

- 1 -

SEAT ASSEMBLY FOR A BABY CARRIAGE

This invention relates to a seat assembly for a baby carriage.

5 Seat assemblies for baby carriages of the chair type including a seat and a back rest are well known.

The present invention provides such a seat assembly whose back rest is designed so that its angle of inclination can be changed to convert the seat assembly into a bed form.

10 According to the present invention, there is provided a seat assembly for a baby carriage comprising a seat, a back rest whose angle of inclination relative to the seat is adjustable, a head guard, and means mounting the head guard for movement relative to the
15 back rest, the mounting means being arranged to vary the position of the head guard relative to the back rest in dependence upon the angle of inclination of the back rest relative to the seat.

20 Further, the present invention also provides a seat assembly for a baby carriage comprising:

a seat,

a back rest foldably connected to a rear edge of said seat and having foldable lateral portions,

a head guard foldably connected to an upper edge
5 of said back rest,

a pair of back rest retaining members to which said foldable lateral portions of said back rest are connected,

a head guard retaining member to which said head
10 guard is connected,

seat shaping means, and

means operatively connected to said seat shaping means to adjust the state of the seat shaping means in operative association with changes in the angle of
15 inclination of said back rest retaining members, such that, when said back rest retaining members are in a raised state, said seat shaping means supports said back rest substantially in alignment with said head guard and so that said lateral portions are folded and,
20 when said back rest retaining members are in a lowered state, said seat shaping means supports said back rest with said lateral portions unfolded and said back rest at an angle to said head guard whereby to form a hammock.

In the embodiments described below, a back rest and a head guard, which are each constructed with a hard core material incorporated therein, are foldably connected to each other and lateral portions, formed of a foldable sheet material, are foldably connected at least to opposed lateral edges of the back rest, to thereby form a hammock, and a seat shaping member is provided for suitably shaping said hammock according to changes in the angle of inclination of the back rest. The seat shaping member abuts against the back surface of the back rest and is arranged to turn relative to the head guard as the angle of inclination of the back rest is changed. In this way, the seat shaping member controls the relative positions of the back rest and head guard such that when the back rest is in a raised state, substantial alignment between the back rest and head guard is obtained, and, when the back rest is in a lowered reclining state, the head guard is angled relative to the back rest and performs its inherent function as a head guard. Thus, there is provided a baby carriage seat assembly which is both safe and comfortable for a baby placed therein.

The present invention will be described further, by way of example, in conjunction with the accompanying drawings, wherein:

Fig. 1 is a perspective view of the frame of a baby carriage including an embodiment of the invention;

Fig. 2 is a side view of the frame of the baby carriage of Fig. 1;

Figs. 3 to 5 are side views of a back rest and associated parts of the seat assembly of the baby carriage of Fig. 1, respectively in a raised state, a partially lowered state, and a lowered state;

Fig. 6 is a side view of the frame of a baby carriage including another embodiment of this invention, showing a mechanism for changing the angle of inclination of the back rest;

Fig. 7 is a side view showing the exterior of angle fixing means for the back rest angle changing mechanism of Fig. 6;

Fig. 8 is a side view similar to Fig. 7 but with the operating knob for the mechanism removed;

Figs. 9 to 11 are a front view, a left-hand side view and a rear view, respectively, of the long connecting member of the mechanism as indicated in Fig. 8;

5 Fig. 12 is a front view of the short connecting member of the mechanism as indicated in Fig. 8;

Figs. 13 to 16 are side views showing a series of typical operating states of the mechanism;

10 Fig. 17 is a side view showing the relation between a back rest retaining member and a seat shaping member of the seat assembly in a state corresponding to the state of the back rest angle changing mechanism shown in Figs. 7 and 8;

15 Fig. 18 is a side view showing the state of a head guard relative to the back rest in the Fig. 17 state of the back rest retaining member and seat shaping member;

Fig. 19 is a front view of the seat shaping member;

20 Fig. 20 is a side view showing the relation between the back rest retaining member and the seat

shaping member in a state corresponding to the Fig.
14 state of the back rest angle changing mechanism;

Fig. 21 is a side view showing the relation
between the back rest retaining member and the seat
5 shaping member in a state corresponding to the Fig.
16 state of the back rest angle changing mechanism;

Fig. 22 is a side view showing the relation
between the back rest and head guard when the back
rest retaining member and the seat shaping member are
10 in the Fig. 21 state; and

Fig. 23 to 25 show a further modification of this
invention, with Figs. 23, 24 and 25 illustrating a
back rest retaining member and seat shaping member in
states corresponding to those of Figs. 17, 20 and 21,
15 respectively.

