July 18, 1967 R. LERNER 3,331,632

SUPPORTING STAND OR CARRIER FOR INFANTS

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Fig. 1.

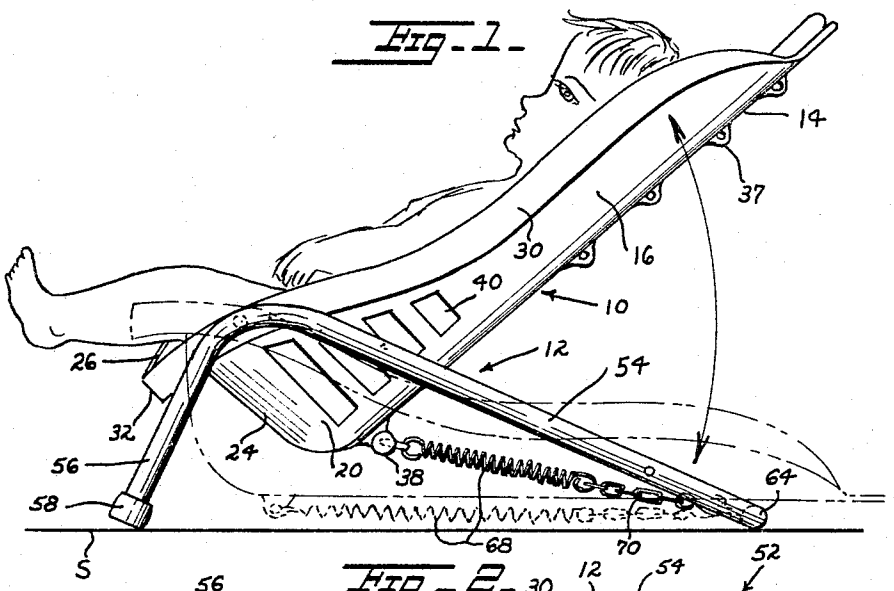


Fig. 2.

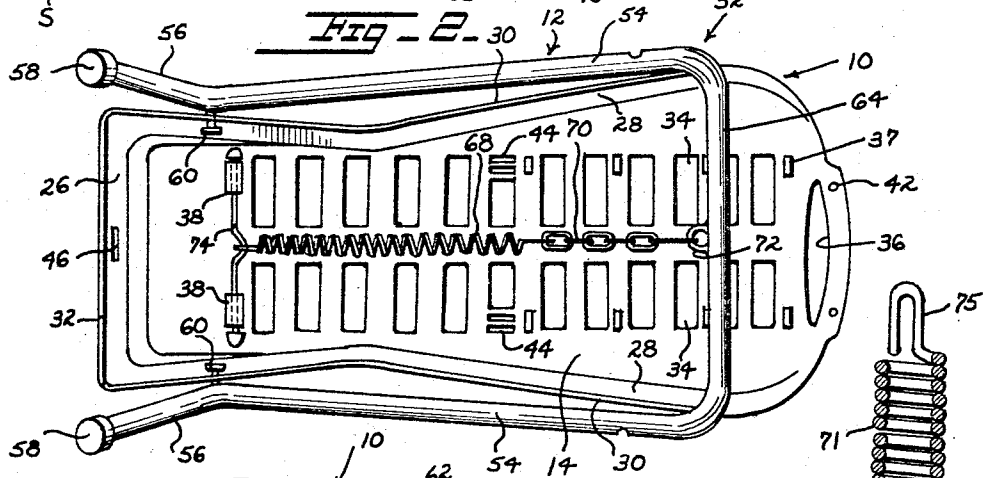


Fig. 3.

