first and second pivot axes. The pivot mechanisms **55** are firstly pivotally attached to laterally opposed posterior portions of the first platform portion **14**, and the first pivot axes of the pair of pivot mechanisms **55** extend in, along, or about a first pivot axis of rotation as at **121**. The pair of pivot mechanisms **55** are secondly and pivotally attached to the upper posterior leg portions **54** and the second pivot axes of the pair of pivot mechanisms **55** are thereby axially aligned at the upper posterior leg portions **54** at a second pivot axis of rotation as at **122**.

The anterior leg assembly **53** preferably comprises laterally opposed upper anterior leg portions as at **58**, laterally opposed lower anterior leg portions **59**, and at least one anterior locking mechanism **60** for locking the lower anterior leg portions **59** in extended relation relative to the upper anterior leg portions **58**. The upper anterior leg portions **58** are preferably extendable relative to the lower anterior leg portions **59**, although the reader will note the key structural feature is extendibility of opposed leg portions relative to one another.

In other words, in the alternative embodiment or height adjustable chair apparatus **50**, the upper anterior leg portions

58 are telescopically receivable in (as at arrow **111**) and extendable from (as at arrow **112**) the lower anterior leg portions **59** and the upper posterior leg portions **54** are telescopically receivable in (as at arrow **113**) and extendable from (as at arrow **114**) the lower posterior leg portions **56** as generally depicted in Figure Nos **13** and **15**. The upper anterior leg portions **58** are pivotally attached to laterally opposed anterior portions of the first platform portion **14** along a third pivot axis of rotation as at **123**. The anterior leg assembly **53** is further pivotally attached to the armrests or third platform portions **17** at a fourth pivot axis of rotation as at **124**.

The first support platform or seat platform **14** is configured to support a user as seated thereupon when in a user-supportive configuration as generally depicted in FIGS. **12-16A** with the second support platform or back support portion **16** providing rear support and the third support platforms or armrest portions **17** providing arm support. The anterior leg assembly **53** and the posterior leg assembly **52** together enable the user to particularly vary the height of the first support platform **14** relative to a support surface as at **100**. The height adjustable chair apparatus **50** enables the user to vary a select support height thereof relative to the support surface **100** so that a user may adjust the height at which he or she sits.

Recalling that the user support platform assembly **11** comprises second platform portion or back support portion **16**, the reader will note the second platform portion **16** is preferably pivotally attached to the first platform portion **14** at the first pivot axis of rotation **121**. The laterally opposed third platform portions or arm rest portions **17** are preferably pivotally attached to laterally opposed pivot portions of the second platform portion **16** along a fifth pivot axis of rotation as at **125** and are further pivotally attached to the posterior leg assembly **52** at a sixth pivot axis of rotation **126**.

Similar to the height adjustable chair apparatus **10**, the height adjustable chair apparatus **50** according to the present invention may be reconfigured or folded into a collapsed configuration for ease of transport or portability and storage. In this regard, the series of pivot axes of rotation (e.g. pivot axes **121**, **122**, **123**, **124**, **125**, and **126**) are cooperable with one another and the structures interconnected thereby to enable the user to collapse or fold the height adjustable chair apparatus **50** into a collapsed configuration for ease of transport or portability and/or storage.

The anterior leg assembly **53** preferably further comprises at least one anterior crossmember as at **29** and the posterior leg assembly **52** preferably further comprises at least one posterior crossmember as at **30**. The at least one anterior crossmember **29** preferably extends intermediate the lower anterior leg portions **59** interconnecting the lower anterior leg portions **59** thereby maintaining a fixed distance between and stabilizing the lower anterior leg portions **59**.

The posterior crossmember(s) **30** extend intermediate the lower posterior leg portions **56** interconnecting the lower posterior leg portions **56** thereby maintaining a fixed distance between and stabilizing the lower posterior leg portions **56**. The lowermost anterior crossmember **29** and the lowermost posterior crossmember **30** may be preferably outfitted with a resilient, high friction material exemplified by rubber to prevent movement of the outfitted features relative to the support surface **100**.