Fig. 1 is a perspective view showing the frame of
a baby carriage including an embodiment of the
invention. Fig. 2 is a side view of the frame of the
baby carriage of Fig. 1. Fig. 3 is a side view of an
20 arrangement including a back rest associated with the
seat assembly of the baby carriage of Fig. 1, shown
in a raised state. Fig. 4 shows the back rest of

Fig. 3 in a somewhat lowered state, and Fig. 5 shows it in a most lowered state.

As shown in Figs. 1 and 2, the baby carriage includes various components, most of which are for the purpose of making the baby carriage foldable. Only those components which are of interest to this invention will be described below.

As shown in Figs. 3 to 5, the seat assembly for the baby carriage comprises a seat 101, a back rest 102 and a head guard 103. The seat 101, back rest 102 and head guard 103 are each constructed with a hard core material incorporated therein for prevention of buckling thereof. A fabric or the like is applied to the core material to cover the same. The fabric foldably connects the rear edge of the seat 101 to the lower edge of the back rest 102 and the upper edge of the back rest 102 to the lower edge of the head guard 103.

The seat 101 is disposed on a plane defined by a pair of longitudinally extending lower connecting rods 104, a rear shaft 105 and a front shaft 106, as

- 8 -

shown in Figs. 1 and 2. The back rest 102 and head guard 103 are substantially held by an inverted U-shaped reclining control rod 107. More particularly, the reclining control rod 107 comprises a pair of

5 back rest retaining members 108 and a head guard retaining member 109 which are formed as a unit. The back rest retaining members 108 are connected at their lateral edges to foldable lateral surface portions 110 (Fig. 5) of the back rest 102. The foldable lateral

10 surface portions 110 are formed of a foldable sheet material, e.g., a fabric. The outer edges of the foldable lateral surface portions 110 extend along and are connected to the back rest retaining members 108, whereby the back rest 102 is retained by the retaining

15 members 108. The head guard 103 is attached at its upper edge to the head guard retaining member 109, which extends widthwise.

The back rest retaining members 108 are installed so that their angle of inclination with respect to

20 the baby carriage main body can be changed. More particularly, rear support rods 111, which are components of the baby carriage main body, each have an adjusting attachment 112 fixed thereto, and the reclining rod 107 is pivotably connected by pivot pins

113 to said reclining adjusting attachments 112. Operating rods 114 are provided for fixing the angle of the reclining rod 107 at a selected one of a plurality of (e.g., three) positions. The operating

5 rods 114 have their lower ends bent outwardly to form engagement pins 115. Each engagement pin 115 is movable in an arcuate slot 116 in the associated adjusting attachment 112, from which extends a plurality of (e.g., three) engagement recesses 117.

10 By moving the operating rods 114 lengthwise, the engagement pins 115 can be engaged ~~in~~ and disengaged from adjacent ones of the engagement recesses 117, and in order to assist in retaining the pins therein, springs 118 are provided to bias the rods 114 down-

15 wardly. The operating rods 114 are vertically movable parallel with the back rest retaining rods 108. Their upward displacement renders the reclining rod 107 pivotable, and when they are displaced downwardly to bring the engagement pins 115 into engagement with any

20 of the engagement recesses 117, the back rest retaining members 108 are fixed at a selected angle of inclination.

A seat shaping member 119 is pivotably supported through pivot pins 120 on the back rest retaining

25 members 108. The seat shaping member 119 includes a

U-shaped portion, at whose opposite ends the pivot pins 120 are positioned. The widthwise extending portion 121 of the U-shaped portion is bent stepwise. As shown in Figs. 3 to 5, the front of the widthwise extending portion 121 abuts against the back surface of the back rest 102. The rear portion of the widthwise extending portion 121 is operatively connected to the rear shaft 105, which is a fixed portion of the baby carriage main body, by a connecting link 122.

