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[54] **BABY CARRIAGE**

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July 1, 1970 Germany ..... G 70 24 766.4

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[51] **Int. Cl.** **B62b 9/10**
[58] **Field of Search** ..... 296/1 B, 28 B, 78 A, 97 K; 280/87.02 W, 150, 47.38; 248/316 D

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[57] **ABSTRACT**

A baby carriage for accommodating babies in a belly-down fashion, having an undercarriage-borne body of walls at least one of which comprises a see-through portion that may be partly or wholly covered by a removable light shade. In a preferred embodiment, at least one body end is higher than the rest of the body and windows extend over the height of said one higher end both at its sides and at its end wall.

7 Claims, 10 Drawing Figures

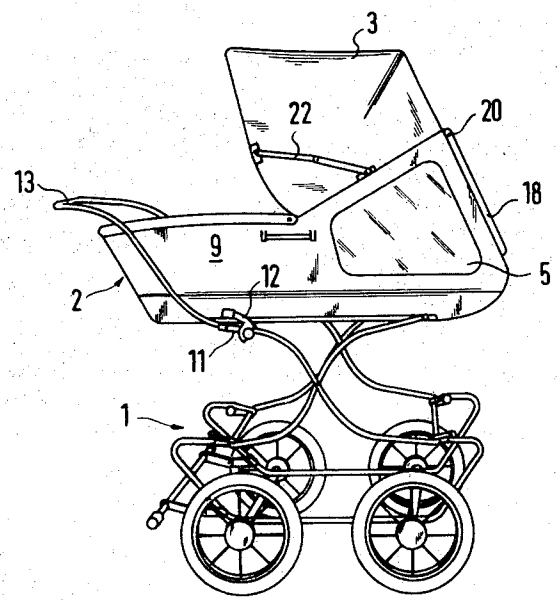


Fig.1

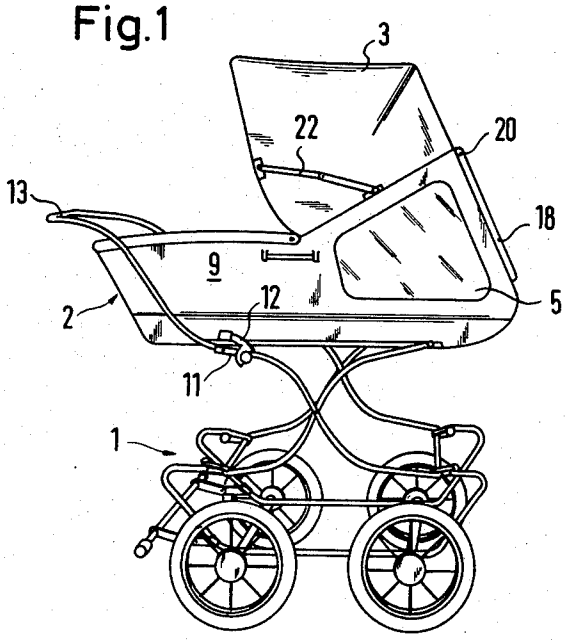
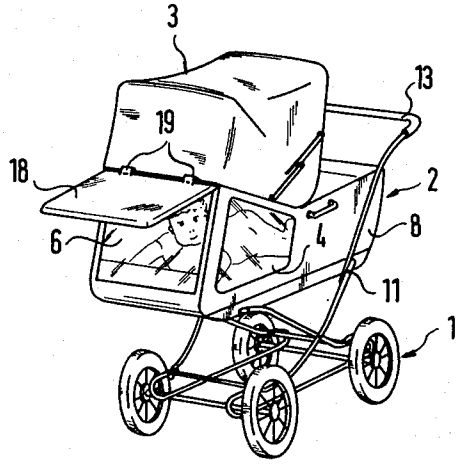