The anterior locking mechanism(s) **60** are preferably outfitted with spring-biased pin mechanisms (pins not specifically illustrated) which cooperate with pin-receiving apertures **34** formed in the upper anterior leg portions **58**.

The spring-biased pin mechanisms are cooperable with the series of pin-receiving apertures **34** for enabling the user to selectively lock the upper anterior leg portions **58** in a telescopically extended state relative to the lower anterior leg portions **59**.

The posterior locking mechanism(s) **57** are also preferably outfitted with spring-biased pin mechanisms which cooperate with pin-receiving apertures formed in the upper posterior leg portions **54**. The spring-biased pin mechanisms **57** are cooperable with the series of pin-receiving apertures **34** formed in the upper posterior leg portions **54** for enabling the user to selectively lock the upper posterior leg portions **54** in a telescopically extended state relative to the lower posterior leg portions **56**.

A select leg assembly exemplified by the anterior leg assembly **53** in the drawings, but selected from the group consisting of the anterior leg assemblies **13/53** and the posterior leg assemblies **12/52**, may preferably comprise a series of steps as at **40** that traverse along the width of the select leg assembly as exemplified by the anterior leg assembly **53** to provide ability for the user to mount the seat portion or first platform portion **14** when the height adjustable chair apparatuses **10** and/or **50** are in a position of raised height as generally depicted in FIGS. **12-16A** in connection with the height adjustable chair apparatus **50**. Steps **40** further function as crossmember mechanisms to maintain the distance between opposed leg portions and increase the stability thereof.

In other words, the steps **40** enable the user to more readily access the first platform portion **14** when the height adjustable chair apparatuses **10** or **50** are in an elevated configuration relative to the support surface **100**. Further, the height adjustable chair apparatuses **10** or **50** according to the present invention may preferably comprise an anterior-to-posterior leg assembly crossmember mechanism as illustrated in connection with height adjustable chair apparatus **50** in FIGS. **12-15**. The anterior-to-posterior leg assembly crossmember mechanism may preferably comprise a pair of parallel strap-like crossmembers **37** for maintaining a fixed leg distance between the anterior leg assembly **13/53** and the posterior leg assembly **12/52** and stabilizing the same when in a user-support configuration.

The alternative embodiments of the height adjustable chair apparatus **50** according to the present invention shown in FIGS. **12-16A** are believed to be substantially the same as the height adjustable chair apparatus **10** according to the present invention. The embodiment there depicted preferably comprises a seat portion or first platform portion **14**, a pair of leg assemblies as at anterior leg assembly **53** and posterior leg assembly **52**. The anterior leg assembly **53** and the posterior leg assembly **52** are each pivotally attached to the first platform portion **14**, but are separately pivotally attached to the arm rest portions or third platform portions **17** at anterior and posterior pivot attachment points coaxial with pivot axes **124** and **126** instead of singular pivot attachment point as in height adjustable chair apparatus **10**.

The proximal portions of the anterior and posterior leg assemblies **53/52** also feature an expansion and contraction mechanism, preferably in the form of telescoping tubular leg sections (formed of substantially rigid weight-supportive material) or similar other structural features, which allow for a lengthening or shortening of the leg assemblies **53/52** to provide the ability for adjusting the overall height of the height adjustable chair apparatus **50**. Other features of the height adjustable chair apparatuses **10/50** include a back support or second platform portion **16**; first and second armrest portions or third platform portions **17**.

13

These armrests or third platform portions **17** can be additionally supplemented with convenience features for the user such a fold-out tray as at **38** and/or a pouch assembly as at **39** and/or a cup holder as at **41** and/or a pocket formation **42** for holding personal items. Additional possible features of the chair can also include a solar panel to be located on some portion of the height adjustable chair apparatus **10** or **50**. The solar panel provides a power source for the at least one power outlet provided on the chair (not specifically illustrated).

The pivot attachment points between the leg assemblies **52** and **53** and the user support platform assembly **51** provides ability for collapsing/folding the height adjustable chair apparatus for transport/portability and/or storage. Tensile crossmembers **37** exemplified by straps are preferably located between the anterior leg assembly **53** and the posterior leg assembly **52** to provide movement termination point(s) as the leg assemblies **53/52** pivot to a fully open position, user-supportive configuration.