10 The connecting link 122 is preferably in the form of a rigid rod, whereby motion can be reversibly positively transmitted to the seat shaping member 119. If this advantage is not desired, the connecting link 122 may be formed of a flexible belt. Formed as a unit with

15 and extend upwardly from the seat shaping member 119 are hood attaching elements 123. The hood attaching elements 123 are formed with holes in their upper ends for receiving an unillustrated hood retaining element to provide a hood extending forwardly from this

20 position.

Referring to Figs. 3 to 5, the operation of the seat assembly of the baby carriage will now be described.

Fig. 3 shows the back rest 102 in a raised state. In this state, the widthwise extending portion 121

of the seat shaping member 119 abuts against the back surface of the back rest 102 to fix the angle of inclination of the back rest 102 in the fully raised state. Further, at this time, the head guard 103
5 connected to the upper edge of the back rest 102 is positioned in alignment with the back rest 102 so that the two lie substantially in a single plane.

Fig. 4 shows the back rest 102 in a partially lowered state. In this state also, the widthwise
10 extending portion 121 of the seat shaping member 119 abuts against the back surface of the back rest 102 to fix the angle of inclination of the back rest 102, with the head guard 103 aligned with the back rest 102 in a single plane. That is, in the Fig. 4 state,
15 in spite of the fact that the back rest retaining members 108 are partially lowered as compared with the Fig. 3 state, the angle between the seat shaping member 119 and the connecting link 122 remains almost unchanged. As a result, in the Fig. 4 state also, the
20 alignment between the back rest 102 and the head guard 103 is maintained.

Fig. 5 shows the back rest 102 in its fully lowered state. In this state, with the back rest

retaining members 108 lowered further, the angle of intersection between the seat shaping member 119 and the connecting link 122 is changed such that they are bent relative to one another. As a result, the

5 widthwise extending portion 121 of the seat shaping member 119 is brought to a position in which it is considerably downwardly spaced from the back rest retaining members 108. If the back surface of the back rest 102 abuts against said widthwise extending

10 portion 121, a box-like bag or hammock will be defined with the back rest serving as the bottom and the head guard 103 and flexible lateral surface portions 110 as the lateral surfaces. The head guard 103 constituting one lateral surface of the bag is at a

15 substantial angle relative to the back rest 102. Thus, when the back rest 102 is fully lowered, the seat assembly assumes a bed form, with the head guard 103 assuming a position opposed to the top of the baby's head.

20 Fig. 6 is a side view showing the frame of a baby carriage including another embodiment of this invention, in which a mechanism for changing the angle of inclination of the back rest is shown. In the baby carriage shown therein, only those components which are

of interest to this invention will be described.

The seat assembly attached to this baby carriage comprises a seat, a back rest and a head guard, as is clear also from a description to be given later with reference to Fig. 17 and the figures that follow it. 5 The seat is attached, e.g., to laterally extending members 8 included in the baby carriage main body 1. The back rest is retained by back rest retaining members 9 pivotably attached to connectors 10 through 10 pivot pins 11, said connectors being provided, e.g., on the lower ends of push rods 4 (said lower ends not appearing in Fig. 6 as they are hidden behind other members). In order to adjust the angle of inclination of the back rest, the angle of inclination of the back 15 rest retaining members is altered, e.g. by adjusting the angle between the manual push rods 4 and the back rest retaining members 9, and the members 9 are fixed in the desired position. It can be seen that for this purpose the push rods 4 and the back rest retaining 20 members 9 may be suitably connected by appropriate connecting members each of whose opposite ends have a variable spacing between them.

A mechanism for changing the angle of inclination of the back rest retaining members 9 will now be

described. Fig. 7 is a side view showing the exterior of angle fixing means for the back rest angle changing mechanism of Fig. 6. Fig. 8 is a side view showing the operating knob for the mechanism removed. Figs. 5 9 to 11 are a front view, a left-hand side view and a rear view, respectively, of the long connecting member of Fig. 8. Fig. 12 is a front view of the short connecting member of Fig. 8. Figs. 13 to 16 are side views showing a series of typical operating states 10 obtained by changing the Fig. 8 state of the mechanism.