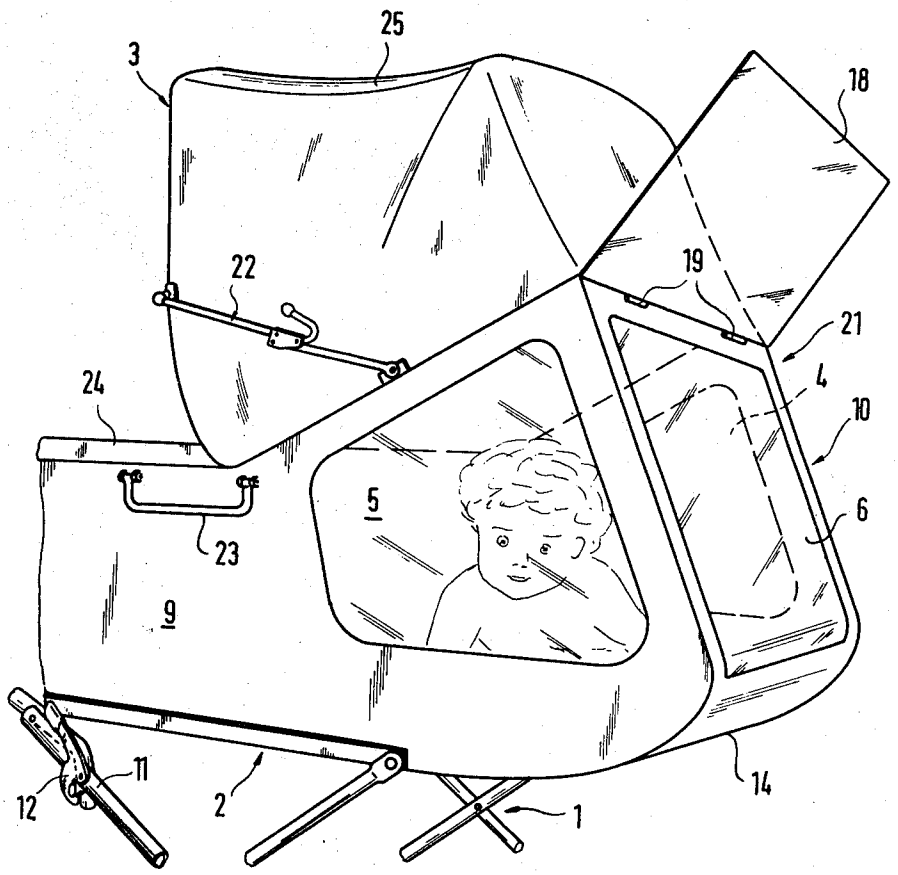
Fig.2



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Fig.3



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Fig.4

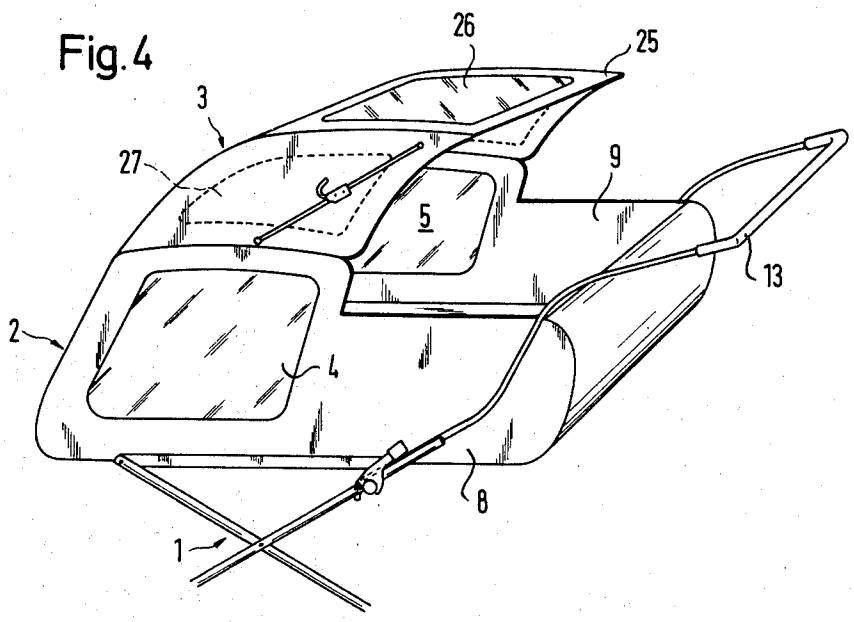
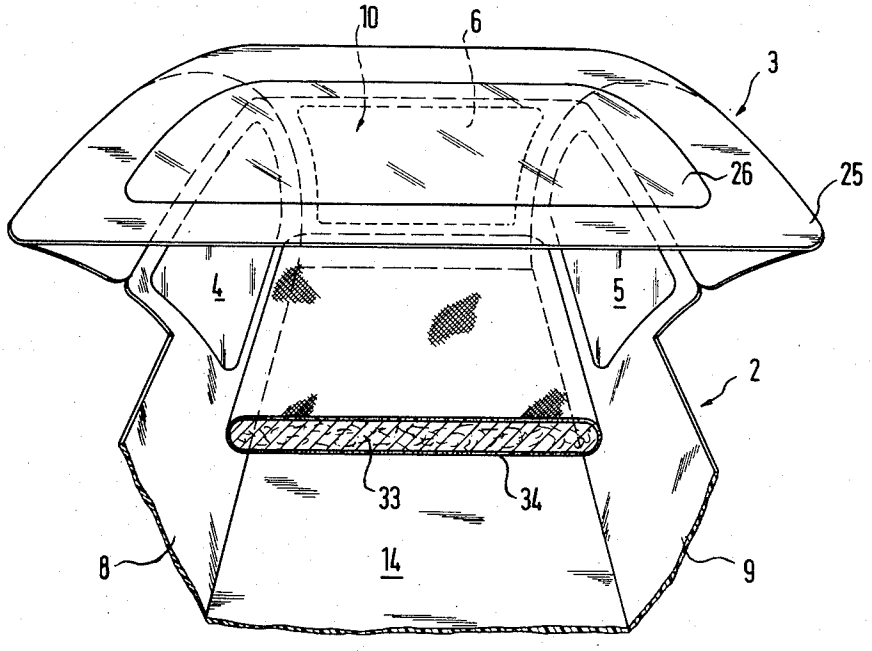