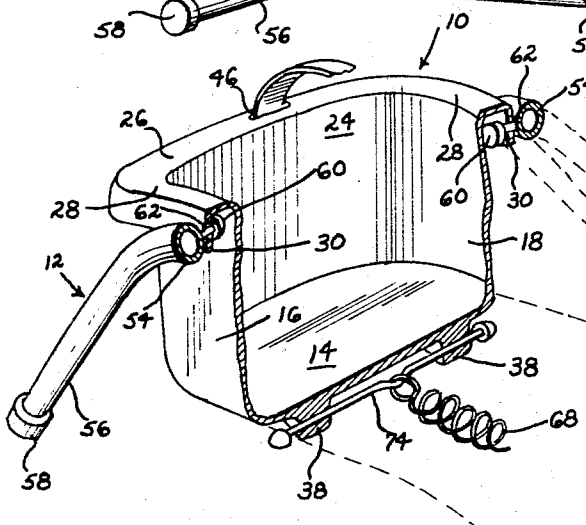


Fig. 4.

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FIG. 4.

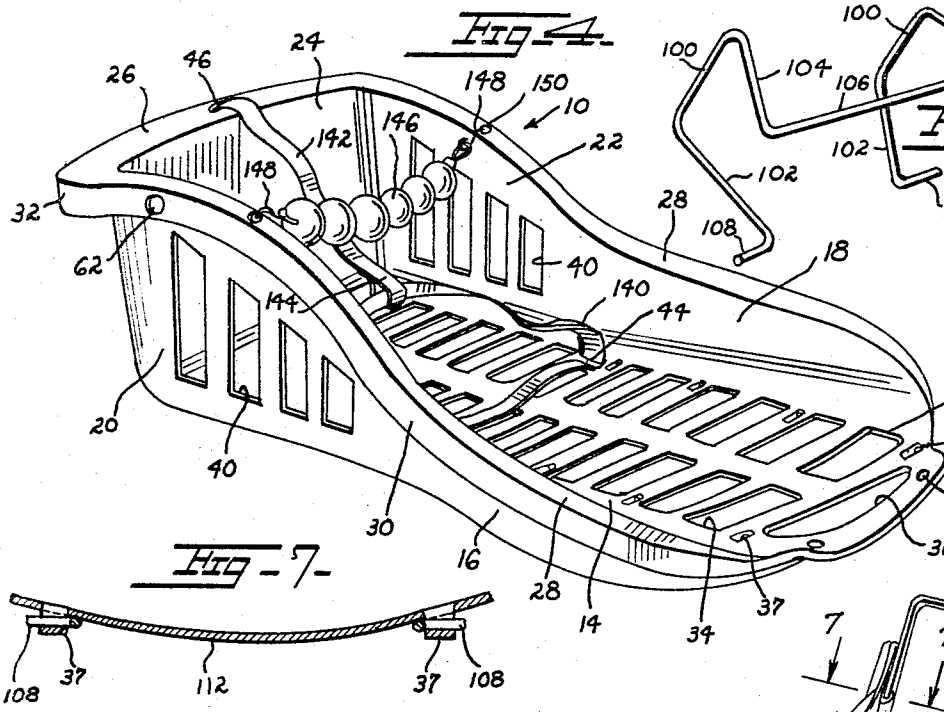


FIG. 5.

FIG. 7.

FIG. 8.

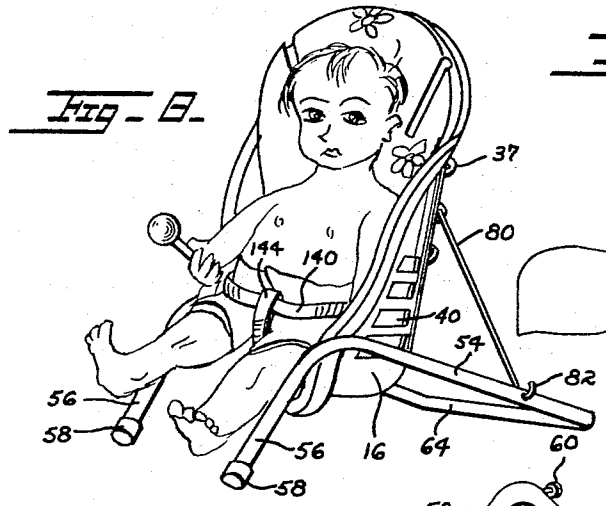


FIG. 6.

