Jan. 7, 1964 D. A. GERDS ETAL 3,116,493

INFANT SUPPORTING AND CARRYING DEVICE

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FIG. 2.

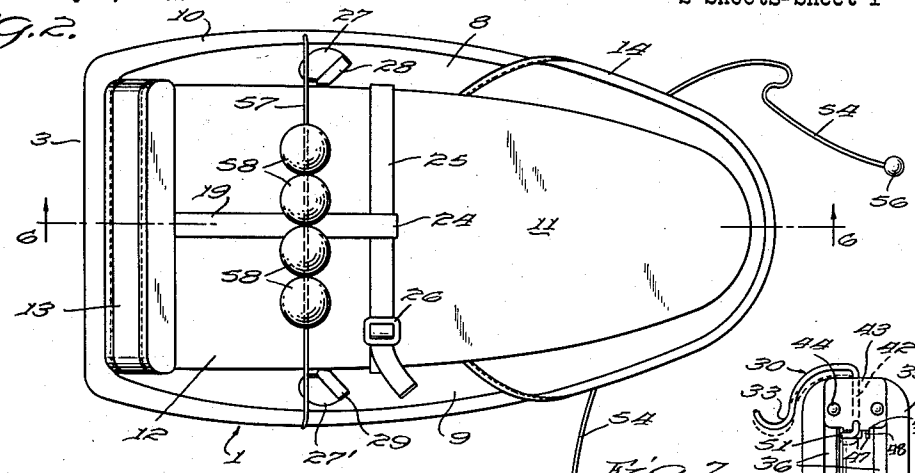


FIG. 7.

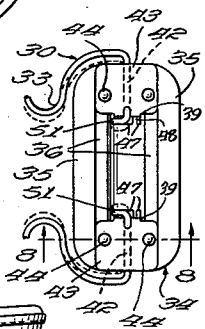


FIG. 1.

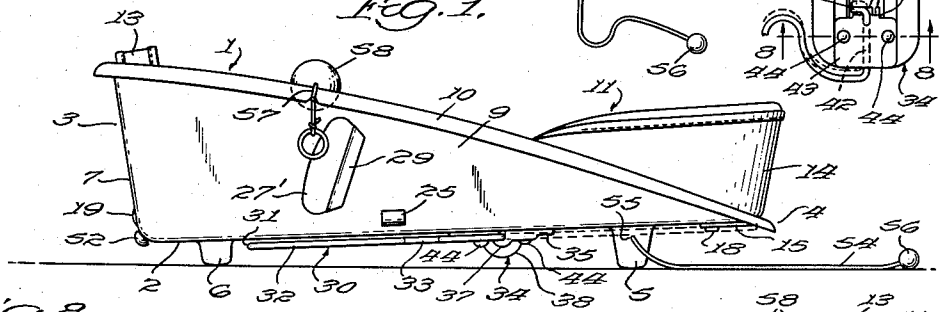


FIG. 8.

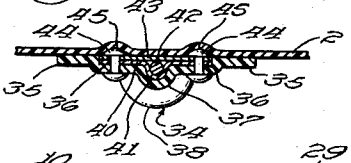
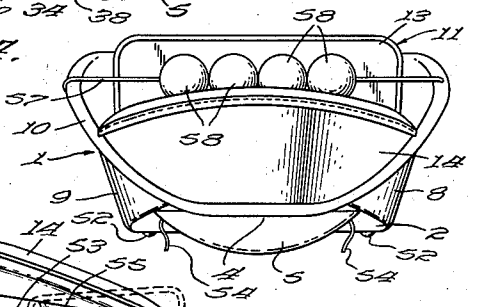


FIG. 4.