As shown in Fig. 6, the manual push rods 4 and the back rest retaining members 9 adjustably connected by short connecting members 12 and long connecting members 13, each in a pair. The state of the back 15 rest retaining members 9 shown in solid lines in Fig. 6 corresponds to the condition of these members shown in Fig. 16 and the state of the back rest retaining members 9 shown in phantom lines corresponds to the conditions of these members shown in Figs. 7 20 and 8. Connecting members 12 and 13 and the manner of their connection will now be described in detail.

The long connecting member 13, shown a Fig. 9 to 11, is provided with round holes 14

at its ends. It is formed on its lateral side with a stop defining element 16 whose function will become apparent from a description to be given later. In this embodiment, there is formed a reinforcing element 5 17 extending from the stop defining element 16 to provide a double layer construction. The double layer construction including the reinforcing element 17 enables the short connecting member 12 to be positioned between the layers, as will be later described. The hole 15 10 also extends through the reinforcing element 17.

The short connecting member 12, shown along in Fig. 12, is provided at one end thereof with a round hole 18 and at the other end thereof with an elongated hole 19. The elongated hole 19 extends along a 15 slightly curved path. The lateral portion of the short connecting member 12 where the elongated hole 19 exists is formed with a slightly projecting horn portion 20. The function of this horn portion 20 will become apparent from a description to be given later.

20 As shown in Figs. 6 to 8 and 13 to 16, the short connecting member 12 is pivotably connected at one end thereof to the back rest retaining member 9 by a first pivot pin 21 inserted into the hole 18. The other end of the short connecting member 12 is interposed between

the reinforcing element 17 formed on one end of the long connecting member 13 and the main body portion of the long connecting member 13. In this state, the elongated hole 19 and the hole 15 are aligned with each other to receive a second pivot pin 22 therein.

5 Thereby, the other end of the short connecting member 12 is pivotably connected to one end of the long connecting member 13. In addition, the second pivot pin 22 also retains an operating knob 23 disposed

10 outwardly of the long connecting member 13. The long connecting member 13 is pivotably connected at the other end thereof to the manual push rod 4, which is a fixed member, by a third pivot pin 24 inserted in the hole 14.

15 In the connected state of the short and long connecting members 12 and 13, the arrangement is such that the distance between the first and second pivot pins 21 and 22 is shorter than the distance between the second and third pivot pins 22 and 24. The operation

20 and movement of the reclining mechanism will now be described.

The state shown in phantom lines in Fig. 6 and the state shown in Figs. 7 and 8 illustrate the back rest retaining member 9 in its raised position. In

this state, the short connecting member 12 abuts against the stop defining element 16 of the long connecting member 13, whereby the limit of rotation of the short connecting member 12 around the axis of the second pivot pin 22 in one direction, i.e., a clockwise direction as viewed in the figure, is defined.

Therefore, even if the back rest retaining member 9 is loaded, the distance between the first and second pivot pins 21 and 24 is maintained unchanged and hence the back rest retaining member 9 is maintained in a raised, inclined, state. The back rest retaining member 9 is so constructed that it can be adjusted between this raised, inclined, state, a partially lowered intermediate inclined state and a fully lowered inclined state. Adjustment is effected by the operating knob 23.

The intermediate inclined state can be established by applying a counterclockwise force to the long and short connecting members 12 and 13 when in the Fig. 7 or 8 state through the operating knob 23. In response thereto, the state shown in Fig. 13 can be obtained. This state is one in which the long and short connecting members 12 and 13 overlies one another. In this state, the positional relation of the first to third pivot

pins 21, 22 and 24 is such that the back rest retaining member 9 is slightly turned counterclockwise around the axis of the pivot pin 11. In the Fig. 13 state, application of a further counterclockwise force through the operating knob 23 (and second pivot pin 22) will provide the state shown in Fig. 14. That is, the short connecting member 12 moves beyond the Fig. 13 state in which it underlies the long connecting member 13. It follows that, during this movement, the short connecting member 12 turns counterclockwise around the axis of the second pivot pin 22.

Fig. 14 shows the horn 20, which is part of the long connecting member 12, abutting against the end 16a of the stop defining element 16, which is part of the long connecting member 13. At this time, the second pivot pin 22 is positioned at one end, the lower end as illustrated, of the elongated hole 19. That is, the elongated hole 19, in this state, extends at right angles to the direction in which the long connecting member 13 extends. In this state, because of said butting, the short connecting member 12 cannot turn any further around the axis of the second pivot pin 22. Therefore, the angle between the short and long connecting members 12 and 13 is fixed and

hence the distance between the first and third pivot pins 21 and 24 is fixed, so that the back rest retaining member 9 is maintained in the intermediate inclined state.