The tensile crossmembers or straps **37** may also wrap around the anterior and posterior leg assemblies **53** and **52** when in the folded/collapsed configuration to secure the leg assemblies **53** and **52** in the collapsed configuration. The height adjustable chair apparatuses **10** and **50** according to the present invention provide basic benefits of being able to collapse and fold just as standard folding chairs, but with the increased benefits related to the novel and unique features mentioned above.

While the above descriptions contain much specificity, this specificity should not be construed as limitations on the scope of the invention, but rather as an exemplification of the invention. In certain embodiments, the basic invention may be said to essentially teach or disclose a height adjustable chair as exemplified by height adjustable chair apparatuses **10** and **50** for enabling a user to vary a select user support height thereof. The height adjustable chair according to the present invention is believed to essentially comprise a user support platform assembly, a posterior leg assembly, and an anterior leg assembly as described hereinabove.

In a preferred embodiment, the user support platform assembly as at **11** preferably comprises a first platform portion or seat portion as at **14**; and a pair of pivot mechanisms as at **15**. Each of the pair of pivot mechanisms **15** comprise an upper pivot axis, a lower pivot axis, a leg-bridge portion as at **18**, a bridge-to-arm portion as at **19**, and a pivot arm portion as at **20**. The pair of pivot mechanisms **15** are firstly and pivotally attached to laterally opposed posterior portions **21** of the first platform portion **14** via the leg-bridge portions **18**. The upper pivot axes of the pair of pivot mechanisms **15** extend through the leg-bridge portions **18** are thereby axially aligned at the first platform portion **14** along a first posterior pivot axis of rotation as at **101**.

The posterior leg assembly as at **12** essentially comprises laterally opposed upper posterior leg portions, laterally opposed lower posterior leg portions extendable relative to the upper posterior leg portions, and a posterior locking mechanism for locking the lower posterior leg portions in extended relation relative to the upper posterior leg portions. The pair of pivot mechanisms **15** are secondly and pivotally attached to the upper posterior leg portions. The lower pivot axes extending orthogonally through the pivot arm portions **20** of the pair of pivot mechanisms **15** are thereby axially aligned at the upper posterior leg portions at the second posterior pivot axis of rotation as at **102**.

The anterior leg assembly **13** essentially comprises laterally opposed upper anterior leg portions, laterally opposed

14

lower anterior leg portions extendable relative to the upper anterior leg portions, and an anterior locking mechanism for locking the lower anterior leg portions in extended relation relative to the upper anterior leg portions. The upper anterior leg portions are pivotally attached to laterally opposed anterior portions the first platform portion **14** along a first anterior pivot axis of rotation as at **103**.

The anterior leg assembly is further pivotally attached to the posterior leg assembly at a second leg-to-leg anterior pivot axis of rotation as at **104**. The first support platform **14** is operable to support a user thereupon. The anterior and posterior leg assemblies together enable the user to vary the height of the first support platform **14** relative to a support surface **100** upon which the height adjustable chair is positioned. The height adjustable chair according to the present invention thereby enables the user to vary a select support height of the chair relative to the support surface.

Referencing FIGS. **17A** and **17B**, the reader will there consider that the present invention contemplates a height adjustable chair assembly whereby both the posterior leg assembly and the anterior leg assembly may preferably comprise a series of telescopic leg segments such that each successive leg segment is outfitted with its own locking mechanism cooperable with the leg segment that telescopes relative thereto for locking the telescoping leg segment in extended relation relative to the locking mechanism. In this regard, FIG. **17A** provides a first sequential fragmentary perspective view of an alternative leg assembly unit with a series of individual telescopic leg segments **61** shown in a fully telescopically collapsed configuration.