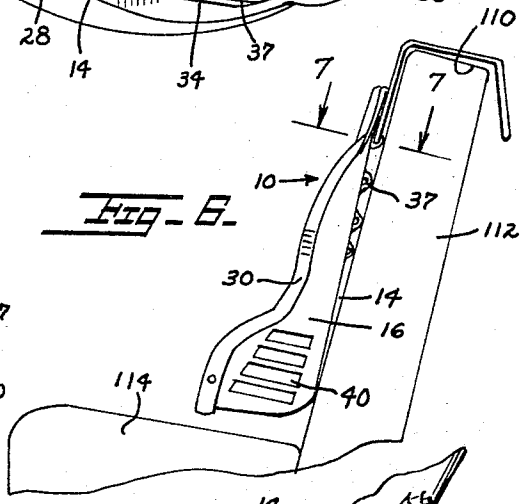


FIG. 10.

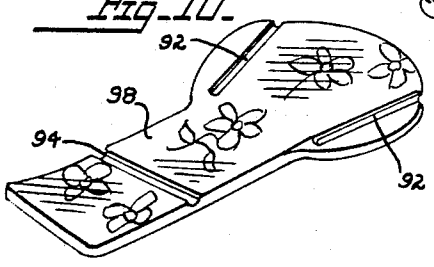
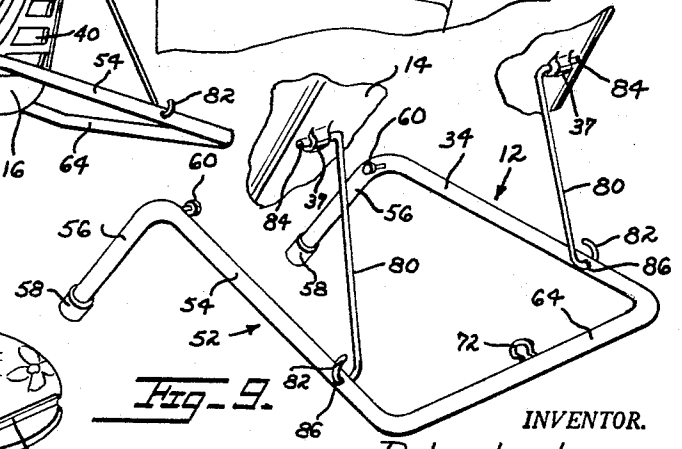


FIG. 9.



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Fig. 11.

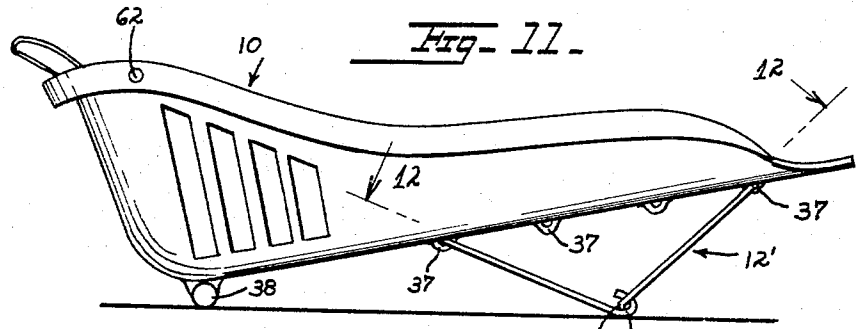


Fig. 12.