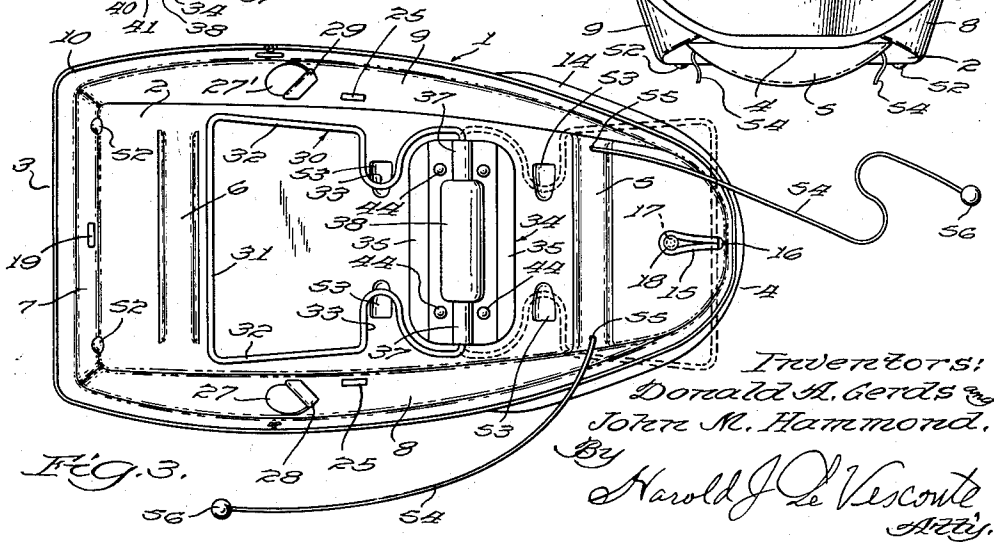


FIG. 3.

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INFANT SUPPORTING AND CARRYING DEVICE

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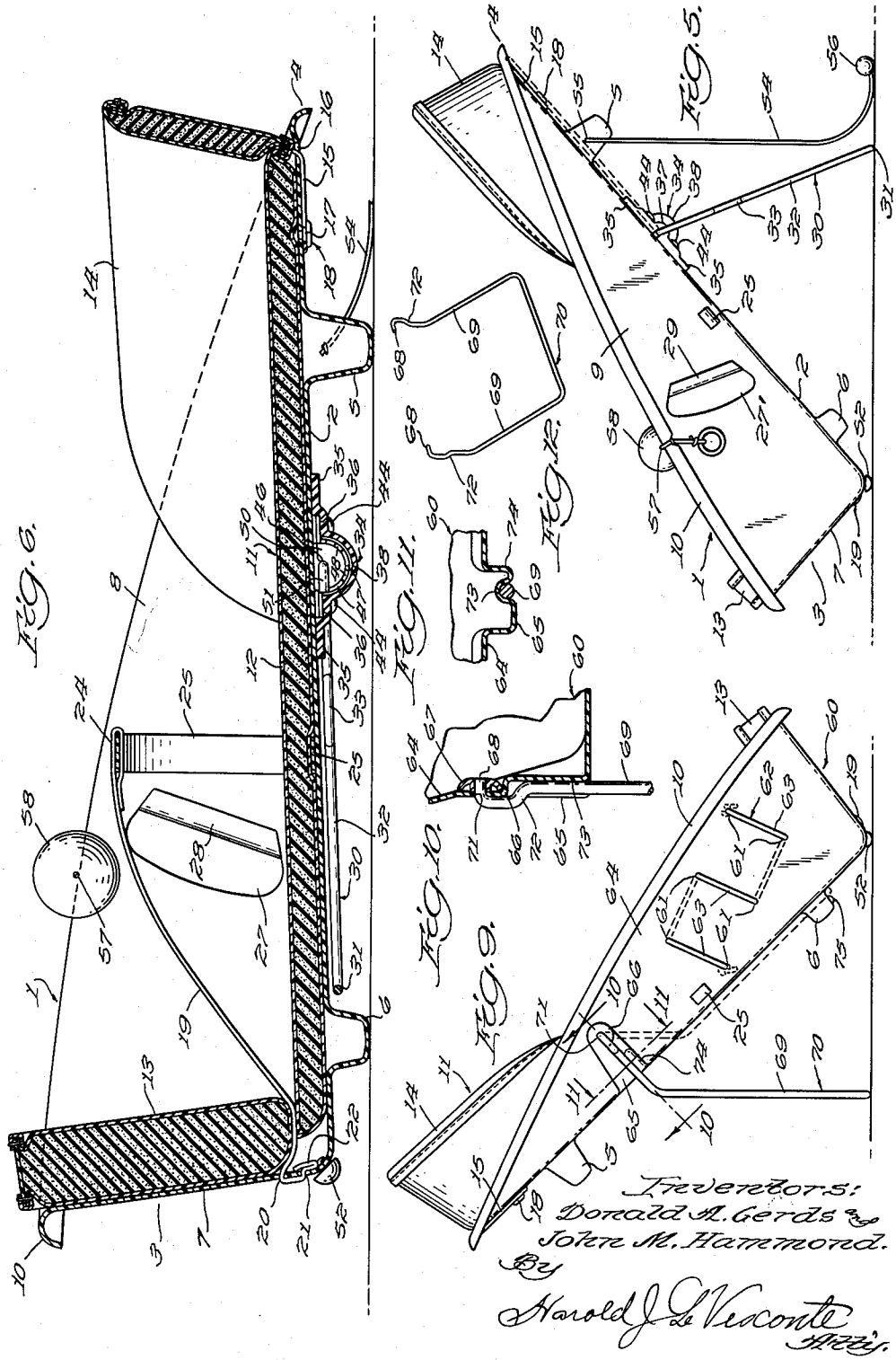