Fig.5



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Fig.6

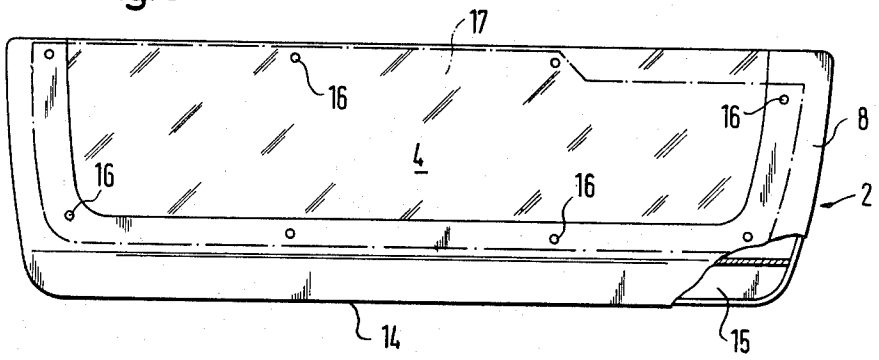


Fig.8

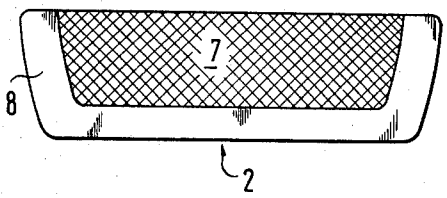


Fig.7

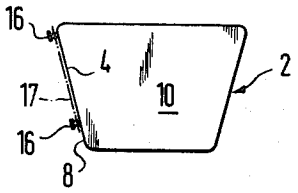


Fig.9

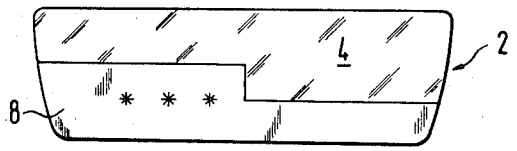
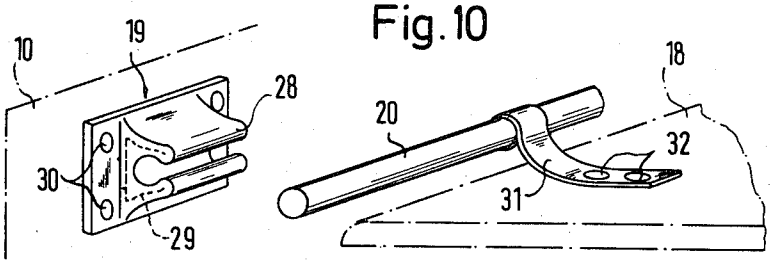