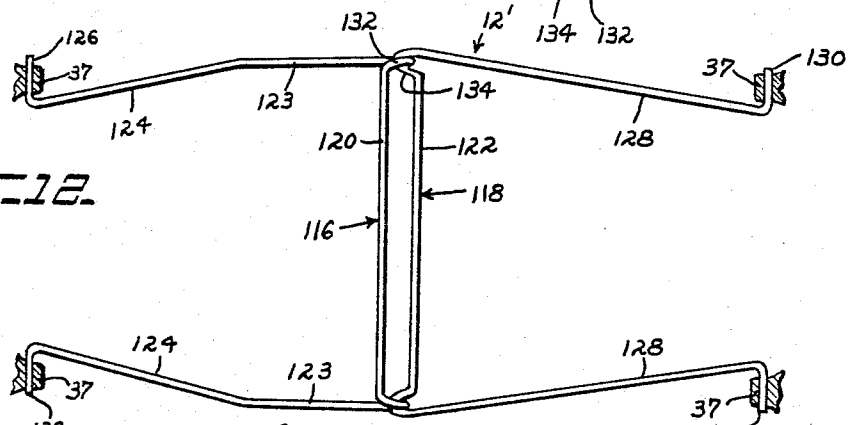


Fig. 13.

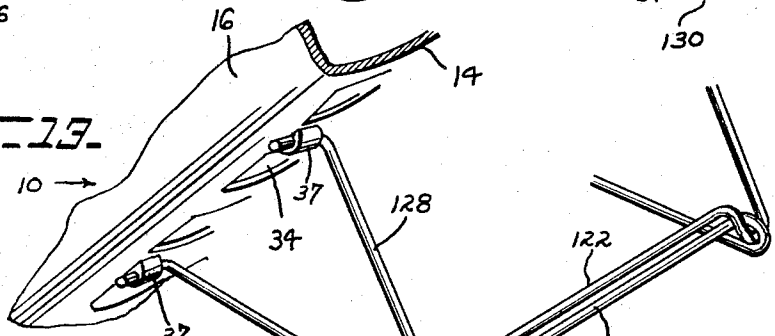
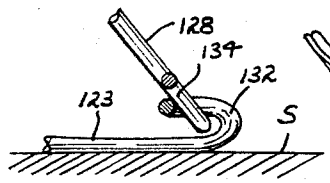


Fig. 15.



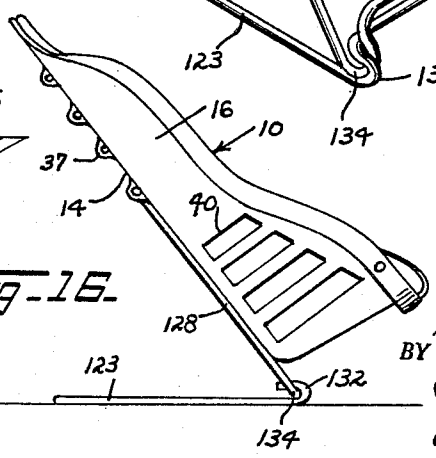


Fig. 16.

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United States Patent Office 3,331,632 Patented July 18, 1967

3,331,632

SUPPORTING STAND OR CARRIER FOR INFANTS

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Filed Oct. 2, 1964, Ser. No. 401,131
5 Claims. (Cl. 297—302)

This invention relates to a supporting stand or carrier for infants too young to sit or stand without support, wherein it is desired to provide a correct device capable of supporting a small baby in a comfortable position.

An extremely young infant before the sitting up stage in the life of the baby must lie flatly on its back or be supported in the arms of an attendant. It is desirable for the health and comfort as well as for the development of the infant to change its position from the helpless prone posture necessarily assumed. The head and back of the infant must be carefully supported at all times until the development allows the baby to sit up erect unsupported.

It has been found that most babies will remain most contented when supported at an angle rather than when lying in a horizontal position. A support holding the baby at an angle has been found to have a tendency to strengthen the back of the infant, as the child may more readily rise into upright position.

It is accordingly a principal object of the present invention to provide an inclined stand or carrier in which the baby may be supported during the hours when the child is awake. This permits the development of the infant body without any strain regardless of the age of the baby. The position of the body may be changed without danger of causing injury to the neck, chest or any part of the body and at the same time the arms and legs are free at all times.