Fig. 6.

Fig. 5.

Fig. 12.

Fig. 11.

Fig. 10.

Fig. 9.

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INFANT SUPPORTING AND CARRYING DEVICE

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8 Claims. (Cl. 5—105)

This invention relates to means for supporting and carrying an infant and has for its principal object the provision of an improved device of that character which is optionally usable as a carrying means, a bed, a cradle, or as an inclinable seat.

Another object of the invention is to provide an infant carrying and supporting device comprising an elongated rigid base element having a back portion, an integral footwall section rising from one end of said back portion, sidewall portions leading from the footwall portion toward the opposite end and decreasing in width as they approach said opposite end, and having means on the two sidewall portions adjacent the footwall end affording hand grasp means.

A further object of the invention is to provide an infant carrying and supporting device comprising an elongated rigid base element provided with a footwall portion and sidewall portions and further provided with integrally formed, laterally spaced rocker surfaces operative to permit the device to be used as a cradle.

Still another object of the invention is to provide an infant carrying and supporting device which is provided with foldable and adjustably positioned brace means permitting the device to be supported at selected angles of inclination from the horizontal.

With the foregoing objects in view, together with such additional objects and advantages as may subsequently appear, the invention resides in the parts, and in the construction, combination and arrangement of parts described, by way of example, in the following specification of presently preferred embodiments of the invention, reference being had to the accompanying drawings which form a part of said specification and in which drawings:

FIG. 1 is a side elevational view of a first embodiment of the invention shown as disposed for use as a bed and cradle,

FIG. 2 is a top plan view of the device shown in FIG. 1,

FIG. 3 is a bottom plan view,

FIG. 4 is a head end elevational view as viewed from the right hand end of FIG. 1,

FIG. 5 is a side elevational view of the device arranged in an inclined position as for a seat,

FIG. 6 is an enlarged longitudinal medial section taken on the line 6—6 of FIG. 2,

FIG. 7 is a fragmentary enlarged scale top plan view of the latching means for the supporting brace device,

FIG. 8 is a further enlarged, transverse sectional view taken on the line 8—8 of FIG. 7, but including the adjacent portion of the body member,

FIG. 9 is a side elevational view of a second embodiment of the invention shown as arranged in its inclined, seat forming position,

FIGS. 10 and 11 are, respectively, fragmentary, enlarged, sectional views taken on the lines 10, 10 and 11, 11 of FIG. 9 showing details of the brace locking structure, and

FIG. 12 is a perspective view of the brace element employed in said second embodiment of the invention.

Referring first to FIGS. 1–8, the first embodiment of the invention comprises a rigid, elongated body member 1 preferably of unitary construction and formed from molded sheet plastic; said body member comprising a generally flat bottom portion 2 having a straight foot end 3 and a rounded head end 4, and provided with a pair of laterally spaced parallel depressions disposed transversely in the bottom member, the outer faces of which form a head end rocker 5 and a foot end rocker 6. Rising from the foot end of the bottom portion 2 is an outwardly extending footwall 7 and extending along the sides are the outwardly flared side portions 8 and 9 which at their junctures with the opposite sides of the footwall are of the same height as said footwall but which are gradually of decreasing width and join each other at the apex of the rounded head end 4 at about the plane of the bottom portion 2. The sides and foot portions at their outer edges terminate in an outwardly and thence downwardly turned rib or flange portion 10.