Fig.10



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BABY CARRIAGE

BACKGROUND OF THE INVENTION

The present invention relates to improved baby carriages and in particular to a baby carriage having a wheeled support, a pusher handle attached to said support, a bottomed and walled body carried by said support and a detachable hood. The invention is also applicable to baby carriages constructed as folding prams or perambulators, and to doll carriages of the box and/or folding pram types.

According to the prior art, baby carriages have been vehicles which for at least part of the day serve as the living space for babies up to a minimum age of about 1 year. During the past decades, a great number of facilities have been created to increase the comfort of mother and child, to improve the baby's safety and ease of living and also to advance hygienic conditions. However, the importance of the baby's early relations to his environment for his well-being and his development has hitherto not been fully appreciated. Thus babies have been, and usually are, reared lying on their backs inside a baby carriage with but a small-angle view to the sky and whatever few objects might appear there occasionally.

The babies' lying on the back has been proved to feature serious drawbacks such as deformations of body and posture, asphyxiation hazards, and a slowing-down of mental development owing to limited communication with the exterior. For further details, reference may be had to the article by Prof. Dr.med. J. Gleiss, "Die Vor-und Nachteile der Bauchlage bei Neugeborenen und Sauglingen" ("The advantages and disadvantages of the belly-down position for babies and infants"), Deutsche Medizinische Wochenschrift 1969, pp. 2449 to 2452.

There has been disclosed in the October 1968 issue of "Pram World & Nursery Times — International," p. 9, a baby carriage with a body and hood having a transparent covering on their frames. Though the publication states that this see-through pram was designed just for fun with the consideration that it might help youngsters to take an interest in their surroundings at a very early age, a baby carriage with all-transparent walls would not, in practice, be suitable for the purpose due to lack of a possibility to provide at times, peace and seclusion so necessary for child up-bringing. Moreover, mothers have objected to a see-through pram as exhibited because all things inside the carriage body are permanently visible, including bed or mattress, cushion, blanket, food containers, diapers, cosmetics etc., which things are, of necessity, sometimes in a less orderly state.

In addition, the see-through prams hitherto proposed have frame members barring a free view if a baby lying on his belly lifts his head, which infants like to do already during their first months of life. Such a hindrance to free sight will prevail even if the hood, too, has a partly or wholly transparent cover on its non-transparent frame.

OBJECTS OF THE INVENTION

It is an important object of the invention to provide a baby carriage having none of the said drawbacks.

It is another object of the invention to provide a baby carriage suitable especially for rearing babies in a belly-down fashion.

It is a further object of the invention to provide, with a minimum of costs, a baby carriage fulfilling all requirements for rearing babies in a belly-down fashion.

Still another object of the invention consists in providing an easy-to-manufacture and easy-to-use baby carriage of simple, yet sturdy design having all the positive qualities of conventional baby carriages.

SUMMARY OF THE INVENTION

According to the invention there is provided a baby carriage having a wheeled support, a pusher handle attached to said support, a bottomed and walled body carried by said support and a detachable hood at one end of said body, comprising see-through means at said one body end, the walls of said one end with said see-through means rising higher than the remainder of said body to permit a baby accommodated therein in a belly-down fashion to lift his head and have a free view, and further comprising means attachable to said body for selectively covering said see-through means in order that the inside of said body may be shielded.

According to another aspect of the invention there is provided, in a baby carriage of the type mentioned above, see-through means both at the side walls and at an end wall of said body end, said see-through means extending over all the height thereof so that said baby may have a free view in his forward and side directions.

According to yet another aspect of the invention, a baby carriage of the type mentioned above comprises a mattress having a replaceable fabric cover to permit through said see-through means a tidy appearance of the baby support mattress inside said walled body.

Still another aspect of the invention resides in a baby carriage of the type mentioned above, comprising see-through means in at least one portion of said detachable hood and means attachable to said hood for selectively covering said see-through means.

