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(54) BABY CHANGING STATION

(71) Applicant: **BOBRICK WASHROOM EQUIPMENT, INC.**, North Hollywood, CA (US)

(72) Inventors: **Dikran Babikian**, Glendale, CA (US); **Branko Bem**, Plano, TX (US)

(73) Assignee: **Bobrick Washroom Equipment, Inc.**, North Hollywood, CA (US)

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Appl. No.: **12/543,173**
Filed: **Aug. 18, 2009**

U.S. Applications:
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A47C 16/00 (2006.01)
A47D 5/00 (2006.01)

(52) **U.S. Cl.**
CPC ***A47D 5/006*** (2013.01); ***A47D 5/003*** (2013.01); *Y10T 29/49826* (2015.01)

(58) **Field of Classification Search**
CPC A47D 5/00; A47D 5/003; A47D 5/006
See application file for complete search history.

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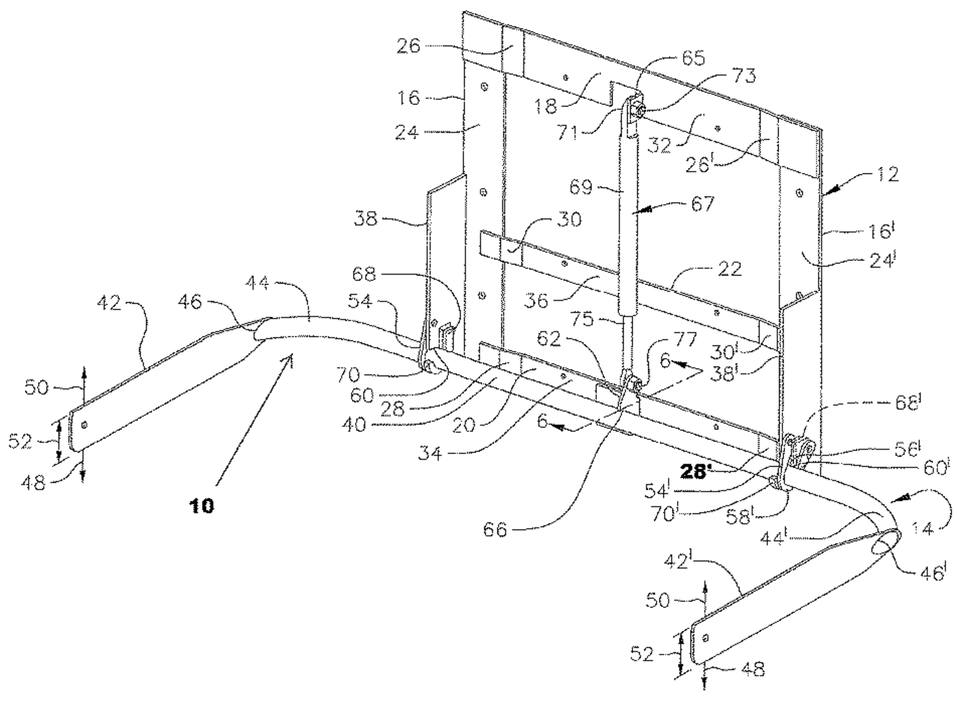
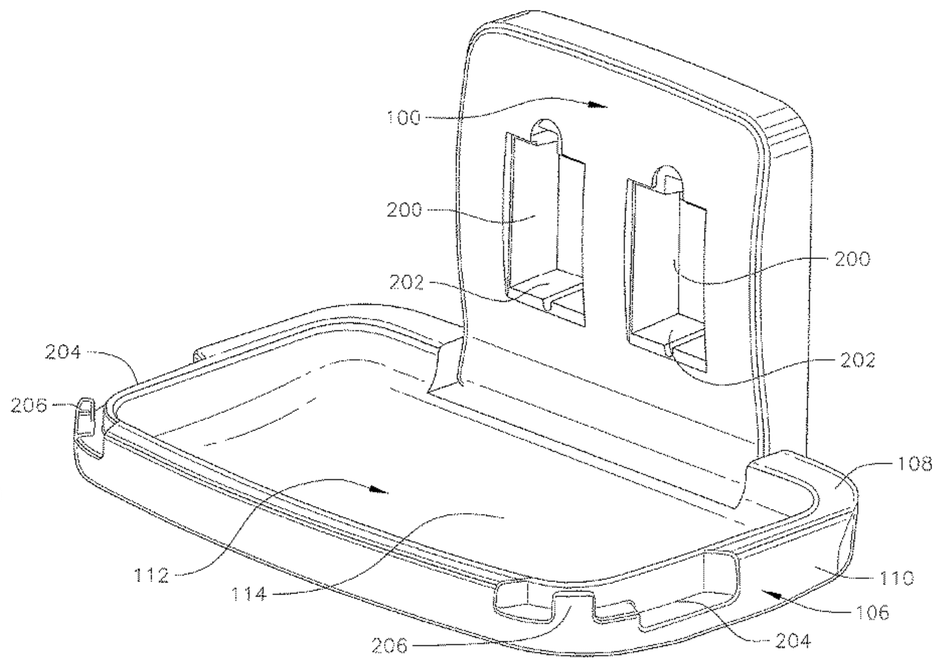
Primary Examiner — Sara S Clarke
(74) *Attorney, Agent, or Firm* — Lewis Roca Rothgerber Christie LLP

(57) ABSTRACT

A baby supporting device is provided which includes a frame. The frame includes a first portion for mounting onto a wall and a second portion pivotally coupled to the first portion and rotatable between a first position and a second position. A first stop member extends from the first portion, and a second stop member extends from the second portion, such that when the second stop member engages the first stop member it stops the second portion at the second position. A first surface covers at least a portion of the first portion, and a second surface covers at least a portion of the second portion.

22 Claims, 7 Drawing Sheets





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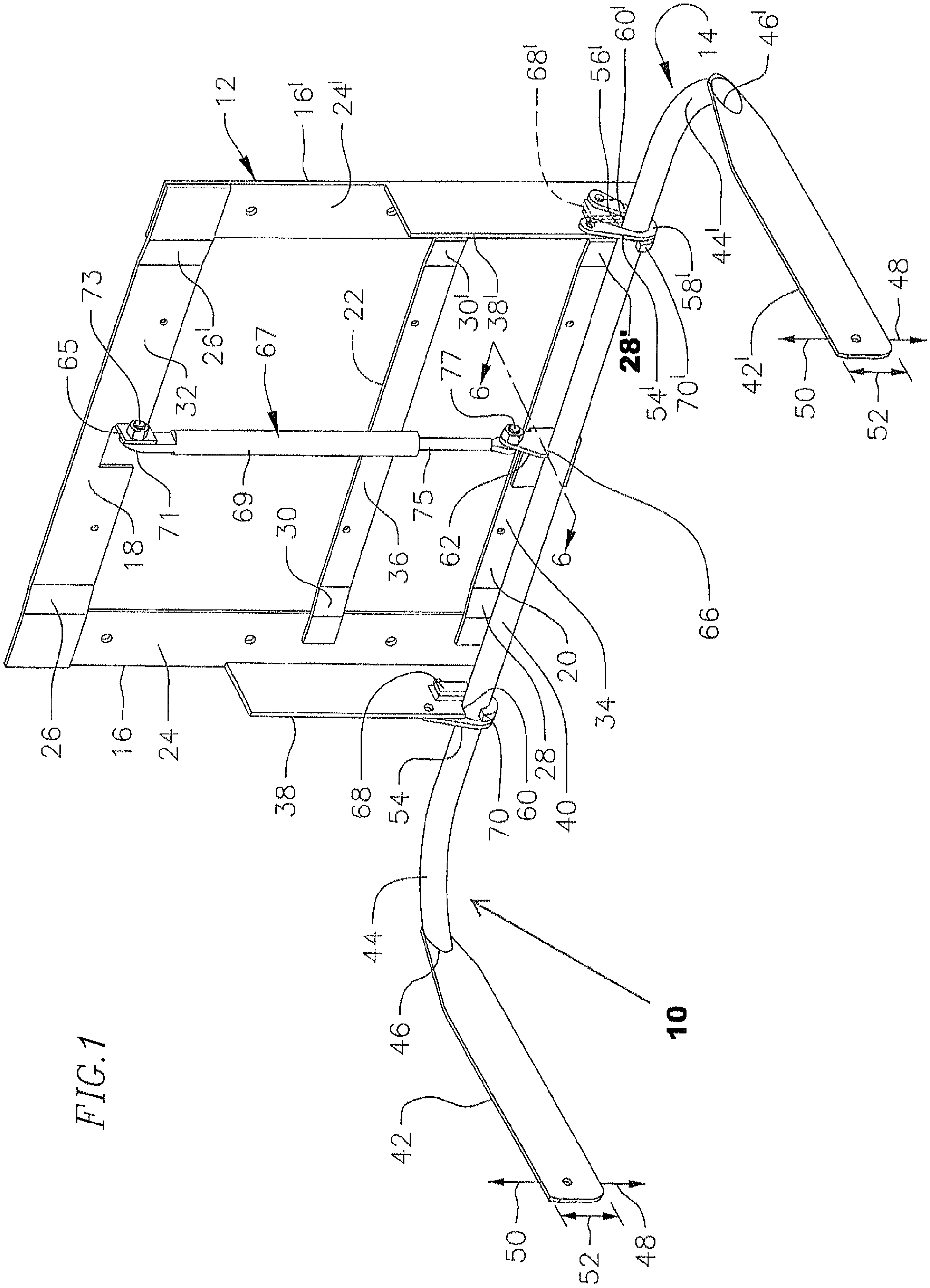
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FIG.1