5 In this embodiment, the horn 20 has been shown projecting from the side of the short connecting member 12, but such an arrangement is not essential. For example, the same effect may be obtained by further extending the end 16a of the stop defining element 16.

10 Adjustment from the Fig. 14 state to the fully inclined state involves lifting the operating knob 23 (second pivot pin 22) against gravity and other forces to position the second pivot pin 22 at the other end or upper end of the elongated hole 19. This state is
15 shown in Fig. 15. In the Fig. 15 state, the horn 20 does not butt against the end 16a of the stop defining element 16. Therefore, the short connecting member 12 can be further turned counterclockwise around the axis of the second pivot pin 22. In this state, if force
20 is applied to the operating knob 23 and secondarily to the back rest retaining member 9 to turn the short connecting member 12 counterclockwise, the latter is aligned with the long connecting member 13. This state

is shown in Fig. 16, which corresponds with the fully lowered state of the back rest retaining member 9.

In this way, the inclination of the back rest retaining member 9 can be changed in three steps and can be fixed in each of three selected states. Return from the Fig. 16 state to the Fig. 14 state and to the Fig. 7 state may be effected by reversing the above operation to produce reverse movement. Thus, the inclination of the back rest retaining member can be reversibly adjusted as desired.

Additional to the arrangement described above for changing the angle of inclination of the back rest retaining member 9 is an arrangement described below. Fig. 17 is a side view showing the relation between the back rest retaining member and the seat shaping member in a state corresponding to the state shown in Figs. 7 and 8. Fig. 18 is a side view showing the state of the head guard relative to the back rest in the Fig. 17 state. Fig. 19 is a front view of the seat shaping member, showing its arrangement. Fig. 20 is a side view showing the relation between the back rest retaining member and the seat shaping member in

a state corresponding to the Fig. 14. Fig. 21 is a side view showing the relation between the back rest retaining member and the seat shaping member in a state corresponding to Fig. 16. Fig. 22 is a side view showing the state of the back rest and head guard in the Fig. 21 state. Illustration of the connecting members 12 and 13 described above is omitted in Figs. 17 to 22, but the first and third pivot pins 21 and 24 are shown in these figures to clarify the relation with Figs. 7, 8, 14 and 16.

Referring to Figs. 17 to 19, the upper ends of the back rest retaining members 9 pivotably support the seat shaping member 27 through pivot pins 26. The seat shaping member 27, as best seen in Fig. 19, is basically a rectangular frame. The U-shaped portion of the rectangle which consists of the bottom and opposite lateral sides performs the seat shaping function. The said pivot pins 26 are positioned at both ends of the U-shaped portion. The widthwise extending portion 28 of the U-shaped portion, as shown in Fig. 18, abuts against the back surface of the back rest 29. The back rest 29, though not particularly shown, is foldably connected to the rear

edge of the seat. The back rest 29 is constructed with a hard core material incorporated therein. The head guard 30 is foldably connected to the upper edge of the back rest 29. The head guard 30 is also
5 constructed with a hard core material incorporated therein. Foldable connection between such back rest 29 and head guard 30 can be easily made, e.g., by integrally covering these hard core materials with a fabric or the like. The portion forming the upper
10 side of the seat shaping member 27 provides the head guard retaining member 31. Therefore, the upper edge of the head guard 30 is connected to this head guard retaining member 31. Means corresponding to the hood attaching elements 123 shown in Figs. 1 and 2 may be
15 attached to the head guard retaining member 31.

The lower end of the back rest retaining member 9, disposed below the back rest pivot pin 11, is provided with a pivot pin 32, whereby an intermediate link 33 is pivotably connected to the back rest
20 retaining member 9. The intermediate link 33 is formed with a substantially C-shaped guide hole 34. The guide hole 34 receives a guide pin 35, which is provided on the connector 10. When the back rest

retaining member 9 is turned around the axis of the back rest pivot pin 11, the attitude of the intermediate link 33 gradually changes while the guide pin 35 is guided in the guide hole 34. The
5 intermediate link 33 and the seat shaping member 27 described above are operatively connected together as by a rigid connecting link 36 formed of a rod.