ADVANTAGES OF THE INVENTION

A baby accommodated in a carriage according to the invention will have free sight in the one end of the carriage body which may be selectively covered, whereas the remainder of the body will be permanently guarded against sight or light, respectively. Lying on his belly, the infant will have unimpaired sight-communication with his environments through the see-through means even when he props himself up. This will not only significantly enhance his mental and physical development and get him simultaneously accustomed to the events round-about though he may not yet be able to sit and to peep over the edges of the box he is in, but also permit of an effective inspection of the baby by a supervising person. Carriage bodies according to the invention are, notwithstanding their cheap manufacture, of a rugged light-weight construction that offers maximum comfort and full protection for the baby against the various influences from outside. In this connection it is important to note that since the see-through means may be covered as desired, the baby can be sheltered whenever necessary so that he may fall and rest asleep or be protected against heavy radiation, while by exposing the see-through means view communication with him may be restored at any time, e.g., when his waking-up should be watched. Of course this feature will also trigger a hide-and-seek play with a baby who is beyond the first few months of life.

SHORT FIGURE DESCRIPTION

Other objects, features and advantages of the invention will become apparent from the following description of preferred embodiments thereof.

In order that the invention may be clearly understood, such preferred embodiments will be elucidated, by way of example, with reference to the accompanying drawings wherein:

FIG. 1 is a side elevation view of a baby carriage according to a first embodiment of the invention, having selectively coverable see-through means,

FIG. 2 is a perspective view of a baby carriage of the type shown in FIG. 1,

FIG. 3 is a perspective view, on an enlarged scale and with parts broken off, of one end of a baby carriage with selectively coverable see-through means as shown in FIG. 1 and 2, respectively,

FIG. 4 is a simplified perspective view of a baby carriage body according to another embodiment of the invention,

FIG. 5 is a perspective view into the baby carriage body shown in FIG. 4,

FIG. 6 is a simplified side elevation view of a baby carriage body according to still another embodiment of the invention,

FIG. 7 is a front elevation view of the baby carriage body shown in FIG. 5,

FIGS. 8 and 9 are simplified side elevation views of further embodiments of baby carriage bodies according to the invention, and

FIG. 10 is an exploded perspective view of mounting means for a detachable and selectively operable cover as used on a baby carriage according to FIGS. 1 to 3.

The baby carriage shown in FIG. 1 has an undercarriage 1 supporting a carriage body 2 shaped like a box or tub and having a hood 3. The undercarriage 1 may be of the folding type providing a wheeled and spring mounted support connected by articulated levers 11 and a locking handle 12 with a pusher handle 13. FIG. 1 shows a comfort undercarriage 1 having relatively soft springs and spring straps as well as a stepdown brake. The construction of the undercarriage 1 shown in FIGS. 2 and 3 is simpler but serves the same purpose in that its top is designed to receive the carriage body 2 which is attached thereto by lockable and unlockable fixing means (not shown). With the locking handle 12 in an unlocking position, the pusher handle 13 may be swung over whereby the undercarriage 1 will fold.

The carriage body 2 has side walls 8 and 9 as well as end walls, one of which is designated by 10. One end of the carriage body 2, generally designated by 21, is raised in relation to the remainder of the carriage body 2 so that the upper edges of the raised end 21, which is preferably the front end of the carriage body 2, are higher than the rest of the carriage body or tub. Whereas the lower parts of the carriage body 2 have non-transparent walls, the raised front end 21 is provided with see-through means 4, 5 and 6. In a preferred embodiment of the invention, the see-through means 4 and 5 are arranged in the side walls 8, 9 and the see-through means 6 in the end wall 10 of the raised front end 21. Between the outer bottom wall 14 of the carriage body 2 and an additional bottom partition (partly shown) there may be a bottom compartment 15 (FIG. 6) designated to receive flat objects such as a waterproof cover 24 (FIG. 3), when the latter will not be required for covering the open carriage box 2 during fine weather.