The body member 1 is preferably provided with a mattress or pad component 11 including a bottom portion 12, a foot portion 13 fixed to the bottom portion 12 and lying against the body member footwall 7 and further having a cowl-like head portion 14 extending from about the mid-length of the mattress at each side thereof around the rounded head end 4 inwardly of the flange 10. The mattress component is removably secured to the bottom of the body member at the head end by an elastic loop 15 having one end attached to the mattress bottom portion 12 and thence extending through a hole 16 in the bottom 2 of the body member and which loop is thence engaged by the body portion 17 of a shoulder rivet 18 extending through said body member bottom portion as best shown in FIGS. 3 and 5. The other end of the mattress portion is secured to the bottom of the body member by a strap 19 having one end thereof extending through an opening in the seam which joins the foot and bottom portions of the mattress and thence extends through a first slit 20 in the footwall of the body member to the outer face thereof and thence through a second parallel slit 21 to the inner face of said body member footwall and terminating in a flange portion 22 formed by doubling the strap end on itself and joining the overlying strap portions together adjacent the terminal end face of that end of the strap. The opposite end of the strap 19 is formed into a loop 24 for engagement with the body restraining strap 25 which extends first to the outside of the body member and thence back to the inside of the body member through parallel slits in the body member sidewalls 8 and 9 and between said side portions extends along the body member bottom portion beneath the mattress; one end of said strap being disposed adjacent to the body member sidewall portion 9 and being provided with a buckle 26 engagable with the opposite end of the strap which also extends through the loop 24 in the strap 19. The strap 19 is disposed parallel to the longitudinal center line of the body member and thus passes between the legs of the infant, and the strap 25 is positioned to cross the torso of the infant at about the waist line, these straps serving to hold the infant in the carrier.

For convenience in carrying the device with an infant therein, the sidewall portions are provided with opposite openings 27 and 27' disposed between the transverse center line of the body member and the footwall thereof and being of a shape to receive the hand of a person holding the body member on his arm, and the edge of said opening engaged by the hand of the user is preferably provided with metal edgings 28 and 29 engaging the opposite side surfaces of the side members.

To position the device in a selected one of a plurality of inclined positions, the outer surface of the bottom portion 2 of the body member carries a foldable brace means including a brace leg member 30 shown folded against the base member in FIGS. 1 and 3, and in an extended position in FIG. 5. The brace member 30 comprises a length of resilient rod material bent to

form a central, straight foot portion 31 and side members 32, 32 extending in parallel relation to each other from the poot portion to the mounting means; said side members 32 adjacent the mounting means being bent in opposed U-shape configurations as at 33, 33 to provide a portion of less width for convenient grasping of said side members to spring them toward each other for a purpose to be presently explained.

The mounting means for the brace leg member comprises a cap member 34 extending transversely of and fixed to the under surface of the body member. The cap member 34 includes opposite flanged portions 35, 35 disposed at opposite sides of the longitudinal center line of the cap member and which are adhesively fixed to the under surface of the body member. The side of the cap member engaging the body member is further provided with spaced parallel ledge portions 36, 36 inwardly of the flange portions 35, 35 and which are laterally offset from the plane of said flange portions to afford clearance for the bearing means by which the brace means is pivotally mounted on the body member as will be presently described. At each end thereof, the cap member 34 is provided with one each of a pair of smaller longitudinally extending, semi-circular clearance grooves 37, 37 disposed in the longitudinal center line of the cap member and interposed between said grooves and in axial alignment therewith is a larger clearance groove 38, the juncture of the opposite ends of said larger clearance groove with the adjacent ends of the smaller clearance grooves forming abutment shoulders 39, 39. The bearing and position determining means for the opposite ends of the brace member are mirror images of each other, wherefore, a description of one will serve for both. Seated on the portions of the ledges 36, 36 at opposite sides of one of said smaller clearance grooves is a bottom bearing plate 40 having a width sufficient to fit between the shoulders formed by the juncture of the ledges 36 with the flange 35 and a length which is substantially equal to the length of the associated smaller clearance groove; said bottom bearing plate having a U-shaped center portion 41 fitting into said groove and having a depth and width sufficient to afford bearing support for the journal portion 42 of the brace member 30. Disposed on top of the bottom bearing plate is the upper bearing plate 43 having a thickness which combined with the side portions of the bottom plate 40 fills the ledge portions to the plane of the faces of the flange portions of the cap member. Rivets 44 extend through the bearing plates and the ledge portions 36 to hold the brace positioning assembly together, it being noted that the portions of the upper bearing plate which overlie the U-shaped center portion 41 of the lower bearing plate confines the journaled portion 42 of the base member therein. Recesses 45 are formed in the bottom 2 of the body member to accommodate the heads of the rivets on the exposed surface of the plates 43, 43.