As shown in Fig. 19, the seat shaping member 27 is foldably constructed, and may be so constructed that
10 its width can be reduced. Such construction is advantageous where the baby carriage main body 1 will be reduced in width when folded. More particularly the seat shaping member 27 is formed with foldable portions 37 and twistable portions, whereby folding
15 is allowed. When the baby carriage main body 1 is thus reduced in width in response to folding thereof, it is necessary that the back rest 29 and head guard 30 also be folded. Therefore, the hard core materials contained therein are preferably divided into a
20 plurality of longitudinally extending portions which can be folded about longitudinally extending folds.

As shown in Fig. 18, with the back rest retaining member 9 in its most raised state, the seat shaping

member 27 is aligned with the back rest retaining member 9. In this case, the back surface of the back rest 29 abuts against the widthwise extending portion 28 of the seat shaping member 27 and the back rest 29 and head guard 30 are substantially aligned with each other in a plane.

Fig. 20 shows the back rest retaining member 9 partially lowered relative to the state shown in Fig. 17. It should be noted that the positional relation between the back rest retaining member 9 and the intermediate link 33 remains unchanged all the while this partially lowered state is established. This is because when the back rest retaining member 9 is turned, the intermediate link 33 retained through the pivot pin 32 allows the guide pin 35 to be displaced in the guide hole 34 without any resistance. Therefore, the back rest retaining member 9 and intermediate link 33 turn as a unit. Under such circumstances, there is no possibility of the attitude of the seat shaping member 27 being changed relative to the back rest retaining member 9 through the connecting link 36, and the positional relation between the back rest and the head guard 30 shown in Fig. 18 is maintained unchanged.

Figs. 21 and 22 show the most lowered state of the back rest retaining member 9. During adjustment from the state shown in Fig. 20 to the state shown in Figs. 21 and 22, the back rest retaining member 9 is turned further. As the back rest retaining member 9 is turned, the intermediate link 33 initially also turns around the axis of the back rest pivot pin 11. However, after an initial movement of the link 33, the guide pin 35 abuts the end of the guide hole 34 and further movement of the guide pin 35 within the guide hole 34 is resisted. This prevents further turning of the intermediate link 33 together with the back rest retaining member 9, whereupon the intermediate link 33 starts to turn around the axis of the guide pin 35, torque being imparted from the back rest retaining member 9 through the pivot pin 32. Such turning of the intermediate link 33 causes movement of the connecting link 36 toward the upper end of the back rest retaining member 9. As a result of this, the widthwise extending portion 28 of the seat shaping member 27 is brought to a position spaced apart downwardly from the back rest retaining member 9. Therefore, the back rest 29, whose back surface abuts the widthwise extending portion 28, falls downwardly. Connected to opposite lateral

edges of the back rest 29 are foldable lateral surface portions 39 formed of a foldable sheet material, whose edges are attached to the back rest retaining member 9. Therefore, in the state shown in Fig. 22, a box-like bag or hammock is formed, with its bottom defined by the back rest and its lateral surfaces defined by the head guard 30 and foldable lateral surface portions 39. In this state, the back rest 29 and head guard 30 are substantially bent relative to one another, and the head guard 30 assumes an attitude opposed to the top of the baby's head.

Fig. 23 to 25 show a further embodiment of this invention, with Figs. 23, 24 and 25 illustrating states corresponding to those of Figs. 17, 20 and 21, respectively. The mechanism for changing the angle of inclination of the back rest used in the embodiment shown in Figs. 23 to 25 is the same as that previously described with reference to Figs. 6 to 16. The relation between the back rest retaining member and the seat shaping member described with reference to Figs. 17 to 22 is slightly modified in this embodiment. Therefore, the reference characters used in Figs. 17 to 22 will be used in Figs. 23 to 25 to denote corresponding parts.

The main difference between this embodiment and the preceding embodiment is that the pivot pin 32 for imparting torque from the back rest retaining member 9 to the intermediate link 33 is not provided directly on the back rest retaining member 9 but on the front end of a bracket 40 attached to the end of the back rest retaining member 9. However, the operation is substantially the same as in the preceding embodiment in that the pivot pin 32 is displaced in response to the turning of the back rest retaining member 9 around the axis of the pivot pin 11.