In the embodiments shown in FIGS. 1, 2 and 3 the front end 21 is shown to raise from the middle of the carriage body 2 to the end wall 10 thereof. The see-through means 4, 5 and 6 extend substantially over all the height of this raised front end 21 and may be selectively shaded by covers. In the embodiment according to FIGS. 1 to 3, only one cover is shown which is associated to the see-through means 6 of the end wall 10. This cover comprises a pivoted shade 18 having a pivot bar 20 which is removably held in at least one holding means or pivot bearing 19 so that it will remain in whatever angular position by friction forces.

Details of this mounting arrangement will be apparent from FIG. 10. As shown schematically, the pivot bearing 19 is secured to the end wall 10 of the carriage body. The holding means or pivot bearing 19 is shown to consist of a backing plate having mounting holes 30 and being integral with a pair of clip legs 28 which are preferably made of plastics and contain a U-shaped metallic reinforcing spring 29. As the profile of the clip legs 28 is U-shaped, they will detachably grip the pivot bar 20, which is attached by means of a bracket 31 with mounting holes 32 to the shade 18. It will be appreciated that the pivot bar 20 may be force-fitted between the clip legs 28 for pivotally mounting the flap or shade 18 at the end wall 10. On the other hand, a simple pulling motion will suffice for taking off the shade 18 which may then be placed in a bottom compartment such as 15.

The walls of the carriage body or box 2 comprise a covering made of plastics, in particular plastic foils, fabric or other sheet material etc. Utilizing plastic foils is especially advantageous if the see-through means 4 to 6 consists of transparent foil sheets permanently welded to the walls 8 to 10. In particular the see-through means 4 to 6 comprise relatively thick clear-glass foil having a mechanical strength, ruggedness, and resistance to scratching which will outlive the severest service loads. However, colored transparent foils can be used as well, the colors preferably being such as to offer protection against sunrays.

As an alternative or in addition covers may be provided which partly or wholly shield light from the see-through means 4 to 6. According to the invention, such covers may be removably attached inside or outside at the carriage body or tub 2. Preferred embodiments of such covers include zipfastened flaps, spring blinds, fabric or plastic coverings such as indicated by reference numerals 17 to be secured with snap fasteners 16 (FIGS. 6 and 7) or even curtains. For attaching the covers, snap fasteners such as 16, so-called burring straps, zippers, sockets and plug connections or any other known means may be used. Of course it is possible that individual covers are transparent and/or colored, whereas others are non-transparent. The fastening means may also be designated to enable attachment of a non-transparent cover on top of a transparent, either clear or colored cover.

The relative sizes of the see-through means or windows 4 to 6 and the non-transparent walls of the carriage body 2 are such as to permit free sight in the forward and side directions for a baby lying on his belly with his head at the front end 21. The non-transparent

wall portions of the box or tub 2 make it possible to store things which must not be directly be visible from outside.

The embodiment shown in FIGS. 4 and 5 differ from the embodiments described only in respect of the shape of the carriage body 2 and the hood 3. According to FIGS. 4 and 5, the raised front end 21 has nearly square side parts with correspondingly bigger windows 4 and 5 and has also a smaller hood 3 comprising a top window 26 in its top face 25. In addition, side windows may be provided, as indicated by dashed lines in FIGS. 4 and 5. Other details may resemble those of the embodiments according to FIGS. 1 to 3, and like reference numerals are used to designate like parts.

As can be seen especially from FIG. 5, there may be provided according to the invention a mattress 33 having a replaceable fabric cover 34. Thus, by taking care that a clean cover 34 is used, a tidy appearance of the baby support mattress inside the walled body 2 with its see-through means 4 to 6 will be warranted at all times.

It can be seen from FIGS. 6 to 9 that the overall shape of the see-through means at least in the side walls of the tub 2 may vary. Thus, FIGS. 6 and 8 show a window 4 or 7, respectively, which extends over the greater part of the length at least of side wall 8 of the carriage body 2. FIG. 6 indicates at its right hand upper corner that the cover 17 need not completely shield the window 4. Similarly, it is evident from FIG. 9 that the non-transparent and transparent parts at least of side walls 8 may be stepped or staggered. Obviously, if the opposite side wall 9 is differently subdivided, it will always be possible to provide non-visible sections for objects which should not be seen from outside.