FIG. **17B** is a second sequential fragmentary perspective view of the alternative leg assembly unit with the series of individual telescopic leg segments **61** shown in a telescopically extended configuration. Each individual telescopic leg segment **61** is outfitted with a locking mechanism **62** exemplified by a pin locking mechanism cooperable with a pin-receiving aperture formed in the telescopic leg portion **63** telescopically received thereby. Fragmentary step portions are depicted at **64** which step portions **64** have been fragmented from the series of steps otherwise referenced at **40** for ease of illustration, and tying the structural concept of telescopic leg segments **61** to the height adjustable chairs **10** and **50** as being a further structural option for the present invention. Accordingly, it is contemplated height adjustable chair according to the present invention, in either iteration, may preferably provide a posterior leg assembly and an anterior leg assembly comprising at least one, but optionally a series of individually telescopic leg segments for enabling the user to selectively vary the height of the first platform portion relative to the support surface.

The user support platform assembly preferably comprises a second platform portion or back support portion **16**, which second platform portion **16** is pivotally attached to the first platform portion at the first posterior pivot axis of rotation in the preferred embodiment. The user support platform assembly **11** further preferably comprises laterally opposed third platform portions or armrest portions **17**, which laterally opposed third platform portions are pivotally attached to laterally opposed portions of the second platform portion **16** along a third posterior pivot axis of rotation as at **105** as well as being pivotally attached to the second leg-to-leg anterior pivot axis of rotation **104** in the preferred embodiment.

The anterior leg assembly comprises an anterior crossmember and the posterior leg assembly comprises a posterior crossmember. The anterior crossmember maintains a fixed first anterior distance between and stabilizes the lower anterior leg portions, and the posterior crossmember main-

15

tains a fixed first posterior distance between and stabilizes the lower posterior leg portions. The anterior locking mechanism extends intermediate lower portions of the upper anterior leg portions and the posterior locking mechanism extends intermediate lower portions of the upper posterior leg portions. The anterior locking mechanism maintains a fixed second anterior distance between and stabilizes the upper anterior leg portions. The posterior locking mechanism maintains a fixed second posterior distance between and stabilizes the lower posterior leg portions.

The anterior leg assembly extends in an anterior leg plane as at plane 106 and the posterior leg assembly extends in a posterior leg plane as at plane 107. The anterior leg plane 106 is preferably angled relative to the posterior leg plane 107 at a select oblique angle as at 108. The select oblique angle is preferably between 50 and 55 degrees. In the preferred embodiment, the lower anterior leg portions are telescopically receivable in and extendable from the upper anterior leg portions and the lower posterior leg portions are telescopically receivable in and extendable from the upper posterior leg portions.

An anterior distance or variable height between the first platform portion to a lowermost portion of the lower anterior leg portions provides a first quotient value and a lowermost distance between the lowermost portion of the lower anterior leg portions to a lowermost portion of the lower posterior leg portions provides a second quotient value. The height-to-leg span ratio of the first quotient value to the second quotient value is preferably between 0.60 when in a minimum chair height configuration and 0.75 when in a maximum chair height configuration.

The first, second, and third posterior pivot axes are together cooperable with the first and second anterior pivot and the structural features to enable the user to collapse the height adjustable chair into a collapsed configuration for ease of transport and stowage. A select leg assembly may preferably comprise a series of steps as referenced at 40. The select leg assembly is selected from the group consisting of the anterior leg assembly and the posterior leg assembly, and the series of steps enable the user to more readily access the first platform portion when the height adjustable chair is in an elevated configuration relative to the support surface. An anterior-to-posterior leg assembly crossmember mechanism as at 37 maintains a fixed leg distance between the anterior leg assembly and the posterior leg assembly and stabilizes the same when in a user-support configuration.

In an alternative embodiment, the present invention contemplates a height adjustable chair for enabling a user to vary a select user support height thereof, which height adjustable chair may be said to essentially comprise a user support platform assembly, a posterior leg assembly, and an anterior leg assembly. The user support platform assembly essentially comprises a first platform portion and a pair of pivot mechanisms. The pair of pivot mechanisms each provide first and second pivot axes of rotation, and are firstly and pivotally attached to laterally opposed posterior portions of the user support platform assembly thereby being axially aligned at the first platform portion along a first pivot axis of rotation.