Reference will now be made to operation. During adjustment from the Fig. 23 state to the Fig. 24 state, the intermediate link 33 slightly changes its positional relation with the back rest retaining member 9 only to the extent that the connecting link 36 actuates the seat shaping member 27. Therefore, though not shown, the alignment between the back rest and the head guard is maintained unchanged.

In the course of movement from the Fig. 24 state to the Fig. 25 state, the guide pin 35 reaches the end of the guide hole 34. The guide pin 35 abuts

88

against the end of the guide hole 34, and the
intermediate link 33 therefore turns around the axis
of the guide pin 35 torque being transmitted from the
back rest retaining member 9 through the bracket 40
5 and pivot pin 32. As a result of the rotation of
the intermediate link 33, the connecting link 36 is
displaced toward the upper end of the back rest
retaining member 9. In response thereto, the seat
shaping member 27 is turned counterclockwise as
10 viewed in the figures. This state is shown in Fig. 25,
and the attitude of the seat shaping member 27 at this
time is the same as that shown in Fig. 22. Therefore,
the back rest 29 and head guard 30 are bent through a
substantial angle relative to each other, as shown
15 in Fig. 22.



- 29 -

CLAIMS:

1. A seat assembly for a baby carriage comprising a seat, a back rest whose angle of inclination relative to the seat is adjustable, a
5 head guard, and means mounting the head guard for movement relative to the back rest, the mounting means being arranged to vary the position of the head guard relative to the back rest in dependence upon the angle of inclination of the back rest
10 relative to the seat.

2. A seat assembly for a baby carriage comprising:
a seat,
a back rest foldably connected to a rear edge
15 of said seat and having foldable lateral portions,
a head guard foldably connected to an upper edge of said back rest,
a pair of back rest retaining members to which said foldable lateral portions of said back rest are
20 connected,
a head guard retaining member to which said head guard is connected,



seat shaping means, and
means operatively connected to said seat
shaping means to adjust the state of the seat shaping
means in operative association with changes in the
5 angle of inclination of said back rest retaining
members, such that, when said back rest retaining
members are in a raised state, said seat shaping
means supports said back rest substantially in
alignment with said head guard and so that said
10 lateral portions are folded and, when said back rest
retaining members are in a lowered state, said seat
shaping means supports said back rest with said
lateral portions unfolded and said back rest at an
angle to said head guard whereby to form a hammock.

15 3. A seat assembly according to claim 2,
wherein said back rest and said head guard each
incorporate a substantially rigid core.

4. A seat assembly according to claim 2 or 3,
wherein said seat shaping means includes a substan-
20 tially U-shaped portion whose limbs are rotatably
supported relative to said back rest retaining members
and whose cross piece contacts said back surface
of said back rest.



5. A seat assembly according to claim 2,
3 or 4, wherein said head guard retaining member is
integral with said back rest retaining members and
connects the upper ends of said pair of back rest
5 retaining members.

6. A seat assembly according to claim 2, 3
or 4 wherein said head guard retaining member is
integral with said seat shaping means and connects
the upper ends of said pair of back rest retaining
10 members.

7. A seat assembly according to any of claims
2 to 6, wherein said operative connecting means
includes intermediate links adapted to be displaced
according to changes in the angle of inclination
15 of said back rest retaining members, and rigid
connecting links for operatively connecting said
intermediate links and said seat shaping member.

8. A baby carriage including a seat assembly
according to claim 1.

20 9. A baby carriage including a seat assembly
according to any of claims 2 to 7.

89



10. A baby carriage according to claim 9,
including means for fixing said back rest retaining
members at a selected one of a plurality of angles of
inclination relative to a frame member of said baby
5 carriage.

11. A baby carriage according to claim 10
when dependent from any of claims 2 to 6, wherein
said operative connecting means includes connecting
links for operatively connecting said frame member
10 and said seat shaping member.

12. A seat assembly substantially as herein
particularly described with reference to and as
illustrated in Figs. 1 to 5, or Figs. 6 to 22,
or Figs. 6 to 22 when modified by Figs. 23 to 25
15 of the accompanying drawings.