Another object of the invention is to increase the utility of a baby support or carrier by providing a supporting frame or stand which is adjustably connected t the stand or carrier in such a way as to support the child in any of a series of positions and to provide a stand which will support the baby comfortably and safely in the carrier.

A feature of the invention is the provision of a supporting frame which will support the baby carrier or stand in any of a variety of positions, allowing the baby to lie flat or to be set up at any desired angle.

Another feature of the invention is the provision of a supporting frame for a baby carrier or stand which is formed of a heavy steel for rigid support of the carrier. The use of the supporting frame or stand in conjunction with the baby carrier enables the carrier to be used in a wide variety of situations; for instance, the carrier may be used as an attachment to an automobile seat, or to a high chair.

Still another object is to provide a baby carrier or stand with means for converting the carrier or stand from a stationary device to a rocker and vice versa.

Yet another object is to provide a baby carrier or stand that is portable and may be readily carried with supported infant from room to room.

For further comprehension of the invention and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

FIG. 1 is a side elevational view of a baby carrier or stand and supporting frame embodying the invention, the carrier being supported at an angle to the vertical and shown supporting an infant, the carrier and frame being shown in collapsed condition in dash lines.

FIG. 2 is a bottom plan view of the carrier or stand and supporting frame.

FIG. 3 is a perspective view of one end of the carrier or stand showing the connection between the compression spring and body of the carrier.

FIG. 4 is a top perspective view of the carrier or stand on an enlarged scale.

FIG. 5 is a perspective view of a bracket adapted to be used with the carrier or stand.

FIG. 6 is a side elevational view of an automobile seat with the carrier or stand of FIG. 1 supported on the top thereof.

FIG. 7 is an enlarged cross sectional view taken on the line 7—7 of FIG. 6.

FIG. 8 is a front perspective view of the carrier or stand and supporting frame, the carrier being supported in an upright position and fixed in position, showing an infant supported therein and seated upon a cushion or pad.

FIG. 9 is a top perspective view of the frame for supporting the carrier or stand as shown in FIG. 8.

FIG. 10 is a top perspective view of the pad or cushion for the carrier.

FIG. 11 is a side elevational view of the carrier or stand supported in horizontal position on a modified form of supporting frame.

FIG. 12 is a sectional view taken on the line 12—12 of FIG. 11.

FIG. 13 is a fragmentary top perspective view of the supporting frame of FIG. 11.

FIG. 14 is a detail sectional view of a compression spring within another compression spring.

FIG. 15 is a detail sectional view of the supporting frame joint.

FIG. 16 is a side elevational view of the carrier or stand of FIG. 11 supported in a position at an angle to the vertical.

Referring now in detail to the drawings, in FIG. 1 there is shown a supporting carrier or stand **10** for an infant supported at an angle to the vertical upon a supporting frame **12** and showing an infant in supported position therein.

The carrier **10** shown comprises an elongated back panel **14** having integrally formed side panels **16** and **18**. The side panels extend forwardly as at **20** and **22** and are integrally connected to a bottom **24**. The bottom has a downwardly extending skirt portion **26**, at the front thereof, to limit forward tipping. The baby carrier of the type illustrated is normally a one-piece structure formed of a comparatively rigid plastic material. The side panels **16** and **18** are formed with laterally extending flanges **28** terminating in rearwardly extending flanges **30**, and the skirt portion **26** is formed with a rearwardly extending flange **32** forming a continuation of the flanges **30**. The rear panel **14** is formed with a series of pairs of aligned transverse closed slots **34** and with a single transverse slot **36** at the top to serve as a handle for carrying the carrier. A plurality of semi-spherical bearing members **37** are integrally formed on the rear surface of the rear panel at spaced intervals and in opposed relation between the slots at the sides of the panel. A pair of opposed tubular bearing members **38** is formed on the rear surface of the rear panel at the bottom thereof, the members being disposed near the sides of the panel. The side panel **16** and **18** are also formed with closed slots **40**. The slots **34** and **40** are for decorative purposes and to reduce the weight of the carrier. A pair of small holes **42** is formed in the rear panel above slot **36**. A pair of vertically disposed closely spaced

slots 44 is also formed in the rear panel midway its ends at each side thereof and a horizontally disposed closed slot 46 is formed in the skirt portion 26 at the bottom front of the carrier.