The posterior leg assembly may be said to essentially comprise laterally opposed lower posterior leg portions, laterally opposed upper posterior leg portions extendable relative to the lower posterior leg portions, and a posterior locking mechanism for locking the upper posterior leg portions in extended relation relative to the lower posterior leg portions. The pair of pivot mechanisms secondly and

16

pivotally attach to the upper posterior leg portions thereby being axially aligned at the upper posterior leg portions at a second pivot axis of rotation.

The anterior leg assembly comprising laterally opposed lower anterior leg portions, laterally opposed upper anterior leg portions extendable relative to the lower anterior leg portions, and an anterior locking mechanism for locking the upper anterior leg portions in extended relation relative to the lower anterior leg portions. The upper anterior leg portions are pivotally attached to laterally opposed anterior portions of the first platform portion along a third pivot axis of rotation. The first support platform supports a user, and the anterior and posterior leg assemblies enable the user to vary the height of the first support platform relative to a support surface.

The user support platform assembly of the alternative height adjustable chair may also comprise a second platform portion that pivotally attaches to the first platform portion at the first posterior pivot axis of rotation, and laterally opposed third platform portions that pivotally attach to laterally opposed portions of the second platform portion along a fourth posterior pivot axis of rotation.

The anterior leg assembly comprises at least one anterior crossmember and the posterior leg assembly comprises at least one posterior crossmember, the at least one anterior crossmember maintaining a fixed first anterior distance between the lower anterior leg portions and the at least one posterior crossmember maintaining a fixed first posterior distance between the lower posterior leg portions.

The upper anterior leg portions of the alternative embodiment are preferably telescopically receivable in and extendable from the lower anterior leg portions and the upper posterior leg portions of the alternative embodiment are telescopically receivable in and extendable from the lower posterior leg portions. This feature is optional and not critical to the practice of the alternative embodiment, and the reader will note that the relative leg-to-leg portion extendibility is central to the practice of the present invention.

The first, second, third and fourth pivot axes of rotation are cooperable to enable the user to collapse the height adjustable chair into a collapsed configuration for ease of transport and stowage. The height adjustable chair, as illustrated in connection with the alternative embodiment, may preferably comprise a series of steps for enabling the user to more readily access the first platform portion when the height adjustable chair is in an elevated configuration relative to the support surface. Further, to stabilize alternative embodiment, the invention contemplates an anterior-to-posterior leg assembly crossmember mechanism exemplified by strap-like elements for maintaining a fixed leg distance between the anterior leg assembly and the posterior leg assembly when in a user-support configuration.

Accordingly, although the invention has been described by reference to certain preferred embodiments, it is not intended that the novel arrangement and methods be limited thereby, but that modifications thereof are intended to be included as falling within the broad scope and spirit of the foregoing disclosures and the appended drawings. Insofar as the description above and the accompanying drawings disclose any additional subject matter that is not within the scope of the claims below, the embodiments are not dedicated to the public and the right to file one or more applications to claim such additional embodiments is reserved.

What is claimed is:

1. A collapsible and height adjustable chair for enabling a user to vary a select user support height thereof, the collapsible and height adjustable chair comprising:

a user support platform assembly, the user support platform assembly comprising a first platform portion and a pair of pivot mechanisms, each of the pair of pivot mechanisms being firstly and pivotally attached to laterally opposed posterior portions of the first platform portion, upper pivot axes of the pair of pivot mechanisms thereby being axially aligned at the first platform portion along a first posterior pivot axis of rotation;

a posterior leg assembly, the posterior leg assembly comprising laterally opposed upper posterior leg portions, laterally opposed lower posterior leg portions extendable relative to the upper posterior leg portions, and a posterior locking mechanism for locking the lower posterior leg portions in extended relation relative to the upper posterior leg portions, the pair of pivot mechanisms being secondly and pivotally attached to the upper posterior leg portions, lower pivot axes of the pair of pivot mechanisms thereby being axially aligned at the upper posterior leg portions at a second posterior pivot axis of rotation; and

an anterior leg assembly, the anterior leg assembly comprising laterally opposed upper anterior leg portions, laterally opposed lower anterior leg portions extendable relative to the upper anterior leg portions, and an anterior locking mechanism for locking the lower anterior leg portions in extended relation relative to the upper anterior leg portions, the upper anterior leg portions being pivotally attached to laterally opposed anterior portions of the first platform portion along a first anterior pivot axis of rotation, the anterior leg assembly being pivotally attached to the posterior leg assembly at a second anterior pivot axis of rotation;