The upper bearing plate at the inner end thereof is provided with an end flange portion 46 which overlies the shoulder formed by the juncture of the larger and smaller clearance grooves and terminates in a set of spaced fingers 47 extending parallel to and spaced from the surface of the larger circular clearance groove; said fingers defining notches 48. The flange portion 46 is further provided with an opening 50 through which the journal portion 42 of the brace member extends beyond said plates and terminates in an end 51 bent at right angles to said journal portion and substantially parallel to the plane of the portions 32 and 33 thereof, said end portion being of a length sufficient to engage the notches 48. The two journal portions 42, 42 are of sufficient length to permit endwise movement thereof to engage and disengage the ends 51, 51 with the notches 48 and the side portions of the brace member are biased to tend to cause the journal members to spring away from each other with resultant tendency at all times of the fingers 51 to be engaged with the notches 48. When engaged with the first notch as shown in FIGS. 6 and 7, the brace member is folded closely against the under side of the body member. When the ends are engaged with the next pair of notches counterclockwise as viewed in FIG. 6, the brace is in the position shown in FIG. 5 with the foot end resting on rubber buttons 52, 52 disposed at the juncture of the footwall and bottom portions of the body member. When the brace ends 51 are in the next following pair of notches, the brace extends still further in a counterclockwise direction as viewed in FIG. 5 with resultant positioning of the body member at a lesser angle to the horizontal than that shown in FIG. 5. Additionally, the brace may be adjusted to a position shown in dotted lines in which it is disposed parallel to the bottom surface of the body member but with the free end thereof disposed adjacent the head end of the body member thus affording still another means for securing and supporting the device in an inclined or vertical position; it being noted that the body member is provided with indentations 53 which underlie the portions 33, 33 of the brace in either of the extreme positions to which it may be moved to facilitate the grasping of the said U-shaped portions 33, 33 to compress them together for releasing the ends 51, 51 from the notches of the brace locking means.

Other accessories may include a cord 54 extending through holes 55 in the head end rocker 5 and terminating in ornaments 56; said cord being useful for tying the body member to the back of a chair or the like to achieve a vertical or inclined position when the use of the brace means is impractical. Another accessory may include an amusement means for the infant as, for example, the taut cord 57 extending between the sides of the body member and carrying a plurality of bright colored hollow balls 58 or other ornaments.

From the foregoing it will be appreciated that the invention provides an infant carrying and supporting device having an unusually wide range of utility in that not only does it provide a convenient carrying means; the hand grasping openings in the sides being of particular utility in this respect, but also it permits feeding the infant in a comfortable attitude and additionally is usable either as a bed or as a cradle.

Referring next to FIGS. 9 through 12 there is shown a second embodiment of the invention characterized by other handle means at the sides thereof and a simplified supporting brace arrangement. In these figures, all identical elements are identified by the same numerals as used in the description of the first embodiment of the invention, and dissimilar components are identified by new numerals.

The body memebr 60 is generally similar in outline to the body member 1 except for differences hereinafter to be noted. It is provided with the same mattress or pad means and retaining means therefor as well as the integrally formed rocker elements on the bottom surface thereof, wherefore, repetition of description of these details is omitted. The hand hole openings of the first form of the invention are replaced by series of upper and lower rows of three holes 61 each in each of the sidewalls, one sidewall being shown in FIG. 9 and the opposite sidewall being correspondingly provided with a similar set of holes. Laced through the holes in each side is a cord 62 secured by knotted ends on the inner face of the sidewall, the cord being arranged to form three substantially vertical runs 63 at spaced intervals and being sufficiently slack so that the fingers of the user may readily be extended between the cord and the body member sidewall. Thus the user is provided with a choice of three handle portions for a position which is found to be most comfortable.

The sidewalls 64 of the body 60 are mirror images of each other and are provided at a point adjacent the point of intersection of the cowl 14 with the top edge of the body

member with a boss 65 extending substantially at right angles to the plane of the bottom surface of the body member and a portion of the inner face of the body member sidewall above said boss is laterally outwardly offset as at 66 to afford a receiving recess for a collar or head 67 which is pressed onto the end 68 of the brace leg member 69 of a brace 70 formed from a length of resilient rod and which end extends through a hole 71 in said laterally offset portion 66. Adjacent to the said end 68, the brace member leg extends inwardly as at 72 to bring the body portion of said leg portion into engagement with the bottom of a notch 73 formed beyond the side of the boss 65 which faces the foot end of the body and a second boss 74, said notch being of a width sufficient to receive the brace member leg therein as thus shown in FIG. 11. It will be understood, of course, that the opposite end of the brace leg member similarly engages a mirror image configuration of the body member wall at the other side of the body member.