The supporting frame 12 is provided for supporting the carrier or stand 10 in positions relative to the horizontal. This frame 12 comprises a U-shaped body 52 of heavy gauge tubular steel material with the free ends of the legs 54 thereof turned at substantially right angles into feet 56. The free ends of the feet are provided with rubber caps 58. A headed pivot pin 60 is carried by each leg at its juncture with its foot 56, the pin extending laterally of the inner surface of the leg and extending loosely through a hole 62 in the adjacent flange 30 of the side panel of the carrier. The carrier or stand 10 is thus pivotally connected to and supported by the supporting frame 12 when the bight portion 64 and the feet 56 of the frame 12 rest on a horizontal supporting surface S as shown in FIG. 1, the construction serving as a rocker. The frame 12 is sufficiently resilient to permit spreading of the legs 54 so that the pivot pins 60 may be inserted into the holes 62 in the side panels.

The invention contemplates cushioning the rocking or pivoting movement of the carrier or stand 10 and for this purpose an elongated compression spring 68 is interposed between the bottom of the rear panel 14 of the carrier or stand and the bight portion or crosspiece 64 of the frame 12 connected to the bight portion by means of a chain 70 fastened at one end to an eye 72 on the bight portion and at its other end to the adjacent end convolution of the spring. The other end convolution of the spring is loosely fastened around a double headed metal cross bar 74, the ends of which are supported by the tubular bearing members 38. Downward pressure on the carrier or stand 10 causes the spring to become elongated and when this pressure is relieved the spring contracts. This provides spring action for the rocking movement of the carrier. Instead of the spring 68 and chain 70 connection, a telescoped spring structure comprising a compression spring 71 telescoped in another compression spring 73 as shown in FIG. 14 may be interposed between the supporting frame and carrier or stand 14, the end convolutions of the springs being formed with hooks 75 for fastening to the eye 72 and rod 74.

Mechanism is also provided for holding the carrier or stand 10 in adjusted angular positions relative to the vertical as shown in FIG. 9. This mechanism includes elongated round metal rods 80 formed with hooks 82 at one end and angular right angular feet 84 at the other end. In order to hold the carrier or stand 10 in predetermined angular position, the hooked ends of the rods 80 are inserted through holes 86 formed in the legs adjacent the bight portion or cross piece 64 of the frame 12 and the feet 84 thereof inserted through the desired pair of opposed bearing members 37 on the rear panel 14 of the carrier or stand. The older the baby becomes the more able he is to sit in a more erect position.

A pad 90 is preferably provided for covering the rear panel 14. The pad is formed of covered waterproof material such as urethane foam rubber and is substantially of the same dimensions as the rear panel being provided with longitudinally extending grooves 92 at one end and a cross groove 94 at the other end to permit the pad to accommodate itself to the shape of the carrier or stand. The pad forms a cushion for the infant.

It is contemplated that the carrier or stand 10 may be suspended from the back of an automobile seat as shown in FIG. 6. The rear panel 14 is accordingly formed with the pair of holes 42 above the slot 36 as viewed in FIG. 1 to receive removably a portion of an adapter bracket 96 as shown in FIG. 5. The adapter bracket comprises a frame of round metal rod material having a pair of substantially inverted U-shaped auxiliary frames

with bight or cross portions 100 and side legs 102 and 104, the extremities of the legs 104 being connected by an elongated rod portion 106 and the extremities of the other legs 102 being outturned in opposed directions forming feet 108.