the first support platform extending in a support plane when the height adjustable chair is supported by a support surface for supporting a user thereupon in elevated relation relative to the support surface, the support plane extending in a select oblique angle relative to the support surface;

the laterally opposed lower posterior leg portions being configured to extend incrementally relative to the upper posterior leg portions and the laterally opposed lower anterior leg portions being configured to extend incrementally relative to the upper anterior leg portions such that posterior incremental extensions of the laterally opposed lower posterior leg portions are greater in length than anterior incremental extensions of laterally opposed lower anterior leg portions for maintaining the select oblique angle as the user varies the height of the first support platform relative to the support surface.

2. The height adjustable chair of claim 1 wherein the user support platform assembly comprises a second platform portion, the second platform portion being pivotally attached to the first platform portion at the first posterior pivot axis of rotation.

3. The height adjustable chair of claim 2 wherein the user support platform assembly comprises laterally opposed third platform portions, the laterally opposed third platform portions being pivotally attached to laterally opposed portions of the second platform portion along a third posterior pivot axis of rotation.

4. The height adjustable chair of claim 3 wherein the first, second, and third posterior pivot axes of rotation are cooperable with the first and second anterior pivot axes of

rotation to enable the user to collapse the height adjustable chair into a collapsed configuration for ease of transport and storage.

5. The height adjustable chair of claim 1 wherein the anterior leg assembly comprises an anterior crossmember and the posterior leg assembly comprises a posterior crossmember, the anterior crossmember maintaining a fixed first anterior distance between the lower anterior leg portions and the posterior crossmember maintaining a fixed first posterior distance between the lower posterior leg portions.

6. The height adjustable chair of claim 1 wherein the anterior locking mechanism extends intermediate lower portions of the upper anterior leg portions and the posterior locking mechanism extends intermediate lower portions of the upper posterior leg portions, the anterior locking mechanism maintaining a fixed second anterior distance between the upper anterior leg portions, the posterior locking mechanism maintaining a fixed second posterior distance between the upper posterior leg portions.

7. The height adjustable chair of claim 1 wherein the anterior leg assembly extends in an anterior leg plane and the posterior leg assembly extends in a posterior leg plane, the anterior leg plane being angled relative to the posterior leg plane at a select oblique angle, the select oblique angle being between 50 and 55 degrees.

8. The height adjustable chair of claim 7 wherein a vertical height between the first platform portion to a first lower portion of the lower anterior leg portions provides a first quotient value and a horizontal distance between a second lower portion of the lower anterior leg portions to a first lower portion of the lower posterior leg portions provides a second quotient value, the ratio of the first quotient value to the second quotient value being between 0.60 when in a minimum chair height configuration and 0.75 when in a maximum chair height configuration, the posterior incremental extensions and the anterior incremental extensions for supporting the ratio as the user varies the height of the first support platform relative to the support surface.

9. A collapsible and height adjustable chair for enabling a user to vary a select user support height thereof, the collapsible and height adjustable chair comprising:

a user support platform assembly, the user support platform assembly comprising a first platform portion and a pair of pivot mechanisms, each of the pair of pivot mechanisms being firstly and pivotally attached to laterally opposed posterior portions of the user support platform assembly, the pair of pivot mechanisms thereby being axially aligned at the first platform portion along a first pivot axis of rotation;

a posterior leg assembly, the posterior leg assembly comprising laterally opposed lower posterior leg portions, laterally opposed upper posterior leg portions extendable relative to the lower posterior leg portions, and a posterior locking mechanism for locking the upper posterior leg portions in extended relation relative to the lower posterior leg portions, the pair of pivot mechanisms being secondly and pivotally attached to the upper posterior leg portions, the pair of pivot mechanisms thereby being axially aligned at the upper posterior leg portions at a second pivot axis of rotation; and

an anterior leg assembly, the anterior leg assembly comprising laterally opposed lower anterior leg portions, laterally opposed upper anterior leg portions extendable relative to the lower anterior leg portions, and an anterior locking mechanism for locking the upper anterior leg portions in extended relation relative to the

lower anterior leg portions, the upper anterior leg portions being pivotally attached to laterally opposed anterior portions of the first platform portion along a third pivot axis of rotation;

the first support platform extending in a support plane when the height adjustable chair is supported by a support surface for supporting a user thereupon in elevated relation relative to the support surface, the support plane extending in a select oblique angle relative to the support surface;

the laterally opposed lower posterior leg portions being configured to extend incrementally relative to the upper posterior leg portions and the laterally opposed lower anterior leg portions being configured to extend incrementally relative to the upper anterior leg portions such that posterior incremental extensions of the laterally opposed lower posterior leg portions are greater in length than the anterior incremental extensions of laterally opposed lower anterior leg portions for maintaining the select oblique angle as the user varies the height of the first support platform relative to support surface.

10. The height adjustable chair of claim 9 wherein the user support platform assembly comprises a second platform portion, the second platform portion being pivotally attached to the first platform portion at the first pivot axis of rotation.

11. The height adjustable chair of claim 10 wherein the user support platform assembly comprises laterally opposed third platform portions, the laterally opposed third platform portions being pivotally attached to laterally opposed portions of the second platform portion along a fourth pivot axis of rotation.

12. The height adjustable chair of claim 11 wherein the first, second, third and fourth pivot axes of rotation are cooperable to enable the user to collapse the height adjustable chair into a collapsed configuration for ease of transport and storage.

13. The height adjustable chair of claim 9 wherein the anterior leg assembly comprises at least one anterior crossmember and the posterior leg assembly comprises at least one posterior crossmember, the at least one anterior crossmember maintaining a fixed first anterior distance between the lower anterior leg portions and the at least one posterior crossmember maintaining a fixed first posterior distance between the lower posterior leg portions.

14. A height adjustable chair, the height adjustable chair comprising:

a user support platform assembly, the user support platform assembly comprising a first platform portion;

a posterior leg assembly, the posterior leg assembly comprising posterior leg portions incrementally extendable relative to one another and a posterior

locking mechanism for locking the posterior leg portions in incrementally extended relation relative to one another; and

an anterior leg assembly, the anterior leg assembly comprising anterior leg portions incrementally extendable relative to one another and an anterior locking mechanism for locking the anterior leg portions in incrementally extended relation relative to one another;

the first support platform extending in a support plane when the height adjustable chair is supported by a support surface for supporting a user thereupon in elevated relation relative to the support surface, the support plane extending in a select oblique angle relative to the support surface;

the posterior leg portions being configured to extend incrementally such that posterior incremental extensions are greater in length than the anterior incremental extensions of the anterior leg portions for maintaining the select oblique angle as the user varies the height of the first support platform relative to the support surface.

15. The height adjustable chair of claim 14 wherein the user support platform assembly comprises a second platform portion and laterally opposed third platform portions.

16. The height adjustable chair of claim 15 comprising a series of pivot axes, the series of pivot axes enabling the user to collapse the height adjustable chair into a collapsed configuration for ease of transport and storage.

17. The height adjustable chair of claim 14 wherein the anterior leg assembly comprises at least one anterior crossmember and the posterior leg assembly comprises at least one posterior crossmember, the at least one anterior crossmember maintaining a fixed distance between the anterior leg portions and the at least one posterior crossmember maintaining a fixed distance between the posterior leg portions.

18. The height adjustable chair of claim 14 comprising a series of steps, the series of steps for enabling the user to more readily access the first platform portion when the height adjustable chair is in an elevated configuration relative to the support surface.

19. The height adjustable chair of claim 14 comprising an anterior-to-posterior leg assembly crossmember mechanism, the anterior-to-posterior leg assembly crossmember mechanism for maintaining a fixed leg distance between the anterior leg assembly and the posterior leg assembly when in a user-support configuration.

20. The height adjustable chair of claim 14 wherein the posterior leg assembly and the anterior leg assembly each comprise a series of telescopic leg segments for enabling the user to selectively vary the height of the first platform portion relative to the support surface.

* * * * *