Further, it can be taken from FIG. 8 that the see-through means of either the carriage body or the hood must not necessarily be closed transparent windows, but may also comprise networks or lattices with narrow or wide meshes so that in addition to free sight, optimum venting will be safeguarded. Thus, a network or lattice will form the overall cover of a carriage body 2 and/or hood 3. Within such a network, the see-through means 4 to 7 may be set off, as by having wider meshes. Should the need arise, in particular during bad weather, the carriage body or top 2 and/or the hood 3 may be closed by means of the covers provided as necessary. In this connection it should be mentioned that it may be desirable in the beginning or at certain times to offer the baby only a limited view, such as through the top window 26 of the hood 3, whereas the growing infant may be afforded larger ranges of view at least during parts of the day.

The hood 3 is provided with expanding stays 22 which may be secured inside or outside as required. The hood 3 may be attached by means of plug-in props, inset hooks or other conventional means. In accordance with standard practice, carrying handles 23 may be provided at both side walls 8 and 9.

While no details have been mentioned for elements such as frames supporting the walls of the carriage body 2 and/or the hood 3, it should be pointed out that self-supporting material may be used, including synthetic resins such as acrylic glass of the type which is traded under names like perspex and plexiglass. Although it is possible to provide the see-through means 4 to 7, 26 and 27 with rainproof venting apertures enabling continuous air exchange while avoiding any sort of draft. Moreover, the invention contemplates an embodiment wherein the raised front end 21 of the carriage body 2 consists of an integral transparent section forming part of the side walls 8 and 9 as well as including the end wall 10. Thus, there is provided a sort of cockpit offering the baby a totally unimpaired view in all side and forward directions.

Although specific examples have been described, it is to be understood that the invention is intended to cover all equivalents and modifications within the scope of the appended claims.

What I claim is:

1. In a baby carriage wherein a baby receiving body is supported on a wheeled carrier including supporting rods, to which carrier is attached a handle, wherein said body has side walls, an end wall, a head wall, and a bottom, wherein said head wall and said side walls are provided with transparent windows forming an integral part of said head and side walls, and wherein shading means are provided for covering said windows, the improvement comprising a head wall which is higher than said end wall, said side walls having a first wall section of substantially uniform height adjacent to said end wall and a second wall section merging at one end thereof into said first side wall section and connected at the other end thereof to said head wall, said second side wall section having a height which increases from the height of the respective first wall section toward said head wall, said windows in said side wall sections of increasing height occupying substantially the entire area of said second side wall sections, whereby the window height also increases from said first wall section to said head wall, said window in said head wall also occupying substantially the entire area of said higher head wall whereby an all round view is provided in any belly down position of the baby, means for removably attaching said shading means to said walls and for selectively positioning said shading means relative to said windows, said shading means being less transparent than said windows, and means for connecting said body to said carrier so that said windows remain unobstructed by said supporting carrier rods.

2. The baby carriage according to claim 1, wherein said second side wall sections increase in height to correspond to the height of said head wall where the head wall is connected to said second side wall sections of increasing height.

3. The baby carriage according to claim 1, wherein said shading means are tinted or colored.

4. The baby carriage according to claim 1, wherein said shading means are non-transparent.

5. The baby carriage according to claim 1, wherein said head wall is slanted inwardly relative to said body.

6. In a baby carriage wherein a baby receiving body is supported on a wheeled carrier including supporting rods, to which carrier is attached a handle, wherein said body has side walls, an end wall, a head wall, and a bottom, wherein said head wall and said side walls are provided with transparent windows forming an integral part of said head and side walls, and wherein shading means are provided for covering said windows, the improvement comprising means for removably attaching said shading means to said walls and for selectively positioning said shading means relative to said win-

dows, said shading means being less transparent than said windows, wherein said means for removably attaching said shading means to the walls and for selectively positioning said shading means relative to said windows comprise U-shaped clip means secured to any one of said body walls and a hinge rod secured to said shading means along an edge thereof, said clip means having legs with a U-shaped reinforcing spring embedded in plastic material, whereby said hinge rod is held by the force of said spring of the clip means in any desired position for adjusting said shading means in any intermediate position relative to the respective window, and whereby said hinge rod is detachable by pulling it out of said U-shaped clip means.

7. The baby carriage according to claim 6, wherein said clip means are attached to an upper edge of said higher head wall.

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