In use, the feet 108 are inserted through the holes 42 in the top of the rear panel 14 whereby the frame forms an extension of the rear panel 14 and the inverted U-shaped auxiliary frames of the frame may be slipped over the top 110 of the upstanding back 112 of an automobile seat 114 as seen in FIG. 6, whereby the carrier or stand may be supported in suspended relation on the back of the seat.

In FIGS. 11 to 15, inclusive, a modified supporting frame structure 12' is illustrated for supporting the carrier or stand 10 in either a horizontal position as shown in FIG. 11 or in a position at an angle to the vertical as shown in FIG. 16. The frame 12' consists of a pair of substantially U-shaped auxiliary frames 116 and 118 placed end to end with their bight portions 120 and 122, respectively interlocked as shown in FIG. 12. The frame 116 consists of a U-shaped body including the bight portion 120 and side legs 123, the free ends of the legs 122 being bent inwardly slightly as indicated at 124 towards each other and being formed with extremities turned outwardly forming feet 126. The frame 118 also consists of a U-shaped body including the bight portion 122 and side legs 128, the legs extending slightly inwardly and terminating in extremities turned outwardly forming feet 130. The bight portions 120 and 122 of the auxiliary frames 116 and 118, respectively, are slightly bent or offset forming loops 132 and 134, respectively.

In order to support the carrier or stand 10 in a horizontal position as shown in FIG. 11, the loops 132 and 134 of the bight portions 120 and 122, respectively, are interlocked with each other as shown in FIG. 12 so that the auxiliary frames 116 and 118 can swing relative to each other. When thus interlocked, the feet 130 of auxiliary frame 118 are inserted in a pair of opposed bearing members 37 adjacent to the top end of the carrier or stand as viewed in FIG. 1, and the feet 126 of the other auxiliary frame 116 are inserted through a pair of opposed bearing members 37 adjacent to the middle of the body of the carrier or stand as shown in FIG. 11. When the supporting frame 12' is thus fastened to the carrier or stand, the carrier may be supported in a horizontal fashion by resting one end thereof on the tubular bearings 38 and the other end on the loops 132 and 134 formed by the bight portions of the frames 116 and 118.

In order to support the carrier or stand 10 in a position at an angle to the vertical as shown in FIG. 16 the feet of one auxiliary frame, for instance, the feet 130 of auxiliary frame 118 are inserted through a pair of opposed bearing members 37 on the rear panel 14 of the carrier or stand, for example, the members 37 near the mid-length of the body of the carrier as shown in FIG. 16, and the legs 123 of the other interlocked auxiliary frame 116 are seated for their entire length on the horizontal supporting surface S. When the auxiliary frames are thus arranged, the carrier or stand 10 will be supported in a balanced condition at an angle to the vertical.

A supporting belt 140 may be provided for strapping the infant in the carrier or stand 10. The belt is threaded through the pairs of slots 44 at the sides of the rear panel 14 and looped around the infant and the ends of the belt releasably fastened by a buckle (not shown). A strap 142, which may be of waterproof material, is formed with a loop 144 encircling the belt 140 and extends through the slot 46 in the skirt portion 26 with its free end anchored behind the skirt portion. As seen in FIG. 8, the strap is positioned between the legs of the infant and prevents the child from slipping out of place.

The hand opening 36 at the top of the carrier or stand as viewed in FIG. 1 permits the carrier or stand to be readily lifted or carried. A string of balls 146 may be

placed across the front of the carrier or stand inwardly of the bottom **24** and secured in position by means of hooks **148** carried on the ends of the string hooked around the edge walls of holes **150** formed in the flanges **28**. The balls constitute play toys for the infant.

It will be seen that the infant is securely held in place in the carrier by the supporting belt and the strap connecting the belt and the base of the carrier; and that the carrier may be inclined at an angle to the vertical. The pad prevents any injury to the infant.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claims.