When not in use, the brace is folded flat under the body member and the lower end thereof extends beyond the rocker 6 and is snapped over the rubber button element 75 at the side of the rocker 6 adjacent the footwall portion of the body member. When the body member is to be set upon the brace in an inclined position, the brace is swung to the open position shown in FIG. 9 with incident spreading apart of the upper ends of the brace to spring past the bosses 74 into the notches 73 to lock it in that position until it is released therefrom. When it is folded into its collapsed position as indicated in dotted lines in FIG. 9, the device can be used as a bed or cradle in the same manner as the first embodiment of the invention.

While in the foregoing specification there has been disclosed certain presently preferred embodiments of the invention, such disclosure has been made by way of example and it will be understood that the invention is not to be deemed to be limited to the disclosed embodiments and that the invention includes as well all such changes and modification in the parts and the construction, combination and arrangement of parts as shall come within the purview of the appended claims.

We claim:

1. An infant supporting and carrying device comprising a rigid, unitary elongated body member including a bottom portion having a foot end extending normal to the length of said body member and a rounded head end at the other end thereof, a foot portion rising from said foot end of said bottom portion, and side portions bordering said bottom portion and said foot portion and gradually decreasing in width to substantially zero width at said rounded head portion, a mattress component detachably mounted in said body member and comprising a bottom portion conforming to the plan configuration of said bottom portion of said body member, a foot end portion similarly conforming to the plan configuration of said foot end portion of said body member and a cowl like head portion extending around the rounded head end of said mattress bottom portion, and means for securing an infant on said mattress; said securing means serving additionally to detachably secure at least one end of said mattress to the corresponding end of said body member.

2. An infant carrying and supporting device as claimed in claim 1 in which the outer face of said body member is provided with a brace means secured to a pivotal mounting for movement about an axis transverse to the length dimension of said body member, said pivotal mounting including means automatically to lock said brace means in any one of a plurality of angular positions relative to the plane of said bottom portion of said body member.

3. An infant carrying and supporting device as claimed in claim 1 wherein said securing means includes strap means.

4. An infant carrying and supporting device as claimed in claim 1 in which said side wall portions of said body member are provided with handle means comprising a pair of openings disposed one each in each of said side wall portions adjacent to the foot of said body member and each of said openings being of a shape to receive the hand of a person holding said body member on his arm with the forearm in a substantially horizontal position.

5. In an infant supporting and carrying device, a rigid body member having a bottom, a foot end portion and side portions, and means for supporting said body member in a plurality of positions inclined from the horizontal comprising a brace means secured to a pivotal mounting on said bottom, said pivotal mounting including means manually disengageable and inherently spring biased for engagement with locking means effective selectively to lock said brace means in opposite positions parallel to said bottom or in one of a plurality of positions angularly to said bottom portion for support of said body member in a selected one of said angular positions.

6. An infant carrying and supporting device as claimed in claim 5 in which said bottom of said body member is provided with a pair of transversely extending rocker members and in which said brace leg is so shaped that when disposed parallel to said bottom, it clears said rocker members.

7. An infant supporting and carrying device as claimed in claim 5 in which said brace means includes a substantially U-shaped rod member having axially aligned opposed end portions extending into said pivotal mounting, said end portions adapted to be moved manually along their axis to engage and disengage said locking means.

8. An infant supporting and carrying device comprising a rigid, unitary, elongated body member including a bottom portion having a foot end extending substantially normal to the length and the plane of said bottom portion and having a rounded head end at the opposite end of said bottom portion, side portions formed integrally with said foot end and said bottom portion bordering said bottom portion and gradually decreasing in width to substantially zero width at said rounded head portion, a mattress component detachably mounted in said body member and comprising a bottom portion conforming to the plan configuration of said body member and having a foot end portion similarly conforming to the plan configuration of said foot end portion, and means for securing an infant on said mattress; said securing means serving additionally to detachably secure one end of said mattress to the corresponding end of said body member.

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