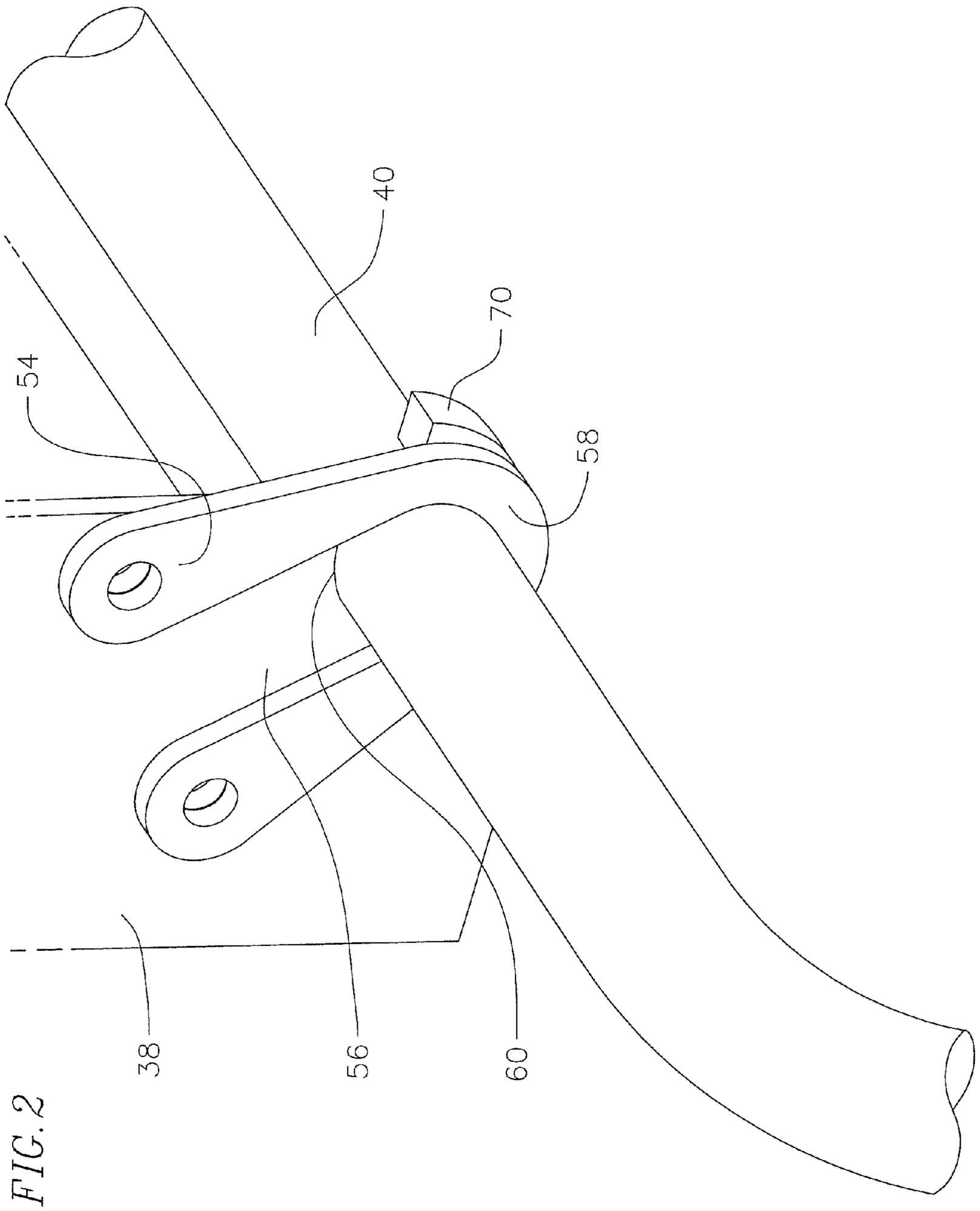
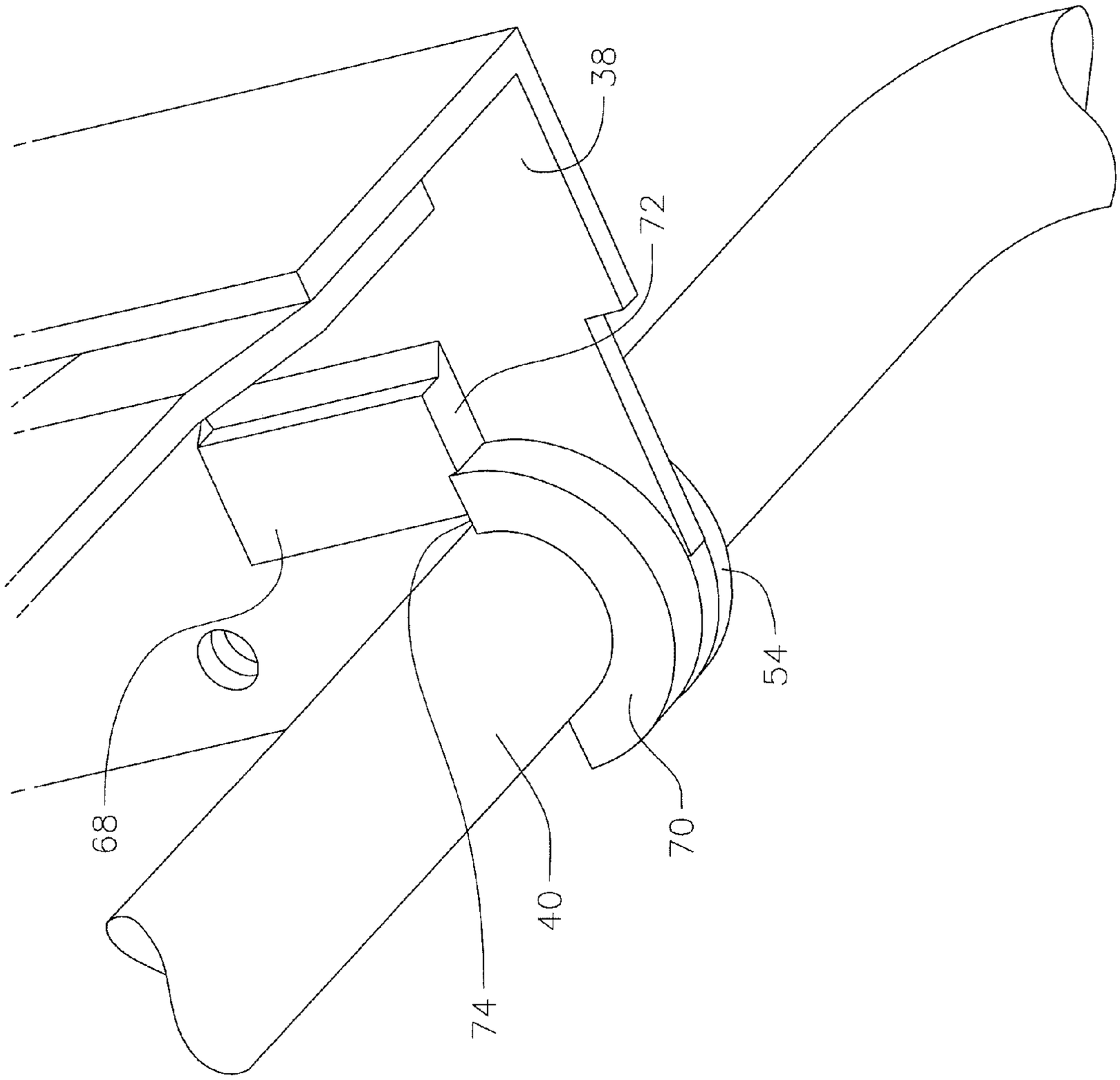


FIG. 2

FIG. 3



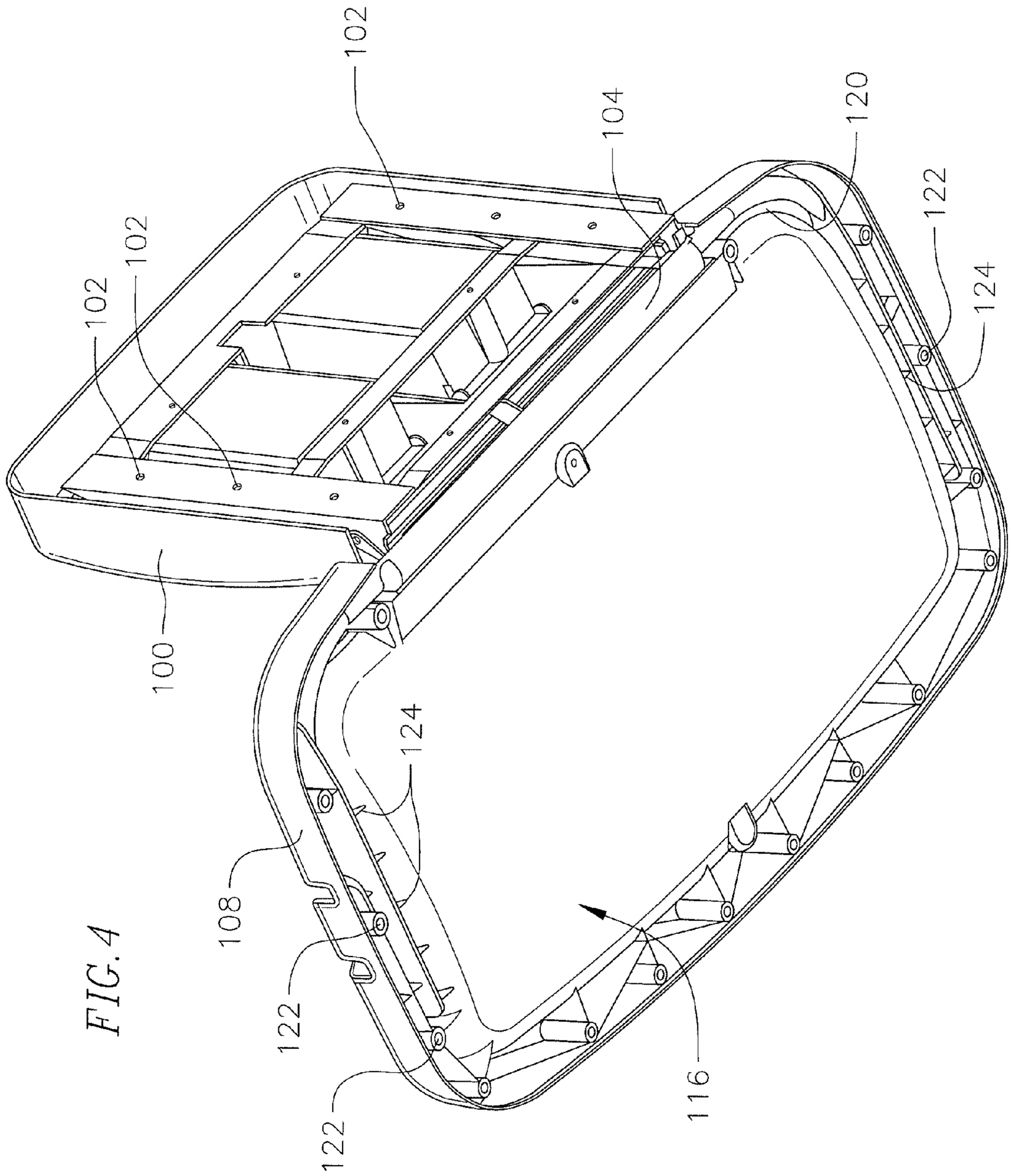


FIG. 4

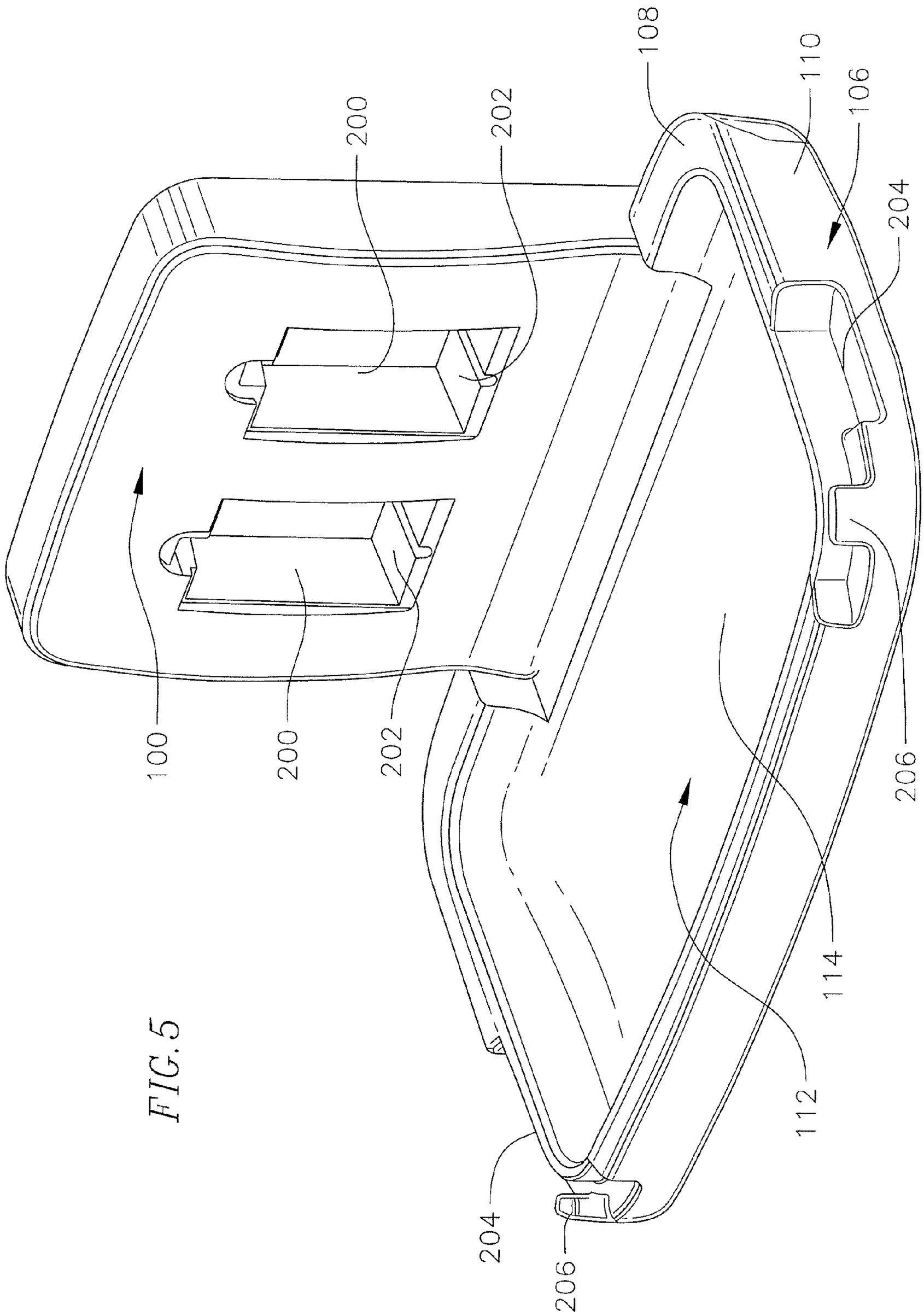


FIG. 5

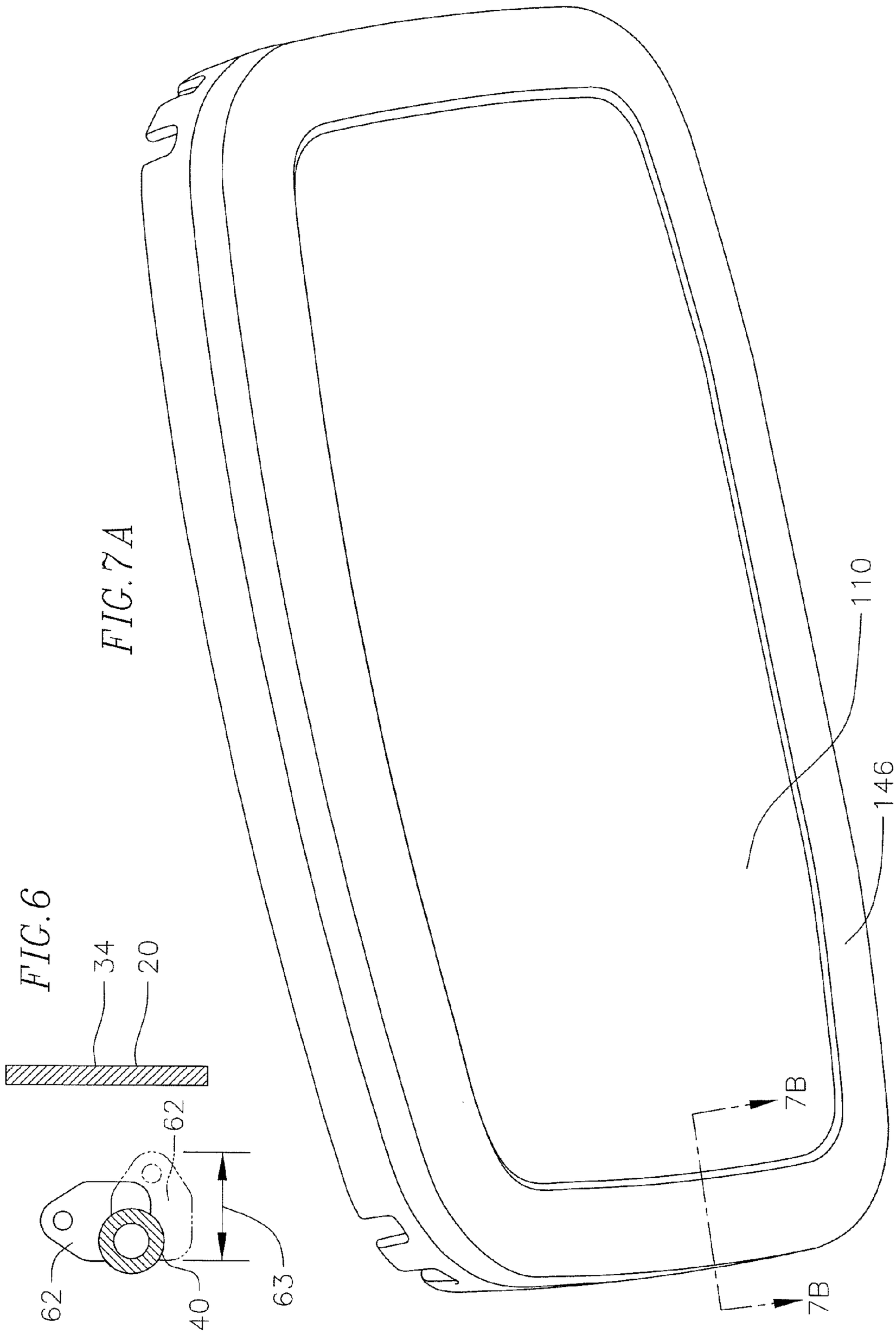


FIG. 7A

FIG. 6

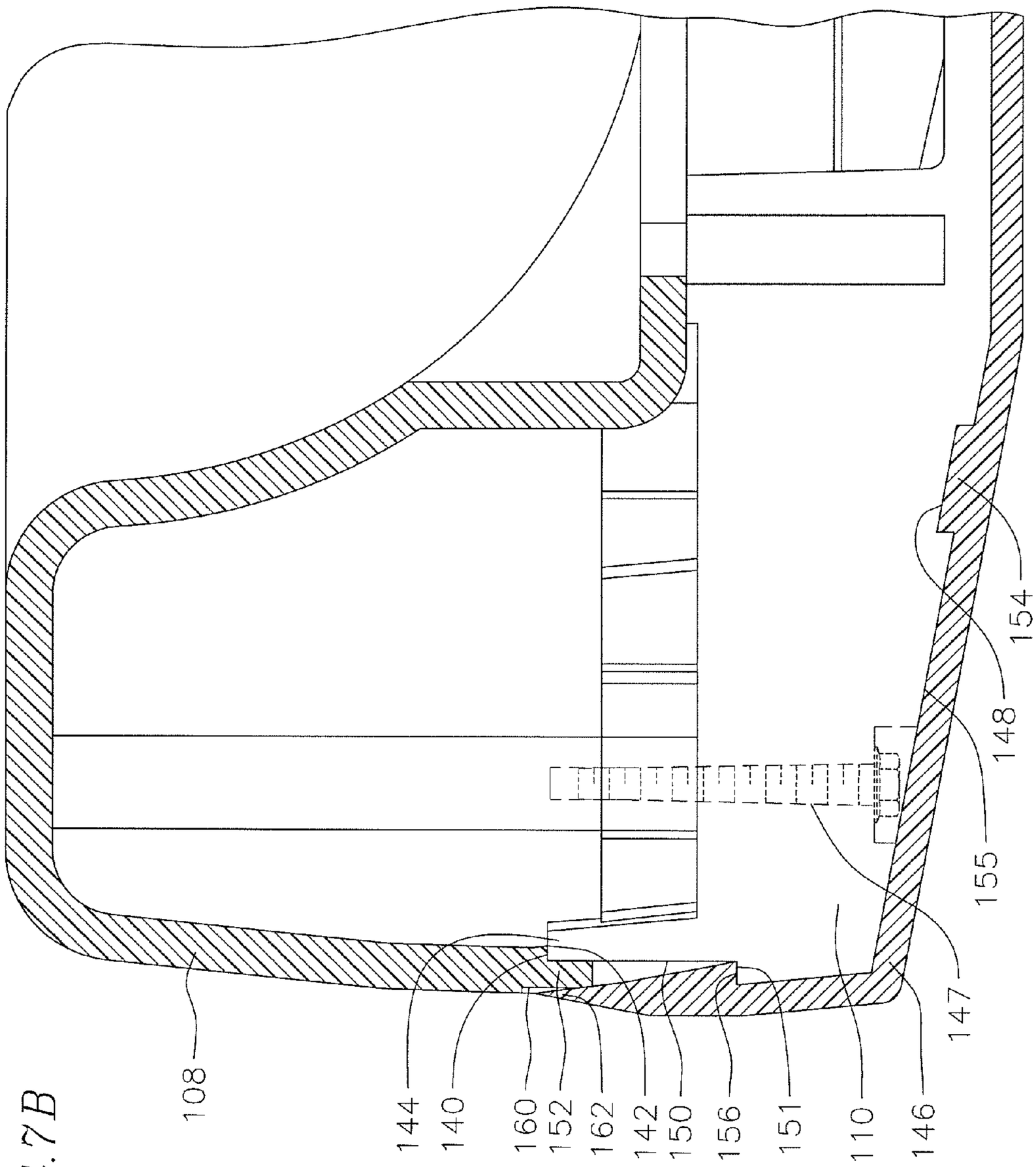


FIG. 7B

BABY CHANGING STATION

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates the additions made by reissue; a claim printed with strikethrough indicates that the claim was canceled, disclaimed, or held invalid by a prior post-patent action or proceeding.

CROSS-REFERENCE TO RELATED APPLICATION

[This application is a continuation-in-part application of application Ser. No. 12/221,918 filed on Aug. 6, 2008, the entire content of which is incorporated herein by reference.] *The present application is a reissue of U.S. Pat. No. 8,365,328 issued Feb. 5, 2013, filed as U.S. application Ser. No. 12/543,173 on Aug. 18, 2009, which was a continuation-in-part application of U.S. application Ser. No. 12/221,918 filed on Aug. 6, 2008, now U.S. Pat. No. 8,375,490, the entire contents of which are incorporated herein by reference.*

BACKGROUND

Baby changing stations are widely used, especially in public facilities. Conventional baby changing stations generally have a base that is mounted vertically onto a wall and a support platform that is hingedly mounted directly to the base. Typically, the base and platform are formed from a resinous or plastic material and react a majority, if not all, of the loads that the baby changing station is exposed to. Conventional baby changing stations are sufficiently strong to support the weight of a baby or a toddler. However, when excess weight is placed on such stations, as for example when an adult exerts his or her own weight on the changing station or when two children are placed on the baby changing station, the weight limits of a baby changing station may be exceeded and the baby changing station may fail, possibly causing injury to those being supported by it. Therefore, stronger baby changing stations capable of withstanding excess loads are desired.

SUMMARY OF THE INVENTION

In an exemplary embodiment, a baby supporting device is provided including a frame having a base portion for mounting onto a wall, a platform portion pivotally coupled to the base portion, the platform portion including a first rotatable section and two spaced apart arms extending from the first rotatable section, the first rotatable section rotating about a longitudinal axis. The device also includes a bracket coupled to the base portion, such that the bracket surrounds at least a portion of and supports the platform portion first rotatable section and allows the platform portion first rotatable section to rotate within the bracket relative to the bracket about the longitudinal axis, whereby rotation of the first rotatable section causes the platform portion to pivot relative to said base portion. The device also requires a first stop member extending from the first rotatable section, and a second stop member extending from the base portion, where the second stop member is engageable by the first stop member for stopping the rotation of the first rotatable section in a first direction. Moreover, the device requires a base covering at least a portion of the base portion, and a platform for supporting the baby extending over at least a portion of the frame platform portion. In a further exemplary embodiment,

the device also includes an actuator connected to the base portion and the platform portion for providing a force for urging the platform portion to rotate toward the base portion. In yet another exemplary embodiment, the second stop member is an arcuate member, the frame platform portion first rotatable section is a tubular member, and the arcuate second stop member is connected to the tubular member outer surface. In yet another exemplary embodiment, the platform includes a first portion defining a supporting surface for supporting the baby and a second portion, wherein the arms are sandwiched between the first and second platform portions. In yet a further exemplary embodiment, each of the arms is a plate extending along a generally vertical plane. In a further exemplary embodiment, the device includes another bracket coupled to the base portion, the another bracket being spaced apart from the bracket and surrounding at least a portion of and supporting the platform portion first rotatable section and allowing the platform portion first rotatable section to rotate relative to the another bracket. In an exemplary embodiment, each bracket is generally U-shaped. In yet another exemplary embodiment, the second stop member engages the first stop member at a location which is at a level not above and not below the first rotatable section.

In another exemplary embodiment, a baby supporting device is provided including a frame having a base portion for mounting onto a wall, a platform portion pivotally coupled to the base portion, the platform portion including a first rotatable section and two spaced apart arms extending from the first rotatable section, the first rotatable section penetrating the base portion and rotating about a longitudinal axis. The device also has a first stop member extending from the first rotatable section, and a second stop member extending from the base portion, where the second stop member is engageable by the first stop member for stopping the rotation of the first rotatable section in a first direction. The device also includes a base covering at least a portion of said base portion, and a platform for supporting the baby extending over at least a portion of the frame platform portion. In an further exemplary embodiment, the second stop member engages the first stop member at a location which is at a level not above and not below the first rotatable section.

In another exemplary embodiment, a method is provided for mounting a baby changing station to wall. The method includes providing a frame first member, mounting the first member to the wall, mounting a baby support surface on a frame second member, and connecting the frame second member to the frame first member, whereby the second member can rotate relative to the first member for rotation of the support surface relative to the first member. In another exemplary embodiment, the method further includes connecting an actuator to the first member, and connecting the actuator to the second member. In yet another exemplary embodiment, connecting includes mounting brackets onto the first member for supporting the second member.

In a further exemplary embodiment, a baby supporting device is provided including a frame including a first portion and a second portion rotatably coupled to the first portion, a cover covering the first portion, and a platform including a first piece defining a bed for receiving a baby. The first piece includes a peripheral edge and a shoulder formed proximate the peripheral edge. The device also includes a second piece coupled to the first piece, wherein at least part of the frame second portion is sandwiched between the first and second pieces. The second piece includes a peripheral edge adjacent the first shoulder, a depression, and a second shoulder. The

device also includes a trim piece. The trim piece includes a projection received in the depression and a third shoulder proximate the second shoulder. In yet a further exemplary embodiment, the third shoulder engages the second shoulder and wherein when the third shoulder engages the second shoulder and the projection is received in the depression, a tension is created between the third shoulder and the projection for retaining the trim piece on the second piece. In another exemplary embodiment, the trim piece includes a peripheral edge extending beyond the first shoulder in a direction away from the second piece.

In another exemplary embodiment, a baby supporting device is provided including a frame including a first portion and a second portion rotatably coupled to the first portion, a cover covering the first portion, and a platform including, a depression, and a second shoulder. The device also includes and a trim piece including a projection received in the depression and a third shoulder proximate the second shoulder. In yet another exemplary embodiment, the third shoulder engages the second shoulder and wherein when the third shoulder engages the second shoulder and the projection is received in the depression, tension is created between the third shoulder and the projection for retaining the trim piece on the second piece.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view of an exemplary embodiment frame incorporated in an exemplary embodiment baby changing station of the present invention.

FIG. **2** is a partial perspective view of the frame shown in FIG. **1** showing a bracket supporting a platform portion of the frame.

FIG. **3** is a partial perspective view of the frame shown in FIG. **1** showing a stop bracket and stop member incorporated in the frame.

FIG. **4** is a bottom perspective view of an exemplary embodiment baby changing station incorporating the frame shown in FIG. **1** absent a lower piece of a platform.

FIG. **5** is a perspective view of an exemplary embodiment baby changing station of the present invention.

FIG. **6** is a cross-sectional view taken along arrows **6-6** shown in FIG. **1**.

FIG. **7**A is a perspective view of platform of baby changing station of the present invention including a trim piece.

FIG. **7**B is a partial cross-sectional view of the platform shown in FIG. **7**A taken along arrows **7**B-**7**B.

DETAILED DESCRIPTION OF THE INVENTION

In the following description, only certain exemplary embodiments of the present invention are shown and described by way of illustration. As those skilled in the art would recognize, the invention may be embodied in many different forms and should not be construed as being limited only to the embodiments set forth herein.

It should be noted that the terms "upper" and "lower" as used herein are terms used to denote the relative position of objects and not necessarily the exact position of such objects. For example, a "lower" object may in certain situations be located over an "upper" object.

In an exemplary embodiment of the present invention, a baby changing station ("BCS") is provided that includes a frame. The frame includes a base portion and a platform portion. The frame platform portion is pivotally coupled to the frame base portion. The frame in an exemplary embodiment is formed from metallic materials. However, in other embodiments, it may be formed from other high strength materials, such as composite materials. The frame base portion is mountable onto a wall. A cover is mounted over the base frame portion. Such cover may be mounted to the base frame portion directly and/or to the wall. A platform is mounted over the frame platform portion.

An exemplary BCS of the present invention includes a frame **10** having frame base portion **12** and frame platform portion **14**, as shown in FIG. **1**. In an exemplary embodiment as shown in FIG. **1**, the frame base portion is generally a rectangular or a square member formed by first and second lateral members **16**, **16'**, respectively, which are interconnected by first and second transverse members **18** and **20**, respectively. In an exemplary embodiment, a third transverse member **22** may be provided interconnecting the two lateral members **16**, **16'**. In the shown exemplary embodiment, the third transverse member **22** is positioned between the first and second transverse members **18** and **20**. In the shown exemplary embodiment, each of the lateral members is welded to the transverse members. In other exemplary embodiments, these members may be connected to each other using other fastening means such as adhesives or fasteners. In an exemplary embodiment as shown in FIG. **1**, the transverse members are connected to a front surface **24**, **24'** of each of the lateral members. In the shown exemplary embodiment, the first, second and third transverse members include joggled portions **26**, **28** and **30**, respectively, proximate the first lateral member **16** and joggled portions **26' 28'** and **30'**, respectively proximate the second lateral member **16'**. In this regard, middle portions **32**, **34**, and **36** of the transverse members are set back from the front surfaces **24**, **24'** of the lateral members.

A member **38**, **38'** referred to herein as a "support member" extends from each of the lateral members **16**, **16'**, respectively. In the shown exemplary embodiment, each of these members is a flat panel which may be welded or otherwise attached to its corresponding lateral member or may be integrally formed with its corresponding lateral member. For example, the member **38**, **38'** may be part of the lateral member **16**, **16'**, respectively, and then bent forward, as for example shown in FIG. **1**.

In an exemplary embodiment as shown in FIG. **1**, the frame platform portion **14** includes a main section **40** which is generally tubular and which is pivotally coupled to the frame base portion so as to be able to rotate about a central longitudinal axis of the main section. At either end of the tubular section, attached generally flat arm portions **42** and **42'**. The arm portions **42**, **42'** in the exemplary embodiment as shown in FIG. **1**, are welded onto the ends of the main section **40**. In an exemplary embodiment, opposite end portions **44**, **44'** of the main section **40** are curved. In the exemplary embodiment shown in FIG. **1** where the end portions **44**, **44'** are tubular and curved, they have an oval cross-section **46**, **46'** as viewed along the plane of their corresponding arm portions **42**, **42'**, which is parallel to a plane generally perpendicular to a main section portion between the end portions. If a straight tubular section is used as the main section without having curved end portions, the cross-section of the ends of the main tubular section as viewed along such plane of the their corresponding arm portions would be circular. In the shown exemplary embodiment, a transverse load (i.e., a load directed downward or upward as shown by arrows **48**, **50**, respectively) on each arm will be reacted in shear along the oval cross-sections of the tubular end portions. In addition, by having the arm

portions being flat members that are oriented along a generally vertical plane and having a height **52**, they are able to withstand a higher bending loads along their length, i.e., loads which are caused when a force is applied along arrows **48** or **50** than if they were members of shorter heights.

In an exemplary embodiment, as shown in FIGS. **1** and **2**, a bracket portion, (referred to herein as a "bracket" for convenience) **54**, **54'** is attached to the support members **38**, **38'**, respectively. More specifically, each bracket **54**, **54'** is a generally U-shaped defining a channel **56**, **56'** having a curved base **58**, **58'** to accommodate frame platform main section **40**. In the shown exemplary embodiment, the support members **38**, **38'** have a cut-out **60**, **60'** complementary to the shape of the main section **40** of the frame platform portion. In this regard, the main section **40** is sandwiched between the cutouts **60**, **60'** formed on the support members **38** and **38'** and the corresponding brackets **54**, **54'**, respectively such that it is supported by the brackets **54**, **54'** while being able to rotate relative to the brackets **54**, **54'** and the support members **38**, **38'**. In an exemplary embodiment, a bracket **62** may extend from the second transverse member **20** proximate the middle of the transverse member. In the shown exemplary embodiment, the bracket **62** has a portion **64** extending forward of the transverse member **20**. A cut-out **66** in the shape of a portion of a circle complementary to the outer surface of the tubular member **40** defining the main section of the frame platform portion is formed such that the tubular member defining the main section is fitted within the cut-out and is able to rotate relative to the cut-out. In an exemplary embodiment, the cut-out is formed such that when the tubular member is inserted in the cut-out, a portion of the bracket member **62** extends underneath the tubular member for providing support.

In other exemplary embodiments, instead of a tubular main section, the frame platform portion main section may have other geometric shapes in cross-section. For example, the main section may be polygonal in cross-section as viewed along a vertical plane. In such case, the section may have to be modified in the areas that it is supported by the brackets **54** so as to allow it to rotate relative to the brackets.

A stop member **68**, **68'** is attached to each of the support members **38**, **38'**. In an exemplary embodiment, the stop members **68**, **68'** may be welded or otherwise attached to the support members or may be formed integrally with the support members. It should be noted that in an exemplary embodiment, the brackets **54**, **54'** are attached to exterior surfaces of the support members **38**, **38'**. With this exemplary embodiment, the stop members **68**, **68'** are attached to the interior surfaces of their respective support members **38**, **38'**. In other exemplary embodiments, this arrangement may be reversed where the brackets are attached to the interior surfaces of the support members and the stop members are attached to the exterior surfaces. In yet a further exemplary embodiment, a bracket may be attached to an exterior surface of one support member while the other bracket is attached to an interior surface of the other support member, and the stop members are attached to their respective opposite surfaces.

Stop brackets **70** and **70'** are attached or otherwise formed on the main section **40** of the frame platform portion so as to be able to make contact with a stop surface **72**, (**72'** not shown) of the stop members **68**, **68'**. In an exemplary embodiment as shown in FIGS. **1**, **2** and **3**, the stop brackets **70**, **70'** are arcuate members welded onto the main section of the frame platform portion. The stop brackets **70**, **70'** are positioned such that when the frame platform portion is rotated relative to the frame base portion at an angle so that the frame platform portion is generally horizontal, a stop surface **74**, (**74'** not shown) of the stop bracket contacts the corresponding stop surface **72**, **72'** of the stop members, preventing the further rotation of the frame platform portion relative to the frame base portion. In the shown exemplary embodiment, the stop bracket contacts the corresponding stop surface at a level not higher and not lower than the level of the tubular main section **40**. In this regard the stop mechanism defined by the stop bracket and the stop surface remains compact. It should be noted that when the stop surface of the stop bracket engages the stop surface of the stop member, the load applied to each stop bracket is reacted as a hoop shear stress between the stop bracket and the tubular main section **40** of the frame platform portion along the outer surface of the tubular main section **40**. This provides for a larger contact area length between the stop bracket of the main generally tubular section, thus allowing a larger load to be reacted through the stop bracket, i.e., allowing the stop bracket to withstand a higher load prior to failing, e.g., separating from the main tubular section. The load that may be carried by the stop members may be increased by increasing the contact area between each stop member and the structure on which it is mounted. For example, this may be accomplished by using an arcuate stop member that has a longer arc and thus, is attached along a longer circumferential portion of the tubular main section **40**. It may also be accomplished by using wider stop members.

In an exemplary embodiment, an actuator **67** is mounted at one end on the bracket **62**, attached to the main section **40** and at the other end on the bracket **65** extending from the transverse member **18**. The actuator provides a force to rotate the frame platform portion to the first position (i.e., the closed position) generally parallel to the frame base portion. Typically, the actuator has a housing **69** from which extends a housing bracket **71** having an opening. A pin **73** is fitted through such opening and through an opening formed on the bracket **65** to pivotable couple the base to the housing bracket. A piston extends into the housing and has an arm **75** having an opening. A pin **77** is fitted through this opening and an opening formed on the bracket **62** coupling the arm and thus, the actuator to the bracket **62**. In this regard, as the frame platform portion is moved toward the frame base portion, the actuator provides a force on the bracket **62**, pushing the bracket downward and causing the frame platform portion to rotate upward toward a closed position. As such, the actuator provides a self-closing function to the BCS, in that as the platform is rotated from the open position toward the closed position, the actuator exerts a force to smoothly close the BCS by moving the platform to the closed position relative to the base. In an exemplary embodiment, the actuator is a gas piston and is positioned such that when the platform is moved from an open position, relatively perpendicular to the base, to a position of about 45° relative to the base. The actuator also ensures that the platform does not rotate from the closed position toward the open position without the exertion of an external force, as for example a force applied by a user to open the platform relative to the base. With this exemplary embodiment, a force must be applied to rotate the platform more than 45° from the base. In an exemplary embodiment, an actuator is made Stabilus GmbH. These actuators are sometimes referred to in the industry as shocks in that they also act as shock absorbers.

In an exemplary embodiment, the frame base portion is mounted onto a wall. The frame may be bolted onto a wall or otherwise fastened or attached to a wall using other

fasteners and/or adhesives. A base cover **100** forming the base is mounted over the frame so as to hide the frame. The base cover may be mounted onto the frame or may be mounted directly onto the wall. In an exemplary embodiment, the frame base portion is placed against the wall, and the base cover is then placed over the frame base portion. Fasteners are then used to fasten the base cover onto the frame through fastener openings **102** and onto the wall (FIG. **4**). In other words, the fasteners are used to fasten both the frame and the cover to the wall. In an exemplary embodiment as shown in FIGS. **4** and **5**, the base cover, when mounted over the base frame portion, covers the base frame portion as well as the portion **104** of the main member of the frame platform portion between the support members **38**, **38'**.

A platform **106** in an exemplary embodiment is formed in two pieces, an upper piece **108** and a lower piece **110**. The upper piece has an external surface **112** defining a support surface **114**. On its inner surface **116**, the upper piece defines a gap **120** for receiving the frame platform portion. In the exemplary embodiment, where the base cover covers the portion **104** of the frame platform portion main member, the remaining portion of the frame platform portion is received in the gap **120**. It should be noted that the gap may be a groove or defined by spaced apart structures as for example pegs **122** which are spaced apart from ribs **124**. In an exemplary embodiment, the gap has a width that varies as necessary for accommodating the various portions of the frame platform portion with minimal sideway play. In another exemplary embodiment, the gap may be defined entirely on the lower piece, or entirely on the upper piece, or partly on each of the upper and lower pieces. In another exemplary embodiment, a gap may or may not be used and the platform upper piece is fastened on the frame platform portion using fasteners or by having features that would allow it to snap onto the frame platform portion. The lower piece **110** may in an exemplary embodiment be fastened to the upper piece and/or to the frame platform portion sandwiching the frame platform portion between the upper and lower pieces. In other exemplary embodiments, the two platform pieces may be "snap" fitted together. In another exemplary embodiment, the platform may be formed as a single piece that that has rear openings for receiving the frame platform portion arms. In an exemplary embodiment, the platform, whether formed in two pieces, or a single member having openings to accommodate the frame platform portion, may be formed by blow molding. The base cover may also be formed blow molded.

In another exemplary embodiment, any of the platform, platform pieces and/or the base cover may be formed by other methods such as injection molding. In other exemplary embodiments, plastics, resinous, metallic or other materials may be used to form the base cover or the platform or platform pieces.

In another exemplary embodiment, the platform upper piece **108** may be formed with a shoulder **140** proximate the peripheral edge of the upper piece. In the exemplary embodiment shown in FIG. **7**B, the shoulder is formed interior of the platform upper piece. When the platform lower piece **110** is mated with the platform upper piece, a peripheral edge **144** of the platform lower piece sits on the shoulder **140** formed on the proximate to the peripheral edge of the platform upper piece. In yet a further exemplary embodiment as shown in FIGS. **7**A and **7**B, a trim piece **146** is mounted over a peripheral portion of the platform lower piece. The trim piece is used in an exemplary embodiment to hide the fasteners **147**, may be used to connect the lower piece to the upper piece to define the platform. In an exemplary embodiment, the platform lower piece is defined with a peripheral annular depression **148**. In a further exemplary embodiment, instead of a peripheral annular depression **148**, a plurality of depressions **148** which are spaced apart or are arranged along a peripheral portion of the platform lower piece. In addition, a platform lower piece shoulder **150** is defined proximate the peripheral edge **144** of the platform lower piece. In the exemplary embodiment shown in FIGS. **7**A and **7**B, the trim piece is such that it covers the exposed side portion **150** of the platform lower piece and extends over an edge portion **152** of the platform upper piece. In the shown exemplary embodiment, the trim piece **146** includes projection(s) **154** to be received in the depression(s) **148**. If an annular depression **148** is formed on the lower piece, than the trim piece includes a complementary annular projection **154** extending from an inner surface **155** of the trim piece. If spaced apart depressions **148** are formed on the lower piece, then complementary projections **154** extend from the inner surface on the trim piece. In addition, a circumferential shoulder **156** is defined on the interior surface of the trim piece which surrounds the side surface **150** of the platform of lower piece for mating with the shoulder **151** formed on the side surface of the platform lower piece.

When mounting the trim piece on the platform lower piece, the projection(s) **154** are pushed into the depression(s) **148** of the platform lower piece while at the same time the shoulder **156** of the trim piece seats against the shoulder **151** on the platform lower piece. The distance between the shoulder **156** formed on the trim piece and the projection **154** are such that a slight tension is provided between the shoulder **156** and the projection **154** which causes the trim piece to clamp on the platform lower piece. In this regard, the trim piece easily connects to the platform lower piece by snapping onto position.

In the shown exemplary embodiment, the edge of the trim piece extends over the edge portion **152** of the platform upper piece. In the shown exemplary embodiment, a recess **160** is defined along the platform upper piece edge portion **152** which receives an edge portion **162** of the trim piece. In the shown exemplary embodiment, the trim piece extends at a distance beyond the shoulder **140** defined on the platform upper piece in a direction away from the platform lower piece.

The baby changing station of the present invention may be mounted on a wall using different approaches. In one exemplary embodiment, the frame base portion is mounted, e.g. is fastened on a wall. The platform piece(s) may then be attached to the frame platform portion and the base cover is placed over the frame base portion and fastened to the frame base portion or directly to the wall. In one exemplary embodiment, the frame platform portion is separated from the base frame base portion by unfastening the brackets **54** and **54'** from the frame base portion and by disconnecting the actuator **67**, if used, from the frame platform portion, i.e., from the bracket **62** extending the base platform portion (or from the frame base portion, i.e. from the bracket **65**) or from both frame portions. In another exemplary embodiment, the frame base portion is not connected to the frame platform portion. With this exemplary embodiment, the frame base portion does not have to be disconnected from the frame platform portion as the two frame portions are already disconnected.

With these embodiments, the frame base portion is fastened or otherwise attached to the wall. The platform piece or pieces are then attached to the frame platform portion

forming the platform **106**. The platform is then attached to the frame base portion by connecting the frame platform portion to the frame base portion by positioning the brackets **54** and **54'** around the frame platform portion main section **40** and fastening such brackets on to their corresponding support member **38**, **38'** of the frame base portion. The actuator, if used in then attached to the frame portion(s) so that it is connected to both frame portions. The base cover is then fastened to the frame base portion or directly to the wall and covers the frame base portion. This exemplary embodiment makes installation easier as the installer installs the baby changing station in sections.

As can be seen in one exemplary embodiment, the frame may be mounted onto a wall by securing the frame base portion onto a wall and the base cover and the pieces forming the platform are fitted over their corresponding frame portions afterwards. In this regard when the base cover and/or platform pieces are worn or mutilated, they may be easily replaced without having to replace the frame. In other words, the base cover and platform pieces may be removed exposing the entire frame which may then be outfitted with another base cover and platform pieces.

In an exemplary embodiment, the base cover forming the base may be formed with one or more depressions **200**, as for example shown in FIG. **5** which provide shelves **202** for storing materials which are used when changing diapers, as for example lotions and the like. In addition, in the exemplary embodiment shown in FIG. **5**, the base is much narrower than the platform such that when the platform is closed relative to the base, it completely encapsulates the base. With this exemplary embodiment, depressions **204** are formed on opposite ends of the platform to provide grips for allowing the user to pull and rotate the platform relative to the base such that the platform comes to a horizontal position where the stop brackets engage their corresponding stop members. In addition, the platform may be formed with pegs **206** to allow the user to hang their bags, as for example, a diaper bag.

As can be seen with the exemplary embodiment BCS, the loads applied to the BCS, for example by the weight of a baby or a person leaning on the BCS platform and all reacted onto the frame which due to its design is capable of withstanding higher loads and especially loads greater than those that are withstood by conventional baby changing stations which typically react the loads on their plastic base and platform. In this regard, the base cover and platform do not have to react the such loads. Consequently they may be formed from materials of lower strength.

Although the present invention has been described and illustrated to respect to multiple embodiments thereof, it is to be understood that it is not to be so limited, since changes and modifications may be made therein which are within the full intended scope of this invention as hereinafter claimed. For example, in another exemplary embodiment, the frame base portion may only have two lateral members as for example, members **16** and **16'** that are directly mounted onto to a wall. Support members **38** and **38'** extend from the lateral members. This embodiment does not require that the frame base portion include the transverse members.

What is claimed is:

1. A baby supporting device comprising:

a frame comprising,

a base portion for mounting onto a wall,

a platform portion pivotally coupled to the base portion, said platform portion comprising a rotatable section, wherein at least a portion of said rotatable section rotates about a longitudinal axis, and two spaced apart arms extending from the rotatable section, said rotatable section rotating about the longitudinal axis, *wherein a first of said two spaced apart arms extends longitudinally from the rotatable section along a first axis, wherein a second of said two spaced apart arms extends longitudinally from the rotatable section along a second axis, and wherein the longitudinal axis intersects the first and second axes,*

wherein the base portion comprises a bracket, wherein said bracket surrounds at least a portion of and supports said platform portion rotatable section at a location between said arms and allows said platform portion rotatable section to rotate within said bracket relative to said bracket about said longitudinal axis, wherein rotation of said rotatable section causes said platform portion to pivot relative to said base portion,

a first stop member extending from said rotatable section, and

a second stop member extending from said base portion, wherein said second stop member is engagable by said first stop member for stopping the rotation of the rotatable section in a first direction; and

a platform for supporting the baby extending over at least a portion of said frame platform portion, wherein said platform comprises a first portion defining a supporting surface for supporting said baby and a second portion, wherein said arms are sandwiched between said first and second platform portions.

2. The device as recited in claim **1** further comprising an actuator connected to the base portion and the platform portion for providing a force for urging the platform portion to rotate toward the base portion.

3. The device as recited in claim **1** wherein the first stop member is an arcuate member, wherein the frame platform portion rotatable section is a tubular member, and wherein said arcuate member is connected to said tubular member outer surface.

4. The device as recited in claim **1** comprising another bracket coupled to the base portion, said another bracket being spaced apart from said bracket and surrounding at least a portion of and supporting said platform portion rotatable section and allowing said platform portion rotatable section to rotate relative to said another bracket.

5. The device as recited in claim **1** wherein the second stop member engages the first stop member at a location, said location being at a level not above and not below said rotatable section.

6. The device as recited in claim **1** wherein the arms are welded to the rotatable section.

7. The device as recited in claim **1** wherein the rotatable section extends from a first end to a second end and one of the arms extends from the first end and the other of the arms extends from the second end.

8. The device as recited in claim **1** wherein the stop members are located adjacent to said location.

[9. The baby supporting device of claim **1** wherein said bracket is coupled to said base portion.**]**

10. A baby supporting device comprising:

a frame comprising,

a base portion for mounting onto a wall,

a platform portion pivotally coupled to the base portion, said platform portion comprising a rotatable section, wherein at least a portion of said rotatable section rotates about a longitudinal axis, and two spaced apart arms extending from the rotatable sec-

tion, said rotatable section penetrating the base portion at least at a location and rotating about the longitudinal axis, whereby the location is between said arms, wherein said base portion surrounds and supports at least a portion of said rotatable section, *wherein a first of said two spaced apart arms extends longitudinally from the rotatable section along a first axis, wherein a second of said two spaced apart arms extends longitudinally from the rotatable section along a second axis, and wherein the longitudinal axis intersects the first and second axes,*

a first stop member extending from said rotatable section, and

a second stop member extending from said base portion, wherein said second stop member is engagable by said first stop member for stopping the rotation of the rotatable section in a first direction; and

a platform for supporting the baby extending over at least a portion of said frame platform portion, wherein said platform comprises a first portion defining a supporting surface for supporting said baby and a second portion, wherein said arms are sandwiched between said first and second platform portions.

11. The device as recited in claim **10** wherein the second stop member engages the first stop member at a location, said location being at a level not above and not below said rotatable section.

12. The device as recited in claim **10** wherein the arms are welded to the rotatable section.

13. The device as recited in claim **10** wherein the rotatable section extends from a first end to a second end and one of the arms extends from the first end and the other of the arms extends from the second end.

14. The device as recited in claim **10** wherein the stop members are located adjacent to said location.

15. A baby supporting device comprising:

a frame comprising,

a base portion for mounting onto a wall,

a platform portion pivotally coupled to the base portion, said platform portion comprising a rotatable section, wherein at least a portion of said rotatable section rotates about a longitudinal axis, and two spaced apart arms extending from the rotatable section, said rotatable section rotating about the longitudinal axis,

wherein the base portion comprises a bracket, wherein said bracket surrounds at least a portion of and supports said platform portion rotatable section at a location between said arms and allows said platform portion rotatable section to rotate within said bracket relative to said bracket about said longitudinal axis, wherein rotation of said rotatable section causes said platform portion to pivot relative to said base portion,

a first stop member extending from said rotatable section, and

a second stop member extending from said base portion, wherein said second stop member is engagable by said first stop member for stopping the rotation of the rotatable section in a first direction; and

a platform for supporting the baby extending over at least a portion of said frame platform portion, wherein the arms are welded to the rotatable section.

16. A changing station for supporting a small person, the changing station comprising:

a platform that is rotatable from a vertical storage position to a horizontal use position along a rotational axis, the platform comprising a top portion and a bottom portion;

a support structure having a rotatable support member that is rotatable along the rotational axis, and two extending members extending out at an angle from the *rotatable* support member and encapsulated between the top and bottom portions of the platform, the rotatable support member comprising an elongate tube and the rotational axis being a central longitudinal axis of the elongate tube, *wherein a first of said two extending members extends longitudinally from the rotatable support member along a first axis, wherein a second of said two extending members extends longitudinally from the rotatable support member along a second axis, wherein the rotational axis intersects the first and second axes*;

a mounting structure for mounting the support structure to a vertical surface, the mounting structure comprising a pair of spaced apart mounting brackets and a central bracket, wherein the central bracket is spaced from the rotatable support member and extends between the mounting brackets;

a pair of open/close stops mounted to the mounting structure; and

a pair of hinge stops mounted to the rotatable support member at a location spaced inwardly between the two extending members, each hinge stop having at least one surface extending away from the elongate tube in a radially outward direction such that the at least one surface of each hinge stop engages a respective one of the pair of open/close stops for controlling the rotation of the rotatable support member at least when the platform is in the horizontal use position.

17. The changing station of claim **16**, further comprising at least one damper system configured to slow the rotation of the platform when the platform moves from the vertical storage position to the horizontal use position.

18. The changing station of claim **17**, wherein the damper system comprises at least one gas spring attached between the rotatable support member and the central bracket of the mounting structure.

19. The changing station of claim **18**, wherein the gas spring compresses as the platform is moved from the vertical storage position to the horizontal use position, and extends when the platform is moved from the horizontal use position to the vertical storage position.

20. The changing station of claim **16**, wherein the platform is constructed of a plastic and the support structure is constructed of a metal.

21. The changing station of claim **16**, wherein each hinge stop includes a cut-out that aligns with a cross-section of the elongate tube of the support member.

22. The changing station of claim **16**, wherein the mounting brackets of the mounting structure are spaced inwardly between the two extending arms of the support structure.

23. The device of claim 15, wherein a first of said two spaced apart arms extends longitudinally from the rotatable section along a first axis, wherein a second of said two spaced apart arms extends longitudinally from the rotatable section along a second axis, and wherein the longitudinal axis intersects the first and second axes.

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