I claim:

1. A baby stand or carrier comprising a body with a rear panel, side panels and a bottom, a skirt portion depending from the bottom at the front thereof, the side panels extending forwardly of the rear panel, a flange along the front edge of each side panel, said flange being angular in cross-section and having a portion extending rearwardly along the side panel and spaced therefrom, a rearwardly extending flange along the skirt portion forming a continuation of the rearwardly extending flange on the side panel, said rearwardly extending flange having a hole, said baby stand or carrier further comprising a support including a tubular metal U-shaped body with side legs and a connecting bight portion, the ends of the legs being bent forming angular feet, and a pin carried by each leg at its juncture with its foot, said pin received loosely in the hole in the flange of the side panel and spring means interposed between the bight portion and the rear panel at the bottom end thereof including an elongated compression spring connected at one end to the rear panel and connected at its other end to a chain, the chain being connected to the bight portion.

2. A baby stand or carrier comprising a body with a rear panel, side panels and a bottom, a skirt portion depending from the bottom at the front thereof, the side panels extending forwardly of the rear panel, a flange along the front edge of each side panel, said flange being angular in cross-section and having a portion extending rearwardly along the side panel and spaced therefrom, a rearwardly extending flange along the skirt portion forming a continuation of the rearwardly extending flange on the side panel, said rearwardly extending flange having a hole, said baby stand or carrier further comprising a support including a tubular metal U-shaped body with side legs and a connecting bight portion, the ends of the legs being bent forming angular feet, and a pin carried by each leg at its juncture with its foot, said pin received loosely in the hole in the flange of the side panel and spring means interposed between the bight portion and the rear panel at the bottom end thereof, including an elongated compression spring connected at one end to the rear panel and connected at its other end to a chain, the chain being connected to the bight portion, said rear panel having a pair of opposed holes for attachment of an adapter supporting bracket for supporting the carrier on the top of the back of an automobile seat, said bracket having a pair of inverted U-shaped frames in spaced relation, the extremities of one side of the legs being connected by a rod, the extremities of the other side of the legs being bent outwardly forming feet adapted to be received in the holes in the rear panel, said inverted U-shaped frames adapted to be seated over the top edge of an automobile seat.

3. A baby stand or carrier comprising a body with a rear panel, side panels and a bottom, a skirt portion depending from the bottom at the front thereof, the side panels extending forwardly of the rear panel, said baby stand or carrier further comprising a support including a pair of U-shaped tubular metal bodies arranged end to end with the bight portions thereof interlocked, pairs of opposed bearing members protruding from the rear surface of the rear panel, said pairs being spaced longitudinally from each other, a pair of tubular bearing members on the rear surface of the rear panel at the bottom sides thereof, the extremities of the side legs of the bodies being bent outwardly forming feet received in the spaced bearing members on the rear panel, the bight portions of the U-shaped bodies and the pair of tubular bearing members serving as supports for the carrier and U-shaped metal bodies with the carrier disposed in a horizontal plane.

4. A baby stand or carrier comprising a body with a rear panel, side panels and a bottom, a skirt portion depending from the bottom at the front thereof, the side panels extending forwardly of the rear panel, said baby stand or carrier further comprising a support including a pair of U-shaped tubular metal bodies arranged end to end with the bight portions thereof interlocked, a pair of opposed bearing members protruding from the rear surface of the rear panel, said pairs being spaced longitudinally from each other, the extremities of the side legs of one U-shaped body being bent outwardly forming feet received in selected spaced bearing members on the rear panel, the side legs of the other U-shaped body adapted to be seated upon a horizontal supporting surface for supporting the carrier in a position inclined to the vertical.

5. A baby stand or carrier as defined in claim **1** characterized by a pair of tubular bearing members on the rear surface of the rear panel at the bottom end thereof at the sides, an elongated round rod with its ends supported in said tubular bearing members, wherein the compression spring is constituted by a pair of spring sections telescoped one within the